

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-3/78-06
50-247/78-19
50-3
Docket No. 50-247
License No. DPR-5 Priority -- Category D
DPR-26 C

Licensee: Consolidated Edison Company of New York, Inc. (Con Ed)

4 Irving Place

New York, New York 10003

Facility Name: Indian Point Nuclear Generating Units 1 and 2 (IP 1 and 2)

Inspection at: Indian Point Generating Station, Buchanan, N.Y. and at the
Corporate Offices of Consolidated Edison Company of New York, Inc.

Inspection conducted: May 16-18 and 22-23, 1978

Inspectors: Robert J. Bries
R. J. Bries, Radiation Specialist

7/7/78
date signed

date signed

date signed

Approved by: J. P. Stohr
J. P. Stohr, Chief, Environmental and
Special Projects Section, FF&MS Branch

7/7/78
date signed

Inspection Summary:

Inspection May 16-18 and 22-23, 1978 (Combined Report Nos. 50-3/78-06 and
50-247/78-19)

Areas Inspected: Routine, unannounced inspection of environmental monitoring programs for operations, including: the management controls for these programs; the licensee program for quality control of analytical measurements; implementation of environmental monitoring programs - radiological; implementation of the environmental monitoring programs - biological/ecological; nonradioactive effluent release rates and limits; and a followup on the licensee action on previous inspection findings. The inspection involved 10 onsite inspector-hours for Unit 1 and 12 onsite inspector-hours for Unit 2 by one NRC inspector.

Results: Of the five areas inspected, no items of noncompliance were identified in one area. Five apparent items of noncompliance (Deficiency - failure to submit molous measurement reports in a timely manner - Detail 6.b(2); Deficiency - failure to approve temporary procedure changes in accord with ETSR - Detail 7.b; Deficiency - failure to monitor temperature of the cooling water system in accord

with ETSR - Detail 8.b(2); Deficiency - failure to perform temperature sensor system calibrations and tests - Detail 8.b(2); Infraction - failure to have approved procedures - Detail 8.b(2) and failure to follow procedures - Detail 4.b and 8.b(2)), were identified in four areas.

DETAILS

1. Individuals Contacted

Consolidated Edison Company of New York, Inc. (Con Ed), Corporate Offices

- *J. D. O'Toole, Asst. V.P. - Vice Chairman, Environmental Protection Committee (EPC)
- *E. G. Kelleher, Director, Environmental Studies & Evaluations
- *K. Burke, Attorney - Secretary, EPC
- *M. C. Smith, Former Secretary, EPC
- *N. Hartman, Consultant, Quality Standards & Reliability
- *A. S. Cheifetz, Division Chemist
- *A. Ferraro, Staff Engineer
- *S. Masciulli, Engineer, Nuclear Environmental Monitoring (NEM)

Con Ed - Indian Point Site

- E. R. McGrath, Manager, Nuclear Power Generation Department
- +T. M. Law, Plant Manager
- +J. M. Makepeace, Director, Technical Engineering
- +J. J. Higgins, Chemistry Director
- +S. Sadlon, Supervisor, Nuclear Environmental Monitoring (NEM)
- H. Morrison, Senior Reactor Operator
- L. J. Kawula, Test and Performance Engineer
- R. Tuttle, Manager, Biological Studies
- W. Carson, Test Engineer
- R. Shacklinsky, NEM Technician

Power Authority of the State of New York (PASNY)

- *J. P. Bayne, Resident Manager, IP-3
- +*J. J. Kelly, Rad. & Env. Services Superintendent, IP-3
- +J. W. Kilduff, Asst. to Resident Manager - Secretary of PORC, IP-3
- J. Gillen, Chemistry Supervisor, IP-3
- *D. Quinn, Radiological Engineer, IP-3
- *D. Wallace, Biologist
- *S. Farber, Radiological Engineer, Nuclear Power Operations
- J. Davis, Chief Nuclear Engineer - Staff

The inspector also interviewed several other members of the Con Ed staff including members of the NEM Group, I&C and Operations Departments, and of the Texas Instruments, Inc. staff.

+ denotes those present at the exit interview on May 18, 1978 at the Indian Point site.

* denotes those present at the exit interview at the conclusion of the inspection on May 23, 1978 at the Con Ed corporate offices in New York City.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved item (3/77-14-04; 247/77-33-04): Gamma spectral analysis of water samples. The inspector determined through discussions with the licensee, review of the licensee's analytical quality control results for recent months, review of the 1976 and 1977 Environmental Radiation Monitoring Reports and the review of the results of licensee's special studies that the discrepancies previously noted in the gamma spectral data were primarily associated with instrument calibration and sample placement difficulties. The latter problem has now been corrected and the calibration error has been sufficiently quantified such that the data in question can be evaluated. In view of these findings and because the environmental radiological analyses are currently performed by an outside contractor, this item is considered closed. (See also Detail 5.a)

(Open) Unresolved item (3/77-14-03; 247/77-33-03): Failure to report radiological environmental results in accord with the requirements. The inspector determined, through discussions with the licensee and the review of the 1976 Radiological Environmental Monitoring Report -Supplement, that the licensee submitted the required radiological data for 1976, although some of the required comparisons could not be performed. The inspector noted that the 1977 Environmental Report, Part B, also lacked some data and evaluations. This had been identified by the licensee, who stated that the required data, comparisons and evaluations would be provided to the NRC in a supplemental report by August 1, 1978. The inspector stated that until the supplemental report is received and is subsequently reviewed, this item remains unresolved. (Detail 6.b(1))

3. General

On November 16, 1977 editorial changes were made to the Indian Point -Unit 3 Environmental Technical Specification Requirements (ETSR) and changes were issued to the Units 1 and 2 ETSR, making the latter ETSR identical to that of Unit 3. On March 10, 1978 PASNY was licensed to assume the operational responsibilities for Indian Point - Unit 3 from Con Ed. Con Ed maintains the operational responsibilities for Units 1 and 2.

Since the environmental monitoring programs are essentially site (as opposed to unit) programs, Con Ed, through contractual agreement with PASNY, continues to perform the bulk of the environmental monitoring requirements for the Indian Point site. Only Section 5, "Administrative Controls," of the ETSRs differ for Unit 3 from that of Units 1 and 2, to reflect the PASNY organization, administrative structure and responsibilities in place of that of Con Ed.

4. Management Controls

a. Changes

The inspector determined through discussions with both PASNY and Con Ed, review of the licensee's organizations responsible for managing the environmental programs, and review of applicable procedures, that essentially no changes had been made in the following areas since the last environmental inspection (50-3/78-01; 50-247/ 78-01):

- (1) Assignment of responsibilities and authorities;
- (2) Provisions for audits and inspections of environmental activities;
- (3) Provisions for identifying, documenting and reporting, correcting and following up on program inadequacies and inspection/audit results; and
- (4) Review of program results.

Several changes had been made in the Con Ed management chain for the Nuclear Environmental Monitoring (NEM) group at the IP

site, including the replacement of the Senior Engineer - Environmental, Nuclear and Gas Testing Group with the Division Chemist as the responsible individual in accord with an ETSR change. However, since this change involved the same individual, Dr. Cheifetz, no personnel changes had been made. Mr. S. Masciulli, Engineer - NEM, has just reported on-board at Con Ed and will assume most of the duties that had been performed by Mr. A. Ferraro. The licensee stated that changes in the administrative portions of the applicable procedures would be made within the next month to reflect these recent changes.

The inspector also determined that Mr. K. Burke (Con Ed) is now the Secretary of the Environmental Protection Committee replacing Mr. M. Smith.

The inspector determined through discussions with the licensee that laboratory analyses of certain biological/ecological samples which had been performed by Texas Instruments, Inc., (TI) in Dallas, Texas were now performed by Lawler, Matusky and Skelly Engineers (LMS), as of the 1978 sampling program. The licensee stated that the analytical procedures employed by LMS are identical to those used by TI.

The inspector verified that the changes made offer the same or higher level of management controls as found during the previous inspections.

b. Licensee Audits

The inspector reviewed the results of the Con Ed QSR-410 Audit No. 77-A10 conducted March 25 - April 27, 1977 relative to the Indian Point thermal discharge monitoring program. Ten findings requiring licensee actions to correct/prevent noncompliance with the ETSR and operating procedures and/or to resolve apparent conflicts between the ETSR and installed instrumentation were identified. These findings were discussed with IP plant management by QS&R in a post-audit conference on May 6, 1977. The findings were documented in Audit Report No. 77-A10, dated June 2, 1977 and submitted to the Chairman of the Environmental Protection Committee (EPC) by a letter dated June 23, 1977. As of the dates of this inspection, corrective action had not been taken with regard to the identified items.

Procedure QSR 410 requires that the audited activity respond to QSR within 30 days after receipt of the audit report, detailing corrective actions to be taken. As of the dates of inspection the EPC had not officially responded to QSR regarding the above audit. Nuclear Power Generation Department. (NPG) responded to the EPC with a copy to QSR on January 6, 1978. That response did not detail the specific actions to be taken to correct the identified items. The inspector stated that the failure of EPC and NPG to respond to QSR within 30 days in accord with Procedure QSR 410 is an item of noncompliance with Section 5.4.1 of the ETSR which requires that procedures be followed (3/78-06-12; 247/78-12-12). (See also Details 7.c and 8.b(2).)

Con Ed representatives stated that the audit procedure regarding the handling of the audit results was being reviewed to insure more timely transmittal of the audit report to the responsible members of the senior management for action/resolution.

5. Licensee Program for Quality Control of Analytical Measurements

a. Radiological

The inspector determined through discussions with the licensee, review of applicable procedures and review of the licensee's and contractor's quality control results since January 1977, that the quality control programs had provisions for the:

- (1) Assignment of responsibility to manage and conduct the program; and
- (2) Type and minimum number of quality checks to be performed.

The inspector noted that Procedure NEM-AD-08, Revision 3, "Quality Control Program" did not address an acceptance criteria for the measurements, nor the followup action on identified discrepancies. The licensee stated that these aspects of the quality control program would be developed and included into the procedure. The inspector stated that he had no further questions regarding this item at this time.

The inspector determined that the radiological environmental quality check program had been implemented in terms of analysis of "blind" split samples of media sent to the contractor; analysis of EPA "spiked" samples by both Teledyne Isotopes, Inc. (the radio-analytical contractor) and by the Con Ed NEM Group; and Teledyne analysis of Con Ed "spiked" media samples. The latter samples were supplied based on the availability of standard radionuclide solutions or sources to the NEM Group. With the exception of I-131 and the radiation source for spiking TLDs, the other spiked media had been supplied.

The inspector also reviewed the licensee's special study effort to resolve item (3/77-14-04; 247/77-33-04) relative to the discrepancy identified in the gamma spectral analysis of water samples. The inspector determined through the licensee's study results and evaluations, that the major discrepancies in the gamma analyses had resulted from (1) problems in positioning the sample accurately in the counting cave and (2) problems in calibration of the Ge(Li) system, rather than as initially suspected, in the transfer of material from the evaporation vessel to the planchet. The first problem was resolved by use of a positioning device. The second problem was discussed with the licensee, who stated that additional training in radioisotope techniques and radiochemistry would be given to those individuals involved in the preparation of standards for calibration and spikes. Based on the comparison of the more recent (since the Second Half of 1977) EPA spike sample analyses with the known results; correlation between analyses with the known results; correlation between the gamma analyses performed using Marinelli beakers and evaporated samples on planchets; and comparison of Con Ed NEM data vs Teledyne data for 1977; a correlation factor could be developed for the reported data in the Con Ed 1976 annual report. The inspector stated that based on the above studies and evaluations, and since Con Ed was not performing the environmental analyses at this time, the above item was considered resolved.

b. Biological/Ecological

The inspector determined through discussions with the licensee that the quality control for the biological/ecological programs was provided, in part, through direct observations by cognizant

Con Ed personnel over contracted services and by the contractors (TI and LMS) through procedural requirements. The latter provided for assignment of responsibilities, for type and frequency of quality checks, for acceptance criteria and for followup on identified discrepancies. The inspector also verified through discussions with the licensee, the mechanisms employed to assure that required sampling and analyses were scheduled and performed in a timely manner.

The inspector had no further questions in the above areas at this time.

6. Implementation of the Environmental Monitoring Program - Radiological

a. Direct Observation

The inspector examined selected air sampling stations and observed the changing of the air particulate and air iodine collection media, the recording of the required information for each sample, and the performance checks made on each sampler as it was returned to service. No deviations from the approved procedure were noted in this area.

The inspector also examined selected TLD, precipitation collection, water and milk collection locations and noted that those examined were located as required by the ETSR. Included in the above inspection was the Standard Brands sampling location addressed in the January 16, 1978 letter from Con Ed to the NRC:I office.

b. Review of Reports

(1) Routine Reports

The inspector reviewed the following radiological reports as part of this inspection:

- Supplement to Annual Environmental Operating Report - Parts A and B, January 1 - December 31, 1976

- Environmental Radiation Monitoring Program; January 1 -December 31, 1977
- Semi-Annual Effluent Release Report, July 1 - December 31, 1977 and Radiological Impact on Man, January 1 - December 31, 1977.

The inspector determined that with the exception of the Environmental Radiation Monitoring Program report, the required information relative to the environmental programs had been reported. With respect to the latter report, required data, including evaluations and comparisons with preoperational and control data were not supplied. The licensee had identified these omissions and had been committed in a letter to the NRC dated April 28, 1978 to supply this information to the NRC within 90 days in the form of a supplemental report. The inspector stated that until this report is received and subsequently reviewed, the adequacy of the radiological report is considered unresolved. The inspector noted that this item remains unresolved from a previous inspection (3/77-14-03; 247/77-33-03).

(2) Nonroutine Reports

The inspector reviewed the environmental aspects of the inadvertent releases of gaseous radioactivity on February 9, 1978 (60.4 curies released from IP-2 as a result of a Volume Control Tank valve relief - as reported in a letter to the NRC dated February 17, 1978, LER-247/78-004/040) and on March 28, 1978 (12.68 curies released from IP-3 as a result of a pump gland seal leak - as reported in a letter to the NRC dated April 27, 1978, LER-286/78-006/03L). The inspector's review of the results of the environmental monitoring program for these time periods indicated no detectable increases in radiation/radioactivity levels in the environs attributable to these releases. The inspector had no further questions regarding this aspect of these releases at this time.

The licensee reported in a letter to the NRC dated January 13, 1978 the inoperability of the continuous water sampling system at the discharge canal. The inspector reviewed the circumstances relative to the sample pump inoperability and the licensee's corrective and preventative actions and found them to be consistent with those reported in the letter. The inspector had no further questions in this area.

The inspector reviewed the circumstances and licensee's evaluations relative to the anomalous measurement reports submitted to the NRC in letters dated October 26, 1977 and December 15, 1977 for IP-Units 1 and 2, concerning levels of airborne I-131 greater than 1.1 E-14 microcuries/cc in the environment. The inspector's review of other airborne iodine measurement results for 1977 and 1978, comparisons of these data with control station values, and review of the licensee's gaseous radioactivity releases indicated that the reported levels could not be fully attributable to IP operations. The inspector had no further questions regarding the above items.

Fallout Radioactivity

The inspector also reviewed the circumstances surrounding the reported high airborne and water radioactivity levels first reported by the licensee to NRC:I by telephone on April 10, 1978 after the preliminary analysis of these samples collected between March 27 and April 4, 1978. (It should be noted that the People's Republic of China conducted a nuclear atmospheric weapons test on March 14, 1978.) Air particulates, precipitation samples and surface water samples all showed elevated levels of I-131, Ba-140, Ru-103 and Ce-141 activity, commonly associated with nuclear weapons fallout debris. Of particular interest were levels of I-131, Ba-140 and Ru-103 in lake water sampled on March 27, 1978 that were measured to be approximately 90 pCi/l. Normally these nuclides are less than the detectable levels (nominally about 10 pCi/l for gamma spectral analysis) for this medium. The licensee confirmed the above lake water sample concentrations by reanalysis of the original samples. The licensee also resampled the same water sources on April 11, 1978. Analysis of these samples indicated no detectable fission nuclides.

The inspector discussed with the licensee the results and possible sources of the reported activities. (a) Review of the licensee's radioactive releases indicated that IP station could not have contributed a detectable quantity of radioactivity to the sampled water bodies. (b) The recent Chinese test resulted in measureable fallout radioactivity in air and precipitation samples collected during this time interval, however, the apparent lake concentrations, as measured by the March 27, 1978 samples, were much too large to be compatible with the other measured fallout data. The April 11, 1978 resampling and analyses also indicated that the March 27 lake water values could not have been real, since such rapid removal of activity from the lake is highly improbable.

Two of the most likely causes of the reported high activity levels in the lake samples are (a) contamination of the water samples, containers or analytical vessels and instruments and/or (b) a highly unrepresentative sample of the lake water which contained unusual amounts of the fallout activity. (The absence of measurable levels of radioactivity in the resampled lake water would seem to indicate that the first sample results were not indicative of the true lake water activity.)

The licensee reviewed the results of similar samples analyzed by the contractor at the time of the initial analysis and found no unusual activity in any of those samples. The licensee also examined the laboratory storage and analytical techniques used. These reviews appeared to indicate that the samples had not been contaminated at the contractor laboratory. The inspector's discussions with the licensee and review of the licensee's sampling, handling and shipping procedures did not appear to indicate a contamination of the samples by the licensee. Discussions with the licensee did indicate, however, that the method of water sampling may have resulted in a nonrepresentative sample being collected from a comparatively stagnant portion of the lake. The licensee proposed that the heavy rainfall during the sample collection on March 27, (nearly an inch of rain fell on March 27,

1978 - N.Y. Times) resulted in several hundred pCi/l of the fallout nuclides (based on the results of the March precipitation sample analyses) being washed into the lake from surface runoff. When the lake water sample was collected from just below the lake surface at the shoreline, the licensee proposed that this water contained a high proportion of the precipitation runoff water. This then resulted in the unusually high activity reported in the lake samples. While neither cause (a) nor (b) can be proved or disproved, the confirmatory, April 11, 1978, samples indicated that no radiological public health problems existed in terms of lake water. The inspector had no further questions regarding this aspect of this event.

The licensee stated in discussions with the inspector that the water sampling techniques and procedures would be revised to prevent a recurrence of a similar event, if the cause were due to nonrepresentative samples. The inspector stated that this item would be considered unresolved pending the completion of the revisions to the sampling procedures and subsequent review by the NRC (3/78-06-01; 247/78-19-01).

Section 5.6.2.2.a of the ETSR requires that if a confirmed measured level of radioactivity in any environmental medium exceeds 10 times the control value, a written report be submitted to the NRC within 10 days after confirmation, and in any case within 30 days of the analysis. The licensee received the contractor's written report dated April 26, 1978 relative to the elevated activity in the lake water sample. The licensee's required report to the NRC was dated June 9, 1978. The inspector stated that the late submission of this report relative to the high (greater than 10 times the control levels) levels of radioactivity in lake water constituted an item of noncompliance with the reporting requirements of ETSR 5.6.2.2.a (3/78-06-02; 247/78-19-02).

c. Other Records(1) Thermoluminescent Dosimeters (TLDs)

The inspector reviewed selected TLD records since January 1977 and determined that the measurements were made at the required locations. The inspector also reviewed the TLD placement and readout procedure with the licensee. The licensee is required to continuously monitor the beta/gamma direct exposure at the specified locations using TLDs which are read quarterly. The current practice at the IP site consists of placing a set of TLDs at each location each month and retrieving the set of TLDs placed at the stations three months earlier. Through discussion with the licensee, the inspector determined that for reporting purposes, only each third set of TLDs is used - that coinciding with the exposure for the calendar quarter. The inspector also noted that the exposure data was not normalized for 30 or 90 day exposures nor in terms of micro R/hr, thereby making the analysis of the data from exposure period to exposure period much more difficult. The licensee stated, in discussions with the inspector, that the procedure for deployment of the TLDs and for the analysis of TLD results and subsequent reporting would be re-evaluated to better utilize the measured results. The inspector stated that this item would be considered unresolved pending completion of the TLD procedure evaluation and appropriate changes were incorporated (3/78-06-03; 247/78-19-03).

The inspector had no further questions in this area at this time.

(2) Calculation of the Lower Limit of Detection (LLD)

The inspector reviewed selected radioanalytical procedures and noted that the licensee's present calculation of LLD is based on the formula,

$$LLD = 2\sqrt{2} kS_b$$

derived from HASL-300 Procedures, developed by the DOE, Environmental Measurement Laboratory, where k is a selected constant and S_b is the standard error in the background count. The value of k used by the licensee was 1.0. This results in a preselected risk in the 15 percentile range for falsely including background measurements as net sample counts. This preselected risk is substantially larger than commonly is accepted in industry practice or recommended by NRC Staff Position. The recommended risk is 5%, corresponding to a k of 1.645. The inspector noted that the ETSR requires that specified "minimum sensitivities" be met, but does not at present specify the method of calculation of the LLD.

The licensee stated that the LLD calculation would be revised in accord with the NRC staff recommendation. The inspector stated that this item would be considered unresolved pending the revision of the LLD calculation in the applicable procedures (3/78-06-04; 247/78-19-04).

(3) Other Media Reviewed

The inspector reviewed selected results of the radiological monitoring program since January 1977 for media including air particulates, air iodines, aquatic and terrestrial vegetation, soil, sediment, fish, precipitation, and surface and ground water. The inspector determined that for those media and data examined, the required environmental samples had been collected and analyzed in accord with the ETSR. The inspector had no further questions in this area at this time.

d. Meteorological Monitoring

The inspector verified that the meteorological instrumentation was operational at the time of inspection by direct observation of the meteorological read-out instruments in the Units 1 and 2 Control Rooms. The inspector also reviewed the Semi-annual Effluent Report of July 1 - December 31, 1977 with respect to the meteorological data reported. No items of noncompliance were identified in this area.

7. Implementation of the Environmental Monitoring Program - Biological/
Ecological

a. Direct Observations

The inspector reviewed selected portions of the Indian Point biological/ecological monitoring programs through discussions with licensee and contractor personnel, selected reviews of sampling and analytical procedures, and direct observations of the following program tasks involving mark/recapture techniques for striped bass stock assessment: gill netting, box trapping, beach seining, and ichthyoplankton sampling. The inspector also visited the Texas Instruments, Inc. (TI) laboratory facilities at Verplanck and observed the analysis of striped bass in progress.

b. Procedures

The inspector determined through the review of selected procedures and changes in procedures, review of EPC meeting minutes, and discussions with licensee personnel, that several procedural changes had been implemented in the 1978 fish biocharacteristics sampling program. Several of these changes, including TI designated procedures change numbers 78-1 and 78-3, involved changes in analytical/ sampling parameters. These changes had been approved for implementation as Temporary Changes by Con Ed on March 29, 1978, as permitted by ETSR 5.4.2. Section 5.4.2 of the ETSR requires; however, that all procedures or temporary changes in procedures be reviewed and approved by the EPC within 30 days of implementation. As of May 18, 1978, these changes had not yet been forwarded to the EPC for approval. Since these procedures had been implemented for more than 30 days, the inspector stated that the failure to obtain the EPC review and approval for these procedure changes was in noncompliance with Section 5.4.2 of the ETSR (3/78-06-05; 247/78-19-05).

c. Reports and Records

The inspector reviewed the following reports relative to the biological/ecological studies:

- "Production of Striped Bass for Power Plant Entrainment Studies, 1977 Hatchery Report" - December 1977.

- "Preliminary Investigations into the Use of a Continuously Operating Fine Mesh Traveling Screen to Reduce Ichthyoplankton Entrapment at Indian Point Generating Station" - December 1977.
- "Evaluation of a Submerged Weir to Reduce Fish Impingement at Indian Point for the Period 25 May - 29 July 1977" - March 1978.
- "Indian Point Nuclear Generating Station Thermal Survey Program - Routine Monthly Thermal Monitoring, May 1977 Survey - Report No. 2" - February 1978.
- "Semi-Annual Report for the Period July 1, 1977 through December 31, 1977" - January 31, 1978.

The inspector identified no items of noncompliance relative to the above reports.

The inspector also reviewed the impingement of Alosa aestivalis (blueback herring) during the interval October 11-18, 1977. Approximately 400,000 were impinged during that time period. The inspector reviewed the licensee's environmental evaluation of the event. The evaluation pointed out that the 1977 year class of A. aestivalis was exceptionally large, that the impingement coincided with a 10°C drop in river temperature and with high river flows from fresh water run-off. The latter resulted in a river salinity decrease from 0.73 to 0.06 parts per thousand. These factors caused the apparent movement of the A. aestivalis down river past Indian Point toward the sea.

The inspector also reviewed the licensee's actions taken to reduce the impingement levels to below the ETSR reporting levels. The inspector stated that he had no further questions regarding the above event at this time.

Section 3.1.4.2 of the ETSR requires that observations be made to determine whether fish are undergoing thermal stresses from rate of temperature change and that the results be reported to the NRC. The licensee's QSR Audit 77-A10 identified this as an item that had not been conducted. Discussions with the

licensee indicated that the Con Ed EPC was currently developing criteria for defining "temperature change" and "fish stress" and were developing a procedure for implementing this specification. The inspector stated that the item would be considered unresolved pending completion of the licensee's action and full implementation of the developed procedure (3/78-06-06; 247/78-19-06).

8. Nonradioactive Effluent Release Rates and Limits

a. Reports

The inspector noted that ETSR Section 5.6.1 requires that the Annual Environmental Operating Report, Part A: Nonradio-logical, be submitted to the NRC within 90 days of January 1 of each year. The inspector determined that the 1977 Annual Operating Report, Part A and Part B were not submitted until April 28, 1978. The inspector noted that the licensee had contacted NRR (Nuclear Reactor Regulation) prior to the 90 day deadline and had also submitted to NRR an ETSR change request, proposing a 120 day submission deadline because of the report reviews required by both Con Ed and PASNY.

The inspector stated that the compliance with the report submission date for the 1977 Annual Environmental Report, Part A, would be considered unresolved, pending completion of NRR's review and action on the proposed ETSR change (3/78-06-07; 247/78-19-07).

The inspector noted that the submitted report (Part A) did not contain all of the required information. The licensee committed in the April 28, 1978 submittal letter to furnish a supplemental report within 90 days containing all of the required data. The inspector further noted that part of the omitted data involved the report of the correlation between the maximum temperature in the discharge canal and the maximum surface temperature of the thermal plume, based on the results of the ETSR 4.1.1.a thermal plume monitoring studies. This omission had been identified in QSR Audit 77-A10 performed in March and April 1977 as related to the 1976 Annual Environmental Operating Report for Unit 3 with a recommendation that an addendum be submitted to the 1976 report.

The inspector stated that the compliance with the ETSR Section 5.6.1.1 report requirements relative to the completeness of the required information, including the thermal plume correlation, would be considered unresolved pending the receipt of and subsequent review of the 1977 Supplemental Report (3/78-06-08;247/78-19-08).

The inspector also discussed with the licensee the Part A report format used to report the nonradiological information in these reports. The current format is such that verification of compliance requirements is difficult to perform. The licensee stated that this problem was recognized during the internal reviews and modifications in format may result. The inspector had no further questions in this area at this time.

b. Thermal

(1) Records

The inspector reviewed selected thermal discharge records for the Indian Point site since January 1977. Records reviewed included intake and discharge temperatures, ΔT_c , and rate of change of ΔT_c . No items of noncompliance were observed for those records reviewed.

(2) Instrumentation

The inspector examined the installed primary temperature monitoring system at Indian Point station. The inspector noted that the ETSR, Section 3.1.1.1 requires that the individual intake temperatures (Units 1, 2 and 3) and discharge temperatures be continuously monitored and recorded. The ETSR, Section 3.1.4.1 requires, in part, that the ΔT_c across the cooling water system (CWS) be differentiated to provide the rate of change of ΔT_c and that this information be recorded for all flow conditions.

The inspector determined through his examination of the monitoring system on May 18, 1978 that the intake sensor elements for both Units 1 and 2 were nonoperational. In addition, the recorder for rate of change of ΔT_c was not operational. The inspector's review of records provided

by the licensee indicated that the last functional test of the temperature monitoring system had been conducted in September 1977. The licensee stated that the Performance Group Logs serve as functional checks of this system and that these tests are performed daily, Monday through Friday. The inspector reviewed a sample of the Performance Group Logs covering the date of inspection (May 18, 1978) and the preceding week. The inspector noted that the performance checks could not be considered functional tests, in that, each channel was not tested (e.g. each intake sensor and rate of change of ΔT_c) and discrepancies of several degrees Fahrenheit were indicated between the recorded ΔT_c and the difference between the average inlet and discharge temperatures. The inspector noted that no Maintenance Work Request (MWR) had been submitted when discrepancies were found. The inspector stated that the failure to monitor the inlet temperatures from each intake and to record the rate of change of ΔT_c was in noncompliance with Section 3.1.1.1 and 3.1.4.1 of the ETSR (3/78-06-09; 247/78-19-09).

Section 3.1.1.6 of the ETSR requires that an annual channel calibration of the sensor systems be performed and that monthly channel functional tests of the sensor systems be performed. The inspector determined through discussions with the licensee and review of the calibration records, that the calibrations performed of the primary (Bendix) temperature monitoring systems were not sensor calibrations. The "calibrations" performed were essentially resistance checks of the recorder systems. Functional tests had not been performed since September 1977. The inspector stated that the lack of sensor function and sensor calibration tests was in noncompliance with ETSR Section 3.1.1.6 (3/78-06-10; 247/78-19-10).

The inspector stated that since the sensor calibrations had not been performed, he could not determine the status of compliance with Section 3.1.1.3 of the ETSR, which requires, in part, that the methods of temperature measurement include sensors with an accuracy of $\pm 0.5^\circ\text{F}$ and a

sensitivity of 0.1°F. The inspector stated that this item would be considered unresolved pending calibration of the sensor systems and review of these calibrations during a subsequent inspection (3/78-06-11; 247/78-19-11).

The inspector determined through discussions with the licensee and review of the procedure for annual calibration of the temperature system, (NEM-D-14 (Rev. 1), that this procedure was not reviewed by the EPC as required by the ETSR. It was further determined that this procedure was primarily a scheduling procedure and that no formal, approved calibration procedure had been developed for the temperature sensor system, nor had detailed written procedures for the functional tests been developed. The inspector stated that this was in noncompliance with Section 5.4.1 of the ETSR which requires that written, approved procedures be developed for all activities covered by the ETSR (3/78-06-12; 247/78-19-12).

Section 3.1.4.1 of the ETSR requires that the rate of change of ΔT_c be obtained by differentiating the ΔT_c as a function of time. The installed instrument does not appear to differentiate the ΔT_c , but to yield a "rate of change of ΔT_c " by some other calculational means. The inspector stated that this item would be considered unresolved pending a determination by the licensee of whether the calculation process is a differentiation of the ΔT_c or until a change is obtained in the ETSR relative to the means of obtaining this rate of change (3/78-06-13; 247/78-19-13).

The inspector also noted that there were several other differences between the installed instrumentation and the ETSR. Most of the mismatches had been covered in letters to the NRC:NRR. The inspector stated that until the differences between the installed instruments and the ETSR are resolved, including the monitoring and recording of each intake channel and the capability of monitoring discharge temperatures less than 50°F, this item is considered unresolved (3/78-06-14; 247/78-19-14).

The inspector noted that QSR Audit 77-A10 performed in March and April 1977 had identified a number of problems relative to the temperature monitoring systems, including (a) operational problems with the Bendix temperature recording system, (b) inadequate maintenance of the system, (c) failure to have approved calibration procedures and functional test procedures, (d) failure to calibrate the sensor systems, (e) problems with system sensitivity/accuracy requirements and (f) instrumentation/requirement mismatches. The inspector noted that while the QSR Audit identified the described items needing correction/resolution and the report was submitted to the EPC in June 1977, as of the dates of this inspection, the above items still were in need of correction/resolution. (See also Detail 4.b)

The inspector reviewed the back-up temperature monitoring system (Partlow System) and determined that it appeared to be functioning properly at the time of inspection. The inspector also reviewed the calibration dates and records for these monitors and discussed the calibration procedure (IPC-I-32, Rev. 1) with the licensee. The inspector determined that because of a problem in retrieving the inlet sensor due to bending of the line, the calibration of the inlet temperature sensor had been performed by comparison with a calibrated temperature probe, which was lowered to the same depth as the Partlow probe. The inspector noted that this method was not described in the above calibration procedure and had been used for each six-month calibration since December 1975. The inspector stated that the failure to perform calibrations in accordance with the approved procedure was in noncompliance with Section 5.4.1 of the ETSR (also see 3/78-06-12; 247/78-19-12 above and Detail 4.b for related items).

c. Chemical Releases

The inspector reviewed the records of chemicals released at IP site since January 1977, examined selected sampling and analytical procedures and discussed selected results with the licensee.

The inspector also reviewed the operation of the continuous discharge canal sampling system which had recently been put into service. Problems and anticipated problems in measuring certain parameters, such as dissolved oxygen were also discussed, as well as, frequency of testing continuous measuring sensors and the acceptance criteria used for these devices. The inspector also reviewed with both PASNY and Con Ed representatives, the coordination between the two utilities in maintaining chemical releases within the ETSR site limitations. Both licensees indicated that this area is handled through plant-to-plant communications. The inspector had no further questions in this area at this time.

9. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during this inspection are described in Details 6.b(1), 6.b(2), 6.c(1), 6.c(2), 7.c, 8.a, and 8.b(2).

10. Management Interviews

On May 18, 1978, following the Indian Point site portion of the inspection, the inspector met with the individuals denoted (+) in Detail 1. On May 23, 1978, at the conclusion of the inspection, the inspector met with the licensee representatives denoted (*) in Detail 1.

On June 6, 1978, the inspector contacted Mr. E. R. McGrath, Manager, Nuclear Power Generation Department, and on June 22, 1978, Messrs. W. Monti and T. Law were contacted. During these meetings/discussions, the purpose and scope of the inspection were summarized and the inspection findings, including each item of noncompliance and unresolved items were discussed.

With regard to the problems with the thermal monitoring systems (Detail 8.b(2)), the licensee stated that as of June 6, 1978, (a) calibration and functional testing procedures for the calibration and testing of the primary thermal effluent monitoring system (Bendix) had been written, given temporary approval and implemented; (b) the calibration of the intake and discharge thermal sensor

systems had been calibrated, including the sensors; (c) two faulty intake sensors had been replaced; and (d) the entire thermal monitoring system was being evaluated with respect to sensitivity and ETSR requirements.

The licensee acknowledged the items of noncompliance.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

APR 24 1978

Docket Nos. 50-03
50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. W. J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

Gentlemen:

Subject: Combined Inspection 50-03/78-05 and 50-247/78-10

This refers to the inspection conducted by Mr. E. Woltner of this office on April 6, 1978, at Indian Point Nuclear Generating Units 1 and 2, Buchanan, New York, of activities authorized by NRC License Nos. DPR-5 and DPR-26 and to the discussions of our findings held by Mr. Woltner with Mr. L. Kawula of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

Our inspector also verified the steps you have taken to correct the items of noncompliance brought to your attention in a letter dated December 22, 1977. We have no further questions regarding your actions at this time.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information

APR 24 1978

from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



Walter G. Martin, Chief
Safeguards Branch

Enclosure: Office of Inspection and Enforcement Combined Inspection
Report Numbers 50-03/78-05 and 50-247/78-10

cc w/encl:

- L. O. Brooks, Project Manager, IP Nuclear
- E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
- T. Law, Plant Manager
- J. M. Makepeace, Director, Technical Engineering
- J. D. Block, Esquire, Executive Vice President - Administration
- E. J. Sack, Esquire
- A. Z. Roisman, Natural Resources Defense Council (Without Report)

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-03/78-05
50-247/78-10
50-03
Docket No. 50-247
DPR-5
License No. DPR-26 Group 4 Category D,C

Licensee: Consolidated Edison Company of New York, Inc.

4 Irving Place

New York, New York 10003

Facility Name: Indian Point Nuclear Generating Units 1 and 2

Inspection at: Buchanan, New York

Inspection conducted: April 6, 1978

Inspectors: E. Woltner
E. Woltner, Auditor

4/14/78
date signed

date signed

date signed

Approved by: J. Joyner
J. Joyner, Chief, Nuclear Material
Control Support Section, Safeguards
Branch

4-20-78
date signed

Inspection Summary:

Inspection on April 6, 1978 (Combined Report Nos. 50-03/78-05 and 50-247/78-10)

Areas Inspected: Routine, unannounced nuclear material control and accounting covering licensee action on previously identified items of noncompliance.

The inspection involved two inspector-hours on site by one NRC inspector.

Results: No items of noncompliance were identified.

DETAILS

1. Persons Contacted

L. J. Kawula, Test and Performance Engineer
E. F. Eich, Performance Supervisor

Both of these individuals were present at the exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (50-03/77-17-01): Failure to report plutonium decay on Material Status Reports Form NRC-742. The inspector reviewed the data for the period ending March 31, 1978, and the required plutonium decay will be reported as required.

(Closed) Noncompliance (50-247/77-39-01): The noncompliance and licensee action is identical to the above paragraph.

3. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on April 6, 1978. The inspector summarized the scope and the findings of the inspection.

CENTRAL FILES



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

MAY 03 1978

Docket Nos. 50-03
50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. W. J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

Gentlemen:

Subject: Combined Investigation 50-03/78-04 and 50-247/78-07

This refers to the investigation conducted by Mr. R. Smith of this office on March 14 and 15, 1978, at Indian Point Nuclear Generating Units 1 and 2, Buchanan, New York, of activities authorized by NRC License Nos. DPR-5 and DPR-26 and to the discussions of our findings held by Mr. Smith with Mr. E. McGrath of your staff at the conclusion of the investigation.

Areas examined during this investigation are described in the Office of Inspection and Enforcement Investigation Report which is enclosed with this letter. Within these areas, the investigation consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the investigator.

Within the scope of this investigation, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed investigation report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement

A large, stylized handwritten signature or mark, possibly the number '9', located at the bottom right of the page.

Consolidated Edison Company of 2
New York, Inc.

MAY 03 1978

of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

No reply to this letter is required; however, should you have any questions concerning this investigation, we will be pleased to discuss them with you.

Sincerely,



Walter G. Martin, Chief
Safeguards Branch

Enclosure: Office of Inspection and Enforcement Combined Investigation
Report Numbers 50-03/78-04 and 50-247/78-07

cc w/encl:

L. O. Brooks, Project Manager, IP Nuclear
E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
T. Law, Plant Manager
J. M. Makepeace, Director, Technical Engineering
J. D. Block, Esquire, Executive Vice President - Administration
E. J. Sack, Esquire
A. Z. Roisman, Natural Resources Defense Council (Without Report)

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-003/78-04
50-247/78-07

Docket No. 50-003
50-247

License No. DPR-5 Priority _____ Category D
DPR-26 _____ C

Licensee: Consolidated Edison Company of New York, Inc. (Con Ed)
4 Irving Place
New York, New York 10003

Facility Name: Indian Point Nuclear Generating Units (1P) 1 and 2

Investigation at: Indian Point Nuclear Generating Units 1 and 2, Buchanan, New York

Investigation conducted: March 14 and 15, 1978

Investigators: Raymond H. Smith
Raymond H. Smith, Investigation Specialist

5/1/78
date signed

Donald R. Neely
Donald R. Neely, Radiation Specialist

5/1/78
date signed

date signed

date signed

Approved by: James W. Devlin
James W. Devlin, Chief, Security and Investigation
Section, Safeguards Branch

5/1/78
date signed

Investigation Summary:

Investigation on March 14 and 15, 1978 (Report Nos. 50-003/78-04 and 50-247/78-07)
Areas Investigated: Unannounced investigation of one allegation concerning the failure of the health physics services contractor to report items of noncompliance. The investigation involved 30 investigative-hours onsite by an NRC investigator and an inspector.

Results: No information or evidence was found to substantiate the allegation and no apparent items of noncompliance were identified.

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I BACKGROUND

A. Reason for Investigation

On March 10, 1978, the Nuclear Regulatory Commission (NRC, Region I) received a telephone call from Mr. William Koenig, Assistant Business Manager, Boilermakers Local Lodge No. 5, Brentwood, New York. At this time Mr. Koenig asked several questions regarding the qualifications of health physics technicians and also described his allegation regarding the health physics services being provided at the Indian Point Nuclear Generating Station by NUMANCO, Inc.

NRC, Region I representatives met with Mr. Koenig on March 13, 1978 to further clarify and define his allegation.

An investigation regarding the allegation was initiated by the NRC, Region I.

B. Identification of Involved Organizations

1. Consolidated Edison Company of New York, Inc. (Con Edison)
4 Irving Place
New York, New York 10003

A utility company licensed by NRC to operate Indian Point Unit 2 and to utilize the facilities at Indian Point Unit 1.

2. NUMANCO, Inc.
P.O. Box 682
Pawtucket, Rhode Island 02862

This firm, under contract to Con Edison, provides health physics support services

II SUMMARY OF FINDINGS

A. Allegation, Concern and Investigation Findings

During an interview of the complainant on March 13, 1978, there was one allegation and one concern established. The findings on each are as follows:

1. Allegation

That the representatives of NUMANCO, Inc., during two meetings with the complainant, stated that their firm has a relationship with Con Edison such that they were covering up items of noncompliance to keep Con Edison from being cited by the NRC.

The NRC investigation found no information or evidence to substantiate the allegation.

2. Concern

That the Radiation Work Permits being used at the Indian Point site were being signed by Junior Technicians rather than by Senior Technicians.

The NRC investigation found no information or evidence that Radiation Work Permits were being signed by Junior Technicians.

B. Conclusions

No items of noncompliance were identified during the investigation.

III DETAILS

A. Introduction

This investigation was initiated as a result of the NRC being contacted by an Assistant Business Manager of the Boilermakers Local Lodge No. 5, Brentwood, New York on March 10, 1978. Additional information was provided by the Assistant Business Manager during a meeting with NRC, Region I representatives on March 13, 1978.

B. Scope of Investigation

This investigation included an examination of pertinent documents and records at the Indian Point 1 and 2 sites; interviews and contacts with involved individuals having significant information; and observations by the investigators.

C. Persons Directly Interviewed and/or Contacted During the NRC Investigation

1. Boilermakers Local Lodge No. 5

W. Koenig, Assistant Business Manager
R. J. Brommage, Business Representative

2. Consolidated Edison Company of New York, Inc.

J. Cullen, General Health Physics Supervisor
T. Law, Plant Manager
G. Liebler, Radiological Engineer
E. McGrath, Manager, Nuclear Power Generating Department
J. Odendahl, Workers Representative
S. Wisla, Chemistry and Radiation Safety Director

3. NUMANCO, Inc.

M. Hensch, Field Supervisor
M. Kreps, Shift Supervisor
C. Pierce, President

Several Health Physics Technicians

4. Cleanco, Inc.

K. McDermott, Operations Manager

5. Rowland Tompkins

G. Egan, Union Shop Steward

D. Interview of Complainant

On March 13, 1978, the Assistant Business Manager, Boilermakers Local Lodge No. 5 was interviewed at his office by two NRC, Region I representatives. The Business Representative for Boilermakers Local Lodge No. 5 was also present.

The complainant stated that he had met with the President of NUMANCO, Inc. on February 12, 1978 and had also met with the President and two other representatives of NUMANCO, Inc. on February 22, 1978. He also stated that the purpose of the meeting was to discuss the unionization of NUMANCO, Inc.

The complainant also discussed his meeting at the Indian Point Site on March 7, 1978 with representatives of the licensee and its' contractors. He stated that he informed the licensee of his allegation during the meeting. The complainant also stated a concern he had that the Radiation Work Permits being used at the Indian Point site were being signed by Junior Technicians rather than by the Senior Technicians.

E. NRC Comments and Findings Regarding the Complainants Allegation

1. Allegation

That the representatives of NUMANCO, Inc., during two meetings with the complainant, stated that their firm had a relationship with Con Edison such that they were covering up items of non-compliance to keep Con Edison from being cited by the NRC.

2. NRC Comments

The investigators interviewed the representatives of NUMANCO, Inc. that were identified by the complainant as attending the meetings on February 12 and 22, 1978, and making the statement described in the allegation. Each of the NUMANCO, Inc. representatives confirmed their presence at the meetings and each representative denied that such a statement was made during the meeting.

The investigators interviewed licensee and contractor representatives that were present at the meeting held at the Indian Point site on March 7, 1978 at the request of the complainant. These individuals confirmed that the complainant stated his allegation regarding the representatives of NUMANCO, Inc. and that the NUMANCO, Inc. representative denied the statement at the meeting.

The licensee had previously informed NRC, Region I by telephone on March 6, 1978 that pickets were located at the entrance to the Indian Point Nuclear Plant site and signs were displayed as follows:

"NUMANCO unfair to Boilermakers"

"Con Ed unfair to Boilermakers"

"What is NUMANCO and Con Ed hiding from the NRC"

On March 7, 1978, the licensee informed NRC, Region I by telephone of the meeting with the complainant.

On March 9, 1978, the licensee informed NRC, Region I by telephone that the pickets had been removed.

The investigators examined the following records regarding the health physics program:

- a. Daily audits during the period January 1, 1978 to March 5, 1978 for surveillance of areas within the controlled area, areas outside of the controlled area, and for adherence to the requirements specified in Radiation Work Permits. These audits are performed by supervision of NUMANCO, Inc. and Con Ed.
- b. Weekly audits during the period January 1, 1978 to March 13, 1978 of controlled area activities performed by Con Ed Radiological Engineer.
- c. Audits required by Technical Specification performed during July and August, 1977 by the members of the Nuclear Facilities Safety Committee. These members are usually representatives from the Con Ed Corporate Office.

The investigators observed that the audit records reflected apparent items of noncompliance identified by the licensee and its contractor. The documents also indicated that corrective action was implemented when necessary or that the items were resolved in a timely manner.

These audit records have also been examined previous to this investigation by NRC, Region I representatives during routine inspections regarding the health physics program controls.

3. NRC Findings

The NRC investigation found no information or evidence to substantiate the allegation.

F. NRC Comments and Findings Regarding the Complainants Concern

1. Concern

That the Radiation Work Permits being used at the Indian Point site were being signed by Junior Technicians rather than by Senior Technicians.

2. NRC Comments

The investigators examined approximately 50 Radiation Work Permits (RWP's) issued for the current outage. This examination indicated that all of the RWP's were authorized and re-authorized by Senior Technician level or above.

The investigators also reviewed the survey data supporting various RWP's and determined that the surveys were signed by Senior Technician or above.

The investigators also noted that RWP's were only issued by personnel that were designated by the Licensee Chemistry and Radiation Safety Director.

The investigators contacted several Health Physics Technicians and determined that they were aware of the required authority for authorizing RWP's.

3. NRC Findings

The NRC investigation found no information or evidence that Radiation Work Permits were being signed by Junior Technicians.

G. Management Meetings

On March 14 and 15, 1978, the investigator met with Mr. E. McGrath, Manager, Nuclear Power Generating Department.

On March 14, 1978, the investigator discussed the reason and scope of the investigation.

On March 15, 1978, the investigator discussed the investigation findings and informed the licensee that no items of noncompliance had been identified.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406



APR 5 1978

Docket Nos. 50-003
50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. W. J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

Gentlemen:

Subject: Inspection 50-003/78-03; 50-247/78-04

This refers to the inspection conducted by Mr. L. H. Thonus of this office on February 27 - March 1 and March 15-17, 1978, of activities authorized by NRC License Nos. DPR-5 and DPR-26 and to the discussions of our findings held by Mr. Thonus with Mr. E. McGrath of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section

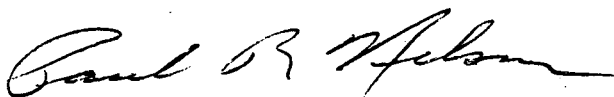
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Consolidated Edison Company of 2
New York, Inc.

2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



Paul R. Nelson, Chief
Fuel Facility and Materials Safety
Branch

Enclosure: Office of Inspection and Enforcement Inspection Report
Number 50-003/78-03; 50-247/78-04

cc w/encl:

- L. O. Brooks, Project Manager, IP Nuclear
- E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
- T. Law, Plant Manager
- J. M. Makepeace, Director, Technical Engineering
- J. D. Block, Esquire, Executive Vice President - Administration
- E. J. Sack, Esquire
- A. Z. Roisman, Natural Resources Defense Council (Without Report)

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-003/78-03
50-247/78-04
Docket No. 50-003
50-247
License No. DPR-5 Priority _____ Category D; C
DPR-26

Licensee: Consolidated Edison Company of New York, Inc.
4 Irving Place
New York, New York

Facility Name: Indian Point Nuclear Generating Units 1 and 2

Inspection at: Indian Point Station, Buchanan, New York

Inspection conducted: February 27 - March 1 and March 15-17, 1978

Inspectors: [Signature] 4 April 78
L. H. Thonus, Radiation Specialist date signed

date signed

date signed

Approved by: [Signature] 4 April 78
P. J. Knapp, Chief, Radiation Support Section, date signed
FF&MS Branch

Inspection Summary:

Inspection on February 27 - March 1 and March 15-17, 1978 (Combined Report
Nos. 50-003/78-03, 50-247/78-04)

Areas Inspected: Routine, unannounced inspection of Unit 1 radiation protection program and Unit 2 radiation protection during refueling including personnel staffing and qualifications, training, exposure control, posting and control, radioactive material control, surveys, clean-contaminated system interfaces and followup of Licensee Event Report LER 78-004/04T-0 (Unit 2 only). Upon arrival, off-shift, areas where work was being conducted were examined to review radiation safety control procedures and practices. The inspection involved 36 inspector-hours onsite by one NRC inspector.

Results: Of the eight areas inspected for Unit 2 and seven for Unit 1, no items of noncompliance were identified.

DETAILS

1. Persons Contacted

- Mr. J. Cullen, General Health Physics Supervisor
- * Mr. E. Dadson, Manager QA Dept. Field Office
- Mr. W. Grassi, General Labor Supervisor
- Mr. P. Gaudio, Health Physics Supervisor
- Mr. J. Higgins, General Chemistry Supervisor
- Mr. M. Hensch, NUMANCO Field Supervisor
- Mr. G. Imbimbo, Nuclear Training Specialist
- Mr. W. Janke, Radwaste Supervisor
- Mr. T. Law, Plant Manager
- Mr. G. Liebler, Radiological Engineer
- * Mr. J. Makepeace, Technical Engineering Director
- * Mr. E. McGrath, Manager - Nuclear Power Generation
- Mr. B. Moroney, Nuclear Training Director
- Mr. J. Odendahl, Union Radiation Safety Representative
- Mr. T. Teague, Health Physics Supervisor
- Mr. R. Vogle, Health Physics Supervisor
- * Mr. S. Wisla, Chemistry and Radiation Safety Director

Approximately 20 other personnel were contacted including Health Physics technicians, maintenance personnel, clerks, contractors and members of the security force.

2. Personnel Staffing and Qualifications

Technical Specification (TS) 6.3.1 "Facility Staff Qualifications" endorses American National Standards Institute (ANSI) standard N18.1-1971. ANSI N18.1-1971 requires that "Technicians in responsible positions shall have a minimum of two years working experience in their specialty." The inspector reviewed the qualifications of 32 contractor health physics technicians in responsible positions by interviews, review of training records and examinations and review of resumes. The inspector reviewed the increased staffing to verify that it was capable of providing an adequate level of health physics coverage to the outage.

No items of noncompliance were identified.

3. Training

The inspector examined training records and examinations of six contractor health physics technicians to verify that they were trained

in accordance with Health Physics Procedure 8.1. The inspector also examined the training records of ten other contractors to verify that they had been trained in accordance with the requirements of 10 CFR Part 19.12.

No items of noncompliance were identified.

4. Exposure Control

The inspector examined dosimetry devices used by the licensee for exposure control. Each individual is assigned a film badge, four TLD's, and one or more self-reading pocket dosimeters; individuals who could receive extremity doses were issued extremity dosimeters in accordance with Health Physics Procedure 4.1. Approximately 50 self-reading pocket dosimeters in use by personnel were examined and found to be in calibration. The licensee's exposure monitoring devices were adequate.

The inspector reviewed the licensee's exposure control system for compliance with 10 CFR 20.101, 20.102, 20.103, 20.202 and 20.401. The records of seven individuals with quarterly whole body exposure in excess of 10 CFR 20.101(a) limits were examined and NRC-4's were completed on all of the individuals prior to exceeding the 10 CFR 201(a) limits for whole body exposure. The records of three individuals were examined for exposure limit extensions as required by Health Physics Procedure 1.2.

The licensee's airborne activity has been low enough that the use of protection factors has not been necessary. The licensee has been routinely performing bioassay (whole body counting on incoming contractor personnel to obtain baseline data). No personnel were found who had been exposed to levels of airborne activity which would indicate a need for bioassay.

No items of noncompliance were identified.

5. Posting and Control

The inspector examined posting of radiologically controlled areas for compliance with 10 CFR 20.203 and Health Physics Procedure 2.3 during four tours of the facility. Independent measurements were taken to verify licensee posting.

Based on independent measurements and licensee surveys the inspector examined 23 Radiation Work Permits (RWP's) to verify that they afforded workers an adequate level of protection. The inspector observed work parties associated with 11 of the above RWP's and found personnel complying with the RWP requirements. The inspector also examined the licensee's control point at the entrance to the Vapor Containment (VC) and found that copies of RWP's and access lists were current and personnel were checked against both before being allowed access to the VC.

The inspector examined approximately 40 of the licensee's RWP sign-in sheets and observed personnel traffic entering and leaving the Radiation Controlled Area (RCA) during shift change and meal breaks. The inspector also checked sign-in sheets against film badge issue. No personnel were found in the RCA who hadn't signed in and out. The inspector examined friskers, hand and foot counters and portal monitors used for contamination control and found them calibrated and operational. The inspector also observed that personnel were adhering to the frisking instructions.

No items of noncompliance were identified.

6. Radioactive Material Control

The inspector examined several containers of radioactive waste and found them to be properly marked and the areas posted in accordance with 10 CFR 20.203. The inspector reviewed transfer and temporary storage of contaminated tools, equipment, and components being used during the outage. The material was packaged to avoid the spread of contamination and labeled in accordance with 10 CFR 20.203.

No items of noncompliance were identified.

7. Surveys

The inspector determined from observations, independent measurements, and inspection of survey records for RWP Nos. 1142, 1161, 1169, 1181, 1188, 1255 and 1269 that radiation, contamination and airborne activity surveys had been performed in accordance with 10 CFR 20.201 and Health Physics Procedures 3.1, 3.2 and 3.3. During tours of the controlled areas the inspector noted that recent routine radiation and contamination survey results were posted at the entrances to the areas surveyed.

Surveys of the radioactive waste draining facility for the month of December were examined for compliance with RWP's 727 and 1017.

Approximately 20 routine surveys during February 25-27 were examined and found to be performed and documented in accordance with Health Physics Procedures 3.1, 3.2, and 3.3.

No items of noncompliance were identified.

8. Clean-Contaminated Systems Interfaces

The inspector examined the licensee's response to IE Circular 77-14 and the licensee's action on the interface of the auxiliary boiler. The licensee's evaluation of Circular 77-14 has been completed and one potential area where cross contamination could occur (Vapor Containment Isolation Valve Seal Water System interconnect with city water). The licensee is currently evaluating a design change in which check valves would prevent flow into the city water system. The auxiliary boiler interface is awaiting installation of a radiation monitor on the clean side.

No items of noncompliance were identified.

9. Initial Followup of Licensee Event Report (LER)

On February 17, 1978, the licensee reported in LER 78-004/04T-0 a release of airborne activity on February 19, 1978. The path of release was from the No. 21 CVCS holdup tank through the waste hold-up tank to the Primary Auxiliary Building and Plant Vent. The inspector examined air surveys taken with particulate and charcoal filters and a gas sample. Samples were counted for beta, gamma activity and later gamma spectral analysis performed. Results indicated that the maximally exposed individual (an auxiliary operator) was exposed to less than the equivalent of 1/2 hour at concentrations listed in 10 CFR 20 Appendix B Table I column 1. Potential environmental effects and plant design considerations will be examined in subsequent inspections.

No items of noncompliance were identified.

10. Exit Interview

The inspector met with the licensee representatives (denoted in paragraph 1) at the conclusion of the inspection on March 17, 1978. The inspector summarized the purpose and scope of the inspection and the inspection findings. The licensee acknowledged the findings of the inspection.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

FEB 14 1978

Docket Nos. 50-03/78-2
50-247

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. W. J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

Gentlemen:

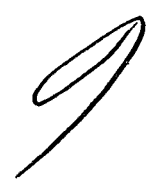
Subject: Inspections 50-03/78-02; 50-247/78-02

This refers to the inspection conducted by Mr. L. Thonus of this office on January 26-27, 1978 of activities authorized by NRC License Nos. DPR-5 and DPR-26 and to the discussions of our findings held by Mr. Thonus with Mr. T. Law of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

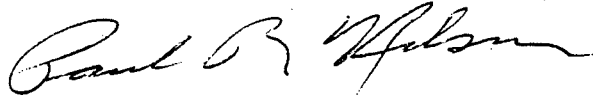
Within the scope of this inspection, no items of noncompliance were observed.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.



No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



Paul R. Nelson, Chief
Fuel Facility and Materials Safety
Branch

Enclosure: Office of Inspection and Enforcement Inspection
Report Numbers 50-03/78-02 and 50-247/78-02

cc w/encl:

L. O. Brooks, Project Manager, IP Nuclear (Con Ed)
E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
T. Law, Plant Manager (Con Ed)
J. M. Makepeace, Director, Technical Engineering (Con Ed)
L. M. Trosten, Esquire (Representing PASNY)
George T. Berry, General Manager and Chief Engineer (PASNY)
L. R. Bennett, General Counsel (PASNY)
Rear Admiral P. J. Early, Assistant Chief Engineer - Projects (PASNY)
P. W. Lyon, Manager - Nuclear Operations (PASNY)
J. P. Bayne, Resident Manager (PASNY)
J. D. Block, Esquire, Executive Vice President - Administration (Con Ed)
E. J. Sack, Esquire (Con Ed)
A. Z. Roisman, Counsel for Citizens Committee for
Protection of the Environment (Without Report)

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-03/78-02
50-247/78-02

Docket No. 50-03
50-247

License No. DPR-5 Priority _____ Category D;C
DPR-26

Licensee: Consolidated Edison Company of New York, Inc.

4 Irving Place

New York, New York 10003

Facility Name: Indian Point Nuclear Generating Units 1 and 2

Inspection at: Indian Point Station, Buchanan, New York

Inspection conducted: January 26-27, 1977

Inspectors: L. H. Thonus, Radiation Specialist

2/10/78
date signed

date signed

date signed

Approved by: P. J. Knapp, Chief, Radiation Support Section, FF&MS Branch

2/10/78
date signed

Inspection Summary:

Inspection on January 26-27, 1978 (Report Nos. 50-03/78-02; 50-247/78-02)

Areas Inspected: Routine, announced inspection of Unit 2 radiation protection during refueling including facility tour, procedures and advance planning and preparation. Upon arrival the inspector toured the facility including portions of the combined Unit 1 and Unit 2 controlled area to observe radiological safety and work practices. The inspection involved 10 inspection hours onsite by one NRC inspector.

Results: Of the three areas inspected no items of noncompliance were found.

DETAILS

1. Persons Contacted

- *M. Byster, QA Engineer
- J. Cullen, General Health Physics Supervisor
- *T. Law, Plant Manager
- *J. Makepeace, Technical Engineering Director
- W. Monti, Outage Coordinator
- J. O'Connell, Foreman, Van Nest Shops
- F. Smith, Superintendent, Van Nest Shops
- *S. Wisla, Chemistry and Radiation Safety Director
- M. Hensch, Field Supervisor (NUMANCO)
- *J. Bayne, Resident Manager IP 3 (PASNY)
- *J. Kelly, Radiological and Environmental Services Superintendent (PASNY)
- *J. Kilduff, Asst. to Resident Manager (PASNY)

The inspector also interviewed 8 other licensee employees during the course of the inspection. They included members of the security force engineering staff, health physics staff and maintenance personnel.

*denotes those present at the exit interview.

2. Facility Tour

The inspector toured the facility on January 26 to verify licensee compliance with 10 CFR 20, Technical Specifications (TS) and procedure requirements. Posting and labeling and radiation area control were examined in the combined Unit 1 and 2 controlled area for compliance with 10 CFR 20.203 and procedures developed pursuant to Unit 2 T.S. 6.11 and Unit 1 T.S. 3.2.6. Independent measurements were made to verify licensee posting. Personnel working under Radiation Work Permit (RWP) numbers 1020 and 1049 were observed to verify that they were complying with the conditions of the RWP's. Contamination control points (step-off pads) were maintained and contamination monitoring devices (portal monitors, hand and foot counters and friskers) were operational, calibrated and the alarms functional.

No items of noncompliance were identified.

3. Procedures

The inspector reviewed two refueling maintenance procedures, one for the repair of Crosby valve 855 (part of the safety injection system) and one for steam generator eddy current testing and tube plugging for compliance with the criteria in Regulatory Guide 1.33 and ANSI standard N 18.7-1972. The steam generator maintenance procedure referenced a temporary Health Physics procedure titled "Steam Generator Primary Channel Head Work", which was also reviewed.

No items of noncompliance were identified.

4. Advance Planning and Preparation

The inspector reviewed the licensee's contractor entry control point and a modified gate to control traffic behind the security desk at the current control point. The contractor control point is capable of controlling traffic flow and preventing the spread of contamination outside the controlled area. The inspector also reviewed the licensee's supplies and equipment to determine if they were adequate for the increased usage during the outage.

A tour was made of the licensee's Van Nest Shops where the steam generator mockup and other outage related items were located. The inspector examined the full-scale (including interferences) steam generator mockup for eddy current testing and the full scale mockup for the placement of hand-holes and removal of tubes. The use of these mockups should increase worker skill, greatly reduce exposure and facilitate resolution of difficulties encountered during the task.

5. Exit Interview

The inspector met with licensee representatives (denoted in Paragraph 1) at the conclusion of the inspection on January 26, 1978. The inspector summarized the scope and findings of the inspection.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

FEB 14 1978

Docket Nos. 50-03/78-1
50-247
50-286

Consolidated Edison Company of
New York, Inc.
ATTN: Mr. W. J. Cahill, Jr.
Vice President
4 Irving Place
New York, New York 10003

Gentlemen:

Subject: Combined Inspections 50-03/78-01; 50-247/78-01 and 50-286/78-02

This refers to the inspection conducted by Dr. Bores and Mr. Donaldson of this office on January 10, 11 and 19, 1978; at Indian Point Units 1, 2 and 3 and at the corporate offices of Consolidated Edison and of PASNY of activities authorized by NRC License Nos. DPR-5, DPR-26 and DPR-64 and to the discussions of our findings held by Dr. Bores and Mr. Donaldson with Messrs. Law, Limoges, Cheifetz and others of your staff at the conclusion of the inspection.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, and observations by the inspector.

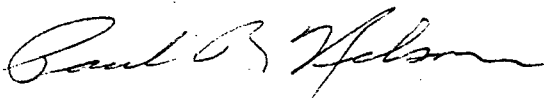
Our inspector also verified the steps you have taken to correct items of noncompliance, A and B brought to your attention in a letter dated November 15, 1977. We have no further questions regarding your action at this time.

Within the scope of this inspection, no items of noncompliance were observed. In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosed inspection report will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subpara-

graph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

No reply to this letter is required; however, should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



Paul R. Nelson, Chief
Fuel Facility and Materials Safety
Branch

Enclosure: Office of Inspection and Enforcement Inspection Combined
Report Numbers 50-03/78-01; 50-246/78-01; 50-286/78-02

cc w/encl:

- L. O. Brooks, Project Manager, IP Nuclear (Con Ed)
- E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
- T. Law, Plant Manager (Con Ed)
- J. M. Makepeace, Director, Technical Engineering (Con Ed)
- L. M. Trosten, Esquire (Representing PASNY)
- George T. Berry, General Manager and Chief Engineer (PASNY)
- L. R. Bennett, General Counsel (PASNY)
- Rear Admiral P. J. Early, Assistant Chief Engineer - Projects (PASNY)
- P. W. Lyon, Manager - Nuclear Operations (PASNY)
- J. P. Bayne, Resident Manager (PASNY)
- J. D. Block, Esquire, Executive Vice President - Administration (Con Ed)
- E. J. Sack, Esquire (Con Ed)
- A. Z. Roisman, Counsel for Citizens Committee for
Protection of the Environment (Without Report)

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-03/78-01
50-247/78-01
50-286/78-02

Docket No. 50-03
50-247
50-286

License No. DPR-5
DPR-26
DPR-64

Priority --

Category D
C
C

Licensee: Consolidated Edison Company of New York, Inc. (Con Ed)
4 Irving Place
New York, New York 10003

Facility Name: Indian Point Nuclear Generating Units (IP) 1, 2, and 3
Indian Point Nuclear Generating Units 1, 2, and 3, Buchanan, New York
Inspection at: and Corporate Offices of Consolidated Edison Company of New York, Inc.
and Power Authority of the State of New York (PASNY)
Inspection conducted: January 10, 11, and 19, 1978

Inspectors: Robert J. Bores
Robert J. Bores, Radiation Specialist

02-10-78
date signed

for Robert J. Bores
Dale E. Donaldson, Radiation Specialist

02-10-78
date signed

Approved by: J. P. Stohr
J. P. Stohr, Chief, Environmental Protection
and Special Projects Section, FF&MS Branch

date signed
2/10/78
date signed

Inspection Summary:

Inspection on January 10, 11 and 19, 1978 (Combined Inspection Report Nos. 50-03/78-01;
50-247/78-01; and 50-286/78-02

Areas Inspected: Special, announced inspection of the environmental protection program (operational phase) and of the emergency planning program (operational phase). The inspection was limited to the followup of previously identified enforcement items and unresolved items, to the preparedness of PASNY to take over the operation of IP-Unit 3, and to the agreements/understandings between Con Ed and PASNY concerning the operation of Unit 3 within common site requirements. Environmental areas inspected include management controls for this program and the implementation of the radiological environmental monitoring program. Emergency planning areas inspected include the management and administrative controls for emergency facilities and equipment, coordination with offsite agencies, emergency plan training, drills, and PASNY-Con Ed material support agreements. The inspection involved 19 onsite inspector-hours by two NRC inspectors.

Results: Within the scope of this inspection, no items of noncompliance were identified.

DETAILS

1. Individuals Contacted

Consolidated Edison Company of New York, Inc. (Con Ed)

- W. Cahill, Jr., Vice President - Licensing
- J. Jannarone, Vice President - Environmental Affairs; Chairman of Environmental Protection Committee (EPC)
- *A. Cheifetz, Sr. Engineer - Environmental, Nuclear and Gas Testing Group
- *M. Smith, Secretary of the EPC
- *J. Szeligowski, Emissions Control Engineer; Past Secretary of EPC
- *N. Hartman, Consultant, Quality Standards & Reliability (QS&R)
 - E. Sack, Law Department
 - A. Ferraro, Staff Engineer
- +T. Law, Plant Manager, IP
- *C. Limoges, Reactor Engineer, IP
- +G. Liebler, Senior Engineer, IP

Power Authority of the State of New York (PASNY)

- *J. Blake, Director - Environmental Programs
- S. Farber, Radiological Engineer
- J. Davis, Chief, Nuclear Engineer - Staff
- +S. Cantone, Superintendent of Power, IP
- +J. Bayne, Resident Manager, IP
- +*J. Kelly, Radiological and Environmental Services (RES) Superintendent, IP
- +S. Dodge, Asst. to RES Superintendent, IP
- D. Quinn, Radiological Engineer, IP

*denotes those present at exit interview on January 11, 1978 at Con Ed Corporate Offices.

+denotes those present at exit interview on January 19, 1978 at IP.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (77-14-01; 77-33-01; 77-31-01) Failure to have properly approved procedures. The inspector determined through a review of selected procedures, review of EPC meeting minutes, and

discussions with licensee representatives, that the procedures identified during previous inspections of this area have been reviewed and approved. The inspector also determined that the additional procedures, which were identified by the licensee's management control system and reported to the NRC in a letter dated December 15, 1977, were being completed and reviewed in accord with the licensee's reported commitment dates. The inspector had no further questions in this area at this time.

(Closed) Noncompliance (77-14-02; 77-33-02; 77-31-02) Failure to follow procedures. The inspector determined through the review of the licensee's Environmental Quality Control Program, Procedure NEM-AD-08 and the implementing procedure, NEM-A-03; discussions with the licensee; and the review of samples collected and split, that the above procedures had been implemented by January 1, 1978. The inspector had no further questions in this area at this time.

(Open) Unresolved Item (286/77-31-06) Analytical Sensitivities for Sr-89, Sr-90 and I-131. The inspector determined through discussions with the licensee and a survey of the records provided, that the licensee has received the work sheets/data sheets from the contractor from which verification of analytical sensitivities can be made. The licensee stated that his review of this data is not yet complete. The inspector stated that this item would remain unresolved pending the completion of the licensee's review and evaluation of these records, and the review of this area by the NRC during a subsequent inspection.

3. Environmental Monitoring

a. Con Ed Management Controls

The licensee stated that Mr. S. Sadlon is now the supervisor of the Nuclear Environmental Monitoring (NEM) program at Indian Point, replacing Mr. L. Volpe. The inspector discussed with the licensee the special training to be provided for this position.

The inspector determined through discussions with the licensee and through the review of applicable records and working papers, that the licensee has completed a "Master List" of procedures necessary to comply with the Environmental Technical Specification Requirements (ETSR) for Indian Point Units

1, 2 and 3. The EPC is in the process of assembling a complete file copy of Master List Procedures at the present time and has committed to a completion schedule to assure timely completion of this task.

The inspector also determined that in order to assure that (1) all environmental samples (radiological) are collected at the required frequency, (2) all required radiological analyses are performed, (3) all radioanalytical sensitivities meet the requirements, and (4) anomalous or unusual results are "flagged" for resolution or reporting, a computer program containing these essential environmental monitoring program elements has been developed and is currently in the "de-bugging" stages. The above program has been implemented in the interim through administrative review requirements.

The inspector had no further questions in the above areas at this time.

b. Readiness of PASNY to Assume Operations of Unit 3 Environmental

The inspector discussed with PASNY personnel the PASNY organization and administrative controls relative to the environmental programs for Indian Point Unit 3. The inspector determined (1) the authorities and responsibilities for conducting these programs have been assigned as stated in the PASNY proposed Section 5.0 of the ETSR, (2) assurance of quality of analytical work will be made through the use of frequent reviews of the Con Ed quality control program, (3) provisions for review of the environmental programs by Plant Operating Review Committee (PORC), including ETSR procedures and/or changes therein, have been made, and (4) periodic audits will be performed by the Safety Review Committee (SRC), although the details of these audits have not yet been fully developed.

The inspector also discussed several modifications/clarifications to the wording in the PASNY proposed ETSR. PASNY representatives stated that they would evaluate and clarify these areas.

The inspector stated that he had no additional questions relative to the PASNY administrative controls on the environmental programs for IP-3 at this time.

c. Con Ed - PASNY Coordination on Site Related Environmental Matters

For purposes of assuring coordination and understandings between the two organizations regarding site facilities, services, systems, regulatory restrictions, and responsibilities, Con Ed and PASNY have prepared memoranda of understanding relative to each identified area. The inspector reviewed the memoranda of understanding concerning the following areas: the discharge canal, outfall structure and associated instrumentation and sampling; the operation and maintenance of the common sewage treatment facility; the chlorination system; the transmittal of operating information between Con Ed and PASNY; the operation and maintenance of the meteorology tower; the receipt, processing and discharge of liquid waste; actions to be taken in the event a site limit is exceeded; environmental monitoring services; and the apportionment of fish impingement limits and actions to be taken.

The memoranda of understanding were discussed with Con Ed and PASNY representatives, along with plans for assuring that procedures, or changes thereto, which may affect site limits or which concern site monitoring programs are brought to the attention of the appropriate organization such that the review/approval of these changes/procedures can be made in accord with the respective ETSR.

The utility representatives stated that coordination in these matters would be maintained through the use of cross-membership on the EPC, NFSC, and PORC. In this manner, items relative to site programs will be brought to the attention of both utilities and can be acted on by their respective committees.

The inspector also discussed the coordination between the various committees relative to resolving conflicts, if any, concerning procedures, reports, limits, or ETSR. While a

formal mechanism has not been established to handle such situations, at present, the utility representatives stated that the general concept for handling this situation has been discussed and will be resolved, as necessary, to continue operation in compliance with the ETSR.

The conduct of audits of site environmental activities, the distribution of such audit reports and response to audit identified deficiencies were also discussed with Con Ed and PASNY representatives. While the details of such activities were not complete, there was mutual consent as to the general policy and directions in this area.

The inspector stated that contingent on the understandings reached between Con Ed and PASNY concerning the conduct of the environmental monitoring programs at the Indian Point site, he had no further questions in these areas at this time.

4. Emergency Planning

a. General

During this portion of the inspection the inspector reviewed the proposed emergency planning program intended for implementation at the Indian Point 3 facility upon transfer of the operating license for Unit 3 from Consolidated Edison to the Power Authority of the State of New York (PASNY). In this regard, the inspector reviewed management and administrative controls and actions relating to: emergency facilities and equipment; coordination with offsite agencies; emergency plan training; drills; and PASNY-Consolidated Edison Mutual Support Agreements.

b. Emergency Plan and Implementing Procedures

PASNY has developed an emergency plan titled, "Emergency Plan, Indian Point 3 Nuclear Power Plant," dated April 1, 1977. This plan closely resembles the current emergency plan implemented by Consolidated Edison for the Indian Point Units 1 and 2 and incorporates appropriate revisions to reflect the PASNY organization.

While each licensee (PASNY and Con Ed) has a separate emergency plan, the procedures to be implemented in the event of an emergency will remain common to both licensees. Through discussion with PASNY and Consolidated Edison management personnel and a review of PASNY Memorandum of Understanding (MOU) Number 28, "Rules Governing the Implementation of the Emergency Plan at the Indian Plant Site," the inspector observed that consideration had not been given to dual licensee review and approval of procedures and any changes thereto. Representatives of both licensee organizations acknowledged the importance of dual review and stated that an appropriate reference to dual review would be added to MOU Number 28 prior to the licensee transfer. Subsequent to completion of the onsite portion of the inspection, the licensee provided the inspector with a revised copy of MOU Number 28, dated 1/23/78. The inspector noted that the document addressed dual review/approval of common emergency plan implementing procedures.

With regard to distribution of implementing procedures, it has been agreed that Consolidated Edison will continue distribution of all common procedures to offsite support agencies. In addition, Consolidated Edison will provide one copy of changes to the PASNY Site Emergency Plan Coordinator who will, in turn, distribute changes within the PASNY organization.

The inspector had no further questions.

c. Coordination with Offsite Agencies

Discussion with PASNY and Consolidated Edison management indicated that offsite agency coordination activities, i.e., training, meetings, etc., will be accomplished via joint effort on the part of the licensees. Licensee management representatives agreed that this understanding should be clarified through revision of PASNY MOU Number 28, prior to license transfer. Subsequent to completion of the onsite portion of the inspection, the licensee provided the inspector with a revised copy of MOU Number 28 (paragraph 4.b). The inspector noted that PASNY and Consolidated Edison have agreed to perform joint offsite agency coordination activities.

PASNY had reached separate written agreements with each off-site agency.

It was therefore, determined that a joint approach to offsite agency coordination would pose no problems.

The inspector had no further questions.

d. Training

The inspector and PASNY management discussed plans for training individuals who may be assigned emergency duties in the event of an emergency. The inspector noted that a training program had not been developed. The inspector stated that a training program, similar to that currently administered by Consolidated Edison, would have to be developed prior to the transfer of the Indian Point 3 operating license to PASNY. This item is unresolved. (286/78-02-01)

e. Drills

Discussions with PASNY management personnel indicated that full consideration had not been given to meeting emergency plan drill requirements. Subsequent discussion with Consolidated Edison management indicated that further discussions between the involved parties would be necessary to formulate a concept for conducting drills that will ensure that each respective licensee's requirements will be met.

Discussions relating to the conduct of drills will necessitate minor revisions to the existing Consolidated Edison procedure by PASNY. The inspector informed PASNY management that development of the drill procedure would be required prior to licensee transfer. This item is unresolved. (286/78-02-02)

f. Facilities and Equipment

Discussion with PASNY and Consolidated Edison Management and review of PASNY MOU Number 28 indicated that all commonly shared emergency facilities and equipment will be inventoried and maintained by Consolidated Edison. The items included are: primary and alternate emergency control centers; emergency kits; and the first aid/decontamination facility.

The inspector had no further questions.

g. Management Control - Emergency Planning

The inspector noted that PASNY had an assigned Emergency Plan Coordinator with responsibility for the administrative control of emergency readiness. This individual coordinates directly with a Consolidated Edison counterpart in the dual licensee interface areas. PASNY has established an audit system for verifying the completion of certain actions by Consolidated Edison in their behalf; i.e., equipment inventory and maintenance. PASNY MOU Number 28 addresses the provision for PASNY audit of applicable Consolidated Edison performed services and provides a means of resolution of any noted discrepancies.

The inspector had no further questions.

5. Unresolved Items

Unresolved items are matters about which more information is required in order to ascertain whether they are acceptable items, items of noncompliance, or deviations. Unresolved items disclosed during this inspection are discussed in Paragraphs 4.d. and 4.e.

6. Exit Interview

On January 11, 1978, at the conclusion of the environmental portion of the inspection, Dr. Bores met with the individuals indicated in Paragraph 1 at the Con Ed offices. The scope and findings of this portion of the inspection were discussed.

On January 19, 1978, at the conclusion of the emergency planning portion of the inspection, Mr. Donaldson met with the individuals indicated in Paragraph 1 at Indian Point. The scope and findings of the inspection were discussed, including the following unresolved items:

Training (286/78-02-01)

Licensee management anticipated no difficulty in developing a training program, prior to licensee transfer, for individuals having emergency duties and who would not receive training under the existing Consolidated Edison emergency plan training program.

Drill Procedure (286/78-02-02)

Licensee management acknowledged the necessity to develop a procedure for conducting drills per the requirements of the emergency plan. It was also acknowledged that the procedure would be completed prior to license transfer.



UNITED STATES
 NUCLEAR REGULATORY COMMISSION
 REGION I
 631 PARK AVENUE
 KING OF PRUSSIA, PENNSYLVANIA 19406

Docket No. 50-03
 50-247
 50-286

MAR 1 1978

Consolidated Edison Company of
 New York, Inc.
 ATTN: Mr. W. J. Cahill, Jr.
 Vice President
 4 Irving Place
 New York, New York 10003

Gentlemen:

Subject: Combined Inspection 50-03/77-18, 50-247/77-38 and 50-286/77-39

This refers to your letter dated 2/10/78, in response to our letter dated 1/19/78.

Thank you for informing us of the corrective and preventive actions documented in your letter. These actions will be examined during a subsequent inspection of your licensed program.

Your cooperation with us is appreciated.

Sincerely,

E. J. Brunner, Chief
 Reactor Operations and Nuclear
 Support Branch

cc:

L. O. Brooks, Project Manager, IP Nuclear (Con Ed)
 E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
 T. Law, Plant Manager (Con Ed)
 J. M. Makepeace, Director, Technical Engineering (Con Ed)
 L. M. Trosten, Esquire (Representing PASNY)
 George T. Berry, General Manager and Chief Engineer (PASNY)
 L. R. Bennett, General Counsel (PASNY)
 Rear Admiral P. J. Early, Assistant Chief Engineer - Projects (PASNY)
 P. W. Lyon, Manager - Nuclear Operations (PASNY)
 J. P. Bayne, Resident Manager (PASNY)
 J. D. Block, Esquire, Executive Vice President - Administration (Con Ed)
 E. J. Sack, Esquire (Con Ed)
 A. Z. Roisman, Counsel for Citizens Committee for
 Protection of the Environment

William J. Cahill, Jr.
Vice President

Consolidated Edison Company of New York, Inc.
4 Irving Place, New York, N Y 10003
Telephone (212) 460-3819

February 10, 1978

Indian Point Station
Docket Nos. 50-003
50-247
50-286

Mr. Eldon J. Brunner, Chief
Reactor Operations and Nuclear Support Branch
U. S. Nuclear Regulatory Commission, Region I
631 Park Avenue
King of Prussia, Pennsylvania 19406

Dear Mr. Brunner

This refers to Inspection Nos. 50-03/77-18, 50-247/77-38 and 50-286/77-39, conducted by Mr. J. Streeter, Reactor Inspector, on November 21-23, November 28 - December 2 and December 5-7, 1977, of activities authorized by NRC License Nos. DPR-5, DPR-26 and DPR-64 at our Indian Point Station. Your January 19, 1978, letter indicated that certain of our activities were not conducted in full compliance with NRC requirements. These activities were set forth as Items A and B in the Notice of Violation enclosed as Appendix A to your letter.

Since your letter indicated a response was not required in reference to Item A, this response will address itself solely to Item B as given in the Notice of Violation. Our response to this item is as follows:

All controlled drawings, with the exception of four, have been returned to the Central Files Controller. A search of company and contractor records has failed to locate these four drawings. The Construction Department has issued a memorandum to the Central Files Controller, documenting the fact that these drawings cannot be retrieved.

To avoid recurrence of this item, the Construction Department has incorporated enhanced drawing control procedures in its recently issued revision to Construction Field Directive No. 1. This document provides administrative controls for the receipt, storage, preservation and safekeeping of quality assurance documents relating to Construction-managed Class A modifications, major maintenance or major repair projects.

Very truly yours

A handwritten signature in cursive script, appearing to read "William J. Kelly". The signature is written in dark ink and is positioned below the typed text "Very truly yours".



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
631 PARK AVENUE
KING OF PRUSSIA, PENNSYLVANIA 19406

Docket Nos. 50-03
50-247
50-286

JAN 19 1978

Consolidated Edison Company of
New York, Inc.

ATTN: Mr. W. J. Cahill, Jr.
Vice President

4 Irving Place
New York, New York 10003

Gentlemen:

Subject: Combined Inspection 50-03/77-18, 50-247/77-38, and
50-286/77-39

This refers to the inspection conducted by Mr. J. Streeter of this office on November 21-23, November 28 - December 2, and December 5-7, 1977, at Indian Point Nuclear Generating Units 1, 2, and 3, Buchanan, New York, of activities authorized by NRC License Nos. DPR-5, DPR-26, and DPR-64, and to the discussions of our findings held by Messrs. Streeter and Thonus with Mr. E. McGrath and other members of your staff at the conclusion of the inspection, and to a subsequent telephone discussion between Mr. Streeter and Mr. J. Makepeace on January 6, 1978.

Areas examined during this inspection are described in the Office of Inspection and Enforcement Inspection Report which is enclosed with this letter. Within these areas, the inspection consisted of selective examinations of procedures and representative records, interviews with personnel, measurements made by the inspector, and observations by the inspector.

Our inspector also verified the steps you have taken to correct the item of noncompliance and deviation brought to your attention in letters dated July 9, 1975, May 20, July 9, August 12, October 1, and November 16, 1976, and January 14, May 27, June 3, June 29, August 17, August 25, and October 28, 1977. We have no further questions regarding the steps you took to correct the items reviewed.

JAN 19 1978

Based on the results of this inspection, it appears that certain of your activities were not conducted in full compliance with NRC requirements, as set forth in the Notice of Violation, enclosed herewith as Appendix A. These items of noncompliance have been categorized into the levels as described in our correspondence to you dated December 31, 1974. This notice is sent to you pursuant to the provisions of Section 2.201 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations. Section 2.201 requires you to submit to this office, within twenty (20) days of your receipt of this notice, a written statement or explanation in reply including: (1) corrective steps which have been taken by you and the results achieved; (2) corrective steps which will be taken to avoid further items of noncompliance; and (3) the date when full compliance will be achieved.

With respect to Appendix A, we note that you have corrected Item No. A, and therefore you need not address yourself to this matter in your response.

In accordance with Section 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and the enclosures will be placed in the NRC's Public Document Room. If this report contains any information that you (or your contractor) believe to be proprietary, it is necessary that you make a written application within 20 days to this office to withhold such information from public disclosure. Any such application must be accompanied by an affidavit executed by the owner of the information, which identifies the document or part sought to be withheld, and which contains a statement of reasons which addresses with specificity the items which will be considered by the Commission as listed in subparagraph (b)(4) of Section 2.790. The information sought to be withheld shall be incorporated as far as possible into a separate part of the affidavit. If we do not hear from you in this regard within the specified period, the report will be placed in the Public Document Room.

Should you have any questions concerning this inspection, we will be pleased to discuss them with you.

Sincerely,



Eldon J. Brunner, Chief
Reactor Operations and Nuclear
Support Branch

JAN 19 1978

Enclosures:

1. Appendix A, Notice of Violation
2. Office of Inspection and Enforcement Combined Inspection Report
Numbers 50-03/77-18, 50-247/77-38, and 50-286/77-39

cc w/encls:

L. O. Brooks, Project Manager, IP Nuclear (Con Ed)
E. R. McGrath, Manager, Nuclear Power Generation Department (Con Ed)
T. Law, Plant Manager (Con Ed)
J. M. Makepeace, Director, Technical Engineering (Con Ed)
L. M. Trosten, Esquire (Representing PASNY)
George T. Berry, General Manager and Chief Engineer (PASNY)
L. R. Bennett, General Counsel (PASNY)
Rear Admiral P. J. Early, Assistant Chief Engineer - Projects (PASNY)
P. W. Lyon, Manager - Nuclear Operations (PASNY)
J. P. Bayne, Resident Manager (PASNY)
J. D. Block, Esquire, Executive Vice President - Administration
E. J. Sack, Esquire
Dr. J. W. Blake, Manager - Environmental
A. Z. Roisman, Counsel for Citizens Committee for
Protection of the Environment (Without Report)

APPENDIX A

NOTICE OF VIOLATION

Based on the results of an NRC inspection conducted on November 21-23, November 28 - December 2, and December 5-7, 1977, it appears that certain of your activities were not conducted in full compliance with conditions of your NRC Facility License No. DPR-26 as indicated below. Item A is an Infraction and Item B is a Deficiency.

- A. Technical Specification 6.8.1 requires in part that procedures be implemented that meet or exceed the provisions of Appendix A of Regulatory Guide 1.33. In May 1976, procedure PE-AD-8, "Calibration and Control of Measuring and Test Equipment," implemented the provisions of Paragraph H.1 of Appendix A of Regulatory Guide 1.33 and required in Section 5.4 that measuring and test equipment used on Class A systems be calibrated against reference standards whose calibration has a known valid relationship to nationally recognized standards.

Contrary to the above, on May 22, 1976, procedure 2PC-R56, "6.9 KV Underfrequency Relay Calibration," was conducted on Class A components using a frequency generator which had not been calibrated against a known nationally recognized standard.

- B. Criterion V of Appendix B, 10 CFR Part 50, requires in part that "activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances and shall be accomplished in accordance with these instructions, procedures, or drawings...." Procedure QA-GAD-8, "Control Policy on Drawing Distribution," requires in Section 3.1.d that personnel possessing controlled drawings will maintain security for the drawings and return them promptly to the Central Files Controller when notified the job is completed.

Contrary to the above, as of December 2, 1977, controlled drawings associated with Modification Procedure ESG-76-2-07 which were issued to members of the Construction Department in June 1976, were not returned to the Central Files Controller when informed by memorandum dated August 16, 1976, that the job was complete and the drawings should be returned.

U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 50-03/77-18
50-247/77-38
50-286/77-39

Docket No. 50-03,
50-247, 50-286

License No. DPR-5,
DPR-26, DPR-64 Priority -- Category D;C;C

Licensee: Consolidated Edison Company of New York, Inc.

4 Irving Place

New York, New York 10003

Facility Name: Indian Point Nuclear Generating Units 1, 2, and 3

Inspection at: Buchanan, New York

Inspection conducted: November 21-23, November 28 - December 2, December 5-7, 1977

Inspectors: William Streeter 1/17/78
J. F. Streeter, Reactor Inspector date signed

William Raymond 1/17/78
W. J. Raymond, Reactor Inspector date signed

L. H. Thonus 1-19-78
L. H. Thonus, Radiation Specialist date signed

Approved by: A. B. Davis 1/19/78
A. B. Davis, Chief, Reactor Projects date signed
Section No. 1, RO&NS Branch

Inspection Summary:

Inspection on November 21-23, November 28 - December 2, December 5-7, 1977
(Combined Report Nos. 50-03/77-18, 50-247/77-38, and 50-286/77-39)

Areas Inspected: Routine, announced inspection of previous unresolved items and items of noncompliance; plant operations (Unit 2 only); reported events (Unit 2 only); drawing control (Unit 2 only); action on IE Circular 77-13 (Units 2 and 3 only); plant modifications (Unit 2 only); radiation protection and exposure controls including plant tours; management audits of plant operations (Unit 2 only). The inspection involved 104 inspector-hours (Unit 1 - 1 hour; Unit 2 - 63.5 hours; Unit 3 - 39.5 hours) on site by three NRC inspectors.

Results: No items of noncompliance were identified at Units 1 and 3. Of the eight areas inspected at Unit 2, no items of noncompliance were identified in six areas; two items of noncompliance were identified in two areas (Deficiency - failure to follow drawing control procedure, Paragraph 3; Infraction - failure to follow instrument calibration procedure, Paragraph 2).

DETAILS

1. Persons Contacted

- ***Mr. J. Bayne, Resident Manager, Unit 3 (PASNY)
- ***Mr. M. Byster, Engineer, QA
 - Mr. S. Cantone, Superintendent of Power, Unit 3 (PASNY)
 - Mr. J. Cullen, General Health Physics Supervisor
 - Mr. S. Dodge, Assistant to R and ESS, Unit 3 (PASNY)
 - Mr. W. Ferreira, QA Engineer
 - Mr. P. Grobelny, QA Examiner
- *Mr. J. Higgins, General Chemistry Supervisor
- ***Mr. J. Kelly, Radiological and Environmental Services Supervisor, Unit 3 (PASNY)
 - Mr. W. Kessler, Watch Supervisor, Unit 2
- *Mr. J. Kilduff, Assistant to Resident Manager, Unit 3 (PASNY)
- **Mr. T. Law, Plant Manager
 - Mr. G. Liebler, Radiological Engineer
 - Mr. C. Limoges, Reactor Engineer
 - Mr. R. Long, Maintenance Engineer
- ***Mr. J. Makepeace, Technical Engineering Director
- ***Mr. E. McGrath, Manager, Nuclear Power Generation Department
 - Mr. J. Mooney, Instrument and Control Engineer
 - Mr. B. Moroney, Nuclear Training Director
- *Mr. A. Nespoli, Operations Engineer, Unit 2
- Mr. R. Orzo, Watch Supervisor, Unit 2
- Mr. J. Perrotta, Health Physics Supervisor, Unit 3 (PASNY)
- *Mr. M. Shatkouski, Chief Operations Engineer
- Mr. E. Tagliamonte, Operations Engineer, Unit 3
- Mr. M. Tagliamonte, Assistant Plant Engineer, Unit 3 (PASNY)
- Mr. T. Teague, Health Physics Supervisor
- Mr. R. Warren, Security Supervisor
- **Mr. S. Wisla, Chemistry and Radiation Safety Director
- *Mr. S. Zulla, Technical Services Superintendent, Unit 3 (PASNY)

The inspectors also interviewed other licensee employees including members of the operations, maintenance, testing, instrument and controls, health physics, and training staffs.

*denotes those present only at the December 2, 1977, meeting at Indian Point Station.

**denotes those present only at the December 7, 1977, meeting at Indian Point Station.

***denotes those present at both the December 2 and 7, 1977, meetings.

2. Licensee Action on Previous Inspection Findings

(Closed) Unresolved Item (247/77-23-01): Location of missing material certifications for spent fuel racks and completion of licensee review of QA documentation. The licensee provided the inspector with copies of the previously missing material certifications and had completed his review of the QA documentation package to assure that all components were properly documented. Discrepancies discovered during the licensee's review had been corrected.

(Closed) Unresolved Item (247/77-25-03): Procedure changes to reflect Technical Specification amendments. The licensee revised procedures POP-2.1, SOP-1.8, and SAO-131 on September 1, 1977, to remove inconsistencies between the procedures and recent Technical Specification amendments. In addition, the revision of SAO-131 included provisions for assuring in the future that applicable procedures are appropriately modified to accurately reflect Technical Specification changes.

(Closed) Noncompliance (247/77-25-02; 286/77-25-02): Index of procedures identifying latest revisions and temporary changes. The licensee completed on August 1, 1977, an index of procedures which identified latest revisions. Procedure OAD-7 was revised on October 1, 1977, to remove the requirement for identifying the latest temporary change in the procedure index. The inspector determined that an index of temporary changes and copies of Temporary Procedure Change Forms were being maintained in the control rooms.

(Closed) Unresolved Item (247/77-26-01): Action to be taken when flux traces are not recorded. The licensee approved new procedure TE-2, "Power Distribution and Hot Channel Factor Determination," on October 26, 1977, which provides guidance as to measures to be taken to assure that all possible flux traces are taken. The licensee incorporated these provisions into TE-2 rather than incorporating them into procedure SOP-14.1.

(Closed) Unresolved Item (247/77-26-04): Missing nuclear instrumentation calibration sheets. The licensee provided the inspector with nuclear instrumentation calibration sheets (SOP 15.1-13) for August 12 and 16, 1977. The sheets did not contain any discrepancies.

(Open) Unresolved Item (247/77-26-03): Calibration records for thermometer SN 68122. The licensee contacted the thermometer manufacturer and determined that all thermometers made by that vendor are routinely checked at one point against a thermometer certified by NBS. The licensee has issued a purchase request for calibrated thermometers to be used on safety related equipment. These thermometers will be calibrated at several points against NBS certified thermometers and certification papers will be provided to the licensee. The calibrated thermometers are expected to be received by January 1, 1978. This item remains an Unresolved Item pending the licensee's receipt of the calibrated thermometers and a review of the calibration documentation by an NRC inspector.

(Closed) Unresolved Item (247/77-26-05): Target axial flux procedure. The licensee approved procedure TE-1, "Target Flux Difference Determination," on September 20, 1977, which provides detailed instructions for and documentation of target axial flux determinations.

(Closed) Unresolved Item (247/77-24-04): Determine if reactor was operated in excess of the license limit. The licensee had revised the Central Control Room Log Sheets to require logging of the NI rack indicators. The inspector concluded his review of this matter which was partially resolved in Inspection 50-247/77-29, Paragraph 3.

(Closed) Unresolved Item (247/77-21-04): Temporary changes to procedure 2/3 CM 3.20. The licensee revised procedure 2/3 CM 3.20 on November 17, 1977, to reflect the correct model of charging pump. The inspector concluded his review of this matter which was partially resolved in Inspection 50-247/77-29, Paragraph 3.

(Closed) Unresolved Item (03/77-02-01; 247/77-06-01; 286/77-07-02): Possible plateout of cesium after liquid sampling. The possibility of plateout of Cs-137 and Cs-134 in an NRC liquid sample was noted during a previous inspection when the licensee's measurement of those isotopes in a liquid sample was higher than the NRC results. A spiked Cs-137 and Cs-134 sample was provided to the licensee for analysis and the results of that analysis were presented in Combined Inspection Report 50-03/77-12, 50-247/77-28, and 50-286/77-27. The results indicate the licensee's analyses of cesium are acceptable.

(Closed) Unresolved Item (247/77-29-11): Weld gouges on Auxiliary Boiler Feed Line to Steam Generator 24. The licensee determined the weld gouges on Auxiliary Boiler Feed Line to Steam Generator 24 to be unacceptable in that the gouges reduced the pipe wall thickness at one spot to 0.045 inches less than the allowable minimum. The licensee completed corrective action to restore the wall thickness by welding on October 14, 1977.

(Closed) Noncompliance (Combined Inspection Report 50-247/76-20 and 50-286/76-22, Paragraph 7): Position descriptions. The licensee approved procedure OAD-9, "Position Guides and Job Descriptions," on November 15, 1977, to delineate the major duties and responsibilities of personnel assigned to the Operations Subsection. The inspector concluded his review of this matter which had been previously addressed in Combined Inspection Reports 50-247/77-08 and 50-286/77-09, Paragraph 7, and 50-03/77-15, 50-247/77-29, and 50-286/77-28, Paragraph 3.

(Closed) Unresolved Item (286/77-09-04): Deluge system testing. The licensee completed surveillance test 3PT-A12 during the interval November 2 - December 2, 1977, which checked the performance of the water deluge system for main, unit, and station transformers. A Maintenance Work Request was issued to correct one minor discrepancy (repair of a heat actuating device).

(Open) Unresolved Item (286/77-11-01): Review of logging requirements. The licensee had made efforts to improve the quality of log entries and reviews. The licensee had instituted a review of outstanding jumpers each month and had reminded operating personnel of the need to insert actual values on log sheets instead of check marks. The licensee had also reminded supervisory personnel of their responsibilities to conduct meaningful reviews to detect degradation of the quality of log entries. Although the licensee had taken these corrective actions, the inspector observed when reviewing the Nuclear NPO Log Sheets that consistent out-of-tolerance readings on the radioiodine monitor sample flows were being recorded and there were no remarks to indicate why the readings were out-of-tolerance. There was no indication from documentation reviewed by the inspector that supervisory review of these log sheets had resulted in action on these out-of-tolerance readings. The inspector stated that this matter would remain an Unresolved Item pending the licensee taking steps to assure that all out-of-tolerance readings are highlighted and explanatory comments are placed on the log sheets.

(Closed) Unresolved Item (Combined Inspection Report 50-247/76-20 and 50-286/76-22, Paragraph 9.c): Drawing control in maintenance area. The inspector reviewed engineering drawing control in the maintenance area to determine if the licensee was acceptably implementing established controls over Class A drawings. The inspector noted that the licensee had been unable to retrieve a controlled copy of drawing B205983 and had classified the drawing as lost. The inspector determined from discussions with personnel in the Maintenance Subsection and with the Central Files Controller that drawing controls were currently being properly implemented in the maintenance area.

(Closed) Unresolved Item (Inspection Report 50-286/76-02, Paragraph 15): Replacement of Penetration W. The licensee had completed the replacement and testing of containment sample line Penetration W to eliminate potential overstressing of sample lines in the penetration due to thermal expansion. The inspector visually examined the penetration, reviewed Modification Procedure MMS-76-3-01, reviewed Safety Evaluation NS-23-76-004, reviewed the hydrostatic testing records of the sample lines, and reviewed the soap bubble and containment isolation valve closure time test results. All items reviewed by the inspector were satisfactory.

The soap bubble test was conducted to satisfy the local leak rate testing provisions of Appendix J to 10 CFR Part 50. The test results indicated zero leakage; however, since the minimum sensitivity for the soap bubble test has been established by the licensee to be 0.59 cubic centimeters per minute, a leak rate of 0.59 cc/min will be assigned to that penetration in the Type B and C running total.

(Closed) Unresolved Item (247/77-24-02; 286/77-24-02): Minimize fire hazards. The inspector determined from visual observations within the Primary Auxiliary Buildings that the licensee had installed flame-proof lockers and had stored unattended flammable material in those lockers. Nuclear Plant Operators were aware of their responsibilities for assuring all unattended flammable materials are stored in the flame-proof lockers.

(Closed) Unresolved Item (247/77-21-01): Installation of new RWST low level alarm. The licensee completed the installation and testing of the new RWST low level alarm which gives operators advance warning of low level conditions before the Technical Specification limit is reached.

The inspector also determined that the licensee had adjusted the setpoints of the existing RWST lo and lo-lo level alarms to provide redundant alarms as required by Amendment No. 34 to the operating license.

(Open) Unresolved Item (247/77-24-03): RCS leakage rate calculations based on containment radiation detector information. The licensee stated that a procedure would be implemented by December 16, 1977, to provide guidance on calculating RCS leakage rates based on containment radiation detector (R11/R12) information. This remains an Unresolved Item pending the licensee's implementation of that procedure.

(Open) Unresolved Item (247/77-24-05): Determine cause of RCP seal failure. The licensee had not yet disassembled the reactor coolant pump seal which failed July 2, 1977, to determine the cause of failure. High radiation areas and a crane clearance problem have contributed to the delay in pump disassembly. The licensee plans to have the seal disassembled by January 1, 1978. This remains an Unresolved Item pending completion of the licensee's investigative efforts.

(Open) Unresolved Item (286/77-24-03): Sealing of cable penetrations. Due to the manpower demands of the current turbine maintenance outage, the licensee had made little progress in reviewing the unsealed cable penetrations between the Unit 3 cable tunnels and the Auxiliary Boiler Feed Pump Room. The licensee indicated an increased effort would be made to resolve the item and this remains an Unresolved Item pending completion of the licensee's review and completion of any sealing deemed necessary by the licensee's review.

(Open) Unresolved Item (286/76-19-01): Establish criteria for heat tracing circuit operability. Due to the manpower demands of the current turbine maintenance outage, the licensee had made little progress in recording and evaluating temperature data on lines required by Technical Specifications to be heat traced. This data is to be used by the licensee to establish acceptable ranges of temperatures for operable lines. A recorder which is being permanently installed will be used to verify operability of alarmed heat tracing circuits. The licensee indicated an increased effort would be made to resolve this item and this remains an Unresolved Item pending completion of the licensee efforts.

(Open) Unresolved Item (286/77-28-07): Schedule for first periodic containment integrated leak rate test. The licensee currently plans to conduct the first periodic containment integrated leak rate test during the second refueling outage which is now expected to begin in June 1979. This would be about 53 months from the preoperational test date and 34 months from the commercial operation date. The licensee's test schedule is under review by the NRC. This remains an Unresolved Item pending completion of the NRC review.

(Closed) Noncompliance (247/77-29-02; 286/77-28-02): Station Nuclear Safety Committee review of security plan implementing procedures. The SNSC reviewed and approved all sections of the "Indian Point Station Security Guard and Watchman Manual" (security plan implementing procedures) during Meeting No. 106 on November 16, 1977.

(Closed) Unresolved Item (286/77-33-01): Supervisory circuit modifications. The inspector reviewed records of the only modification made to the supervisory relay circuit at the Buchanan Substation since the operating license was issued for Unit 3. That modification made in late 1976, caused continuous energization of timer relay 62 TR1 which prevented the relay from properly operating (deenergizing) when the generator output breakers opened on July 13, 1977. This prevented the automatic transfer of the 6900 volt power to Busses 1 through 4 from the unit to offsite sources.

The licensee corrected the faulty supervisory relay circuit modification in November 1977, and performed post-modification trip checks. The circuit modification was implemented in accordance with a October 27, 1977, memorandum from the licensee's electrical engineering department. The licensee plans additional long-term actions to improve supervisory circuit reliability.

The dead fast transfer scheme for 6900 volt Busses 1 through 4 is generally described on FSAR Page 8.2-3 where it is stated that the fast transfer will occur after a turbine thrust bearing trip or an electrical trip. The 1976 supervisory circuit modification, which was made without a safety evaluation being performed, defeated the fast transfer scheme for some but not all of the unit electrical trips. (The fast transfer scheme was defeated only for those electrical trips which sense an interruption of electrical load.) The inspector stated that since the specific electrical trips which initiate the fast transfer scheme were not described in the FSAR, it was acceptable to modify the specific electrical trips without conducting a safety evaluation under the requirements of 10 CFR 50.59.

(Closed) Noncompliance (247/76-26-04): Valves in instrument air system open but unlocked. The inspector visually verified valves IA-11 and IA-11-1 were locked in the open position as is required by the Instrument Air System Check-Off List (COL-39). The licensee revised COL-39 and COL-51 to clearly indicate the locked open requirement and to require quarterly verification of the locked open condition.

(Closed) Unresolved Item (247/76-26-07; 286/76-28-06): Installation of narrow range pressure recorder. The licensee had completed the installation of a narrow range pressure recorder on each unit which have a unique sounding adjustable alarm. The recorders and alarms will be used to provide advance overpressure warning while the reactor coolant system is in a low temperature/low pressure condition. The licensee's efforts are documented in MWRs 6157 (Unit 2) and 1412 (Unit 3) and test procedure P-MT-25 (Unit 2) dated May 7, 1977.

The licensee investigated but was unable to determine the cause of the spurious closure of the Unit 3 RHR inlet valve which initiated the overpressurization event of September 30, 1976. This anomaly has not recurred.

(Closed) Unresolved Item (247/77-10-03; 286/77-21-04): Jumper control review. The licensee determined that the missing tags for Unit 2 Jumper J-2-82 were caused by maintenance personnel who corrected the deficient condition requiring the jumper but who failed to clear the non-safety related jumper. The licensee conducted a review of his jumper controls and revised procedure SAC-126, "Jumper Log," on November 15, 1977, to improve jumper control.

(Closed) Noncompliance (03/77-15-01; 286/77-28-06): Physical security. The inspector determined that corrective actions in regard to these matters had been completed.

(Closed) Noncompliance (247/77-29-03): Accumulator discharge valve circuit breakers not locked. The inspector visually verified the circuit breakers to be locked in deenergized position during the inspection. The licensee revised check-off lists COL-12, COL-46, COL-1, and COL-51 to assure the circuit breakers are locked in the deenergized position. The revision to COL-51 provides for quarterly verification of correct circuit breaker locking.

(Closed) Noncompliance (247/77-29-04): Weld Channel and Containment Penetration Pressurization System valves open but unlocked. The inspector visually verified valves PCV-1110-1, -1110-5, -1110-9, and -1110-21 to be locked in the open position as is required by check-off list COL-15. The licensee fabricated and installed a locking bar to assure these valves remain locked open. In addition, procedure OAD-7 was revised on October 1, 1977, to require check-off list deviations be explained.

(Open) Unresolved Item (247/76-18-05; 286/76-35-01): Radiation monitoring air pump replacement. The licensee has experienced many failures of the containment radiation monitor air sample pump. The engineering department initially decided to change pump designs but subsequently decided to install improved bearings instead. The first and only improved bearing in use at Indian Point was installed September 23, 1977, at Unit 2. Additional improved bearings are on order and will be installed in spare pumps. The performance of the improved bearings and past performance of pump belts will be evaluated to determine the need and scope of a preventive maintenance program.

The licensee currently takes local flow readings every four hours to insure timely detection of pump failures. In addition, the licensee plans to include the pump high/low flow conditions in the process radiation monitor category alarm.

This remains an Unresolved Item pending the licensee's determination of the need for a preventive maintenance program and the implementation of any program deemed necessary.

(Closed) Noncompliance (286/77-10-06): Milch animal census. On August 1 and November 1, 1977, the licensee submitted to NRR the results of the milch animal census for Indian Point Station for 1976 and 1977.

(Closed) Unresolved Item (03/77-03-07; 247/77-09-07): Calculation of maximum heat rejection rate. The revised Environmental Technical Specification Requirements issued by NRR on November 16, 1977, clarifies and resolves this matter by making the Unit 1 and 2 ETSRs the same as the Unit 3 ETSRs.

(Closed) Unresolved Item (03/77-03-08; 247/77-09-08): Reporting requirements for I-131 concentrations in air. The revised Environmental Technical Specification Requirements issued by NRR on November 16, 1977, removed the nonroutine reporting requirement for I-131 in air which was previously in Section 5.6.2.2.b.

(Open) Unresolved Item (247/77-21-02): Charging pump vibration. The licensee had received a report from Southwest Research which recommended the installation of pulsation dampeners to reduce the vibration problem. The licensee is reviewing an engineering modification which provides for the installation of pulsation dampeners. This remains an Unresolved Item pending (1) installation of the pulsation dampeners, and (2) completion of the licensee's resolution of NPG-QA findings concerning charging cubicle weld integrity as documented in a May 18, 1977, memorandum from the QA Engineer to the Manager NPG.

(Open) Unresolved Item (247/77-10-05): Primary Auxiliary Building sump piping. The engineering modification for the PAB sump tank drainage system has been finalized and the earliest date for completion of the modification is February 1, 1978 (start of second refueling outage).

(Closed) Unresolved Item (247/76-35-04): Voluntary entry into an LCO action statement. The NRC has reviewed the matter of licensee's voluntarily entering for ease of plant operation into the action statements of limiting conditions for operations. The NRC has concluded that licensees could take such action providing a Reportable Occurrence was reported and providing the action statements were not frequently entered. Therefore, the licensee's actions on September 22 and 26, 1976, in reducing the level of the Condensate Storage Tank to expedite the flushing of chlorides from the secondary system is considered acceptable.

(Open) Unresolved Item (247/76-18-04): Operability requirements for ECCS components. The licensee has reviewed this matter and does not intend to propose a change to Technical Specification 3.3 to make the Unit 2 TS as conservative as the equivalent Unit 3 TS. The licensee expects the Unit 2 TS to be revised sometime in the future as a result of NRR's efforts to encourage licensee's with older TSs to revise the older TSs to conform to the Standard Technical Specifications. This remains an Unresolved Item pending further review by the inspector.

(Closed) Unresolved Item (286/77-01-08): Review of waste system requirements in FSAR, SAO-107, and ETSR. The licensee completed a review of the various waste system requirements and associated safety evaluations on June 23, 1977. There were no unreviewed safety questions related to the inconsistencies identified. All differences between the FSAR, SAO-107, and ETSR have been resolved.

(Closed) Noncompliance (286/76-28-01): Periodic instrument calibration program. The licensee had implemented a calibration program and had calibrated approximately 51% of the instruments in less than one year of the two year cycle which ends December 31, 1978.

(Open) Unresolved Item (286/77-13-02): Operational directives for three channel fixed gas and particulate monitors. The licensee had made little progress in establishing operational controls to govern maximum alarm setpoints and alarm response actions. The licensee indicated increased efforts would be made to resolve this item in a timely manner.

(Open) Unresolved Item (247/77-12-01; 286/77-13-03): Sampling line losses and heat tracing evaluation. The licensee had begun but not yet completed the engineering evaluation of the need to heat trace the portion of the plant vent sampling line exposed to the environment.

The licensee had completed the line loss testing for R-13 on Units 2 and 3 and the test results indicated there is no significant line loss. A line loss test was conducted for R-11 on Unit 3 but the results were inconclusive due to the low activity in containment. The line loss test for R-11 on Unit 2 will be conducted during the second refueling outage. The Unit 2 results on R-11 will be evaluated for applicability to Unit 3. If the Unit 2 results are not applicable to Unit 3, a retest will be conducted for R-11 at Unit 3.

This remains an Unresolved Item pending the licensee (1) evaluating the line loss for R-11, and (2) completing the heat tracing evaluation and installing heat tracing if deemed necessary.

(Open) Unresolved Item (286/77-01-10): Status of startup test program. The licensee has completed the initial startup program testing and accepted the results with the exception of the following tests:

INT-TP-4.12.11, "Feedwater Pumps Functional"
INT-TP-4.12.21, "Steam Dump Control"
INT-TP-4.12.12, "Secondary Sampling System Function Test"
INT-TP-4.11.4, "Flash Evaporator"
INT-TP-4.6.4, "Solid Processing"
INT-TP-4.1.4, "Power Relief Valve Operability"

INT-TP-4.12.11 and INT-TP-4.12.21 are scheduled to be conducted during the plant recovery from the turbine outage. INT-TP-4.12.12 and INT-TP-4.11.4 have been conducted and the results are under review. INT-TP-4.6.4 has been conducted and the test results did not meet the acceptance criteria. INT-TP-4.1.4 will probably be omitted since the new valves have been installed and tested as part of the overpressure protection system installation.

None of the incomplete tests relate to specific testing commitments made in the FSAR. The incomplete tests do not prevent the plant from operating safely at full licensed power.

This remains an Unresolved Item pending the licensee's completion or dispositioning of the above listed tests.

(Open) Unresolved Item (247/76-31-02): SNSC and NFSC recommendations to prevent dilutions. The licensee changed procedure SOP-1.2, "Draining the Reactor Coolant System," to require the secondary side of the steam generator be drained before the reactor coolant system whenever a steam generator is known to have leaking tubes. Controls have also been implemented which prevent using nitrogen to expedite secondary draining on generators having leaking tubes. In addition, a policy within the Chemistry Subsection has been instituted to require boron sampling of the RCS twice per watch instead of once per day.

The licensee concluded that the boron dilution event of November 9, 1976, did not involve an unreviewed safety question. However, efforts continue in addition to the above mentioned procedure changes to prevent an undetected boron dilution event. These efforts include the installation of an improved RCS level indicator during the upcoming refueling outage and evaluation of continuous boron analyzers.

This remains an Unresolved Item pending the licensee (1) installing the improved RCS level indicator, and (2) determining if a continuous boron analyzer with acceptable response characteristics is available for installation. These efforts will complete the implementation of SNSC and NFSC recommendations to prevent dilutions.

(Closed) Noncompliance (286/77-13-01): Continuous recording of flow rates of liquid effluents. The inspector verified that the licensee is using his Regulatory Status Report to assure timely resolution of matters related to regulatory requirements.

(Open) Unresolved Item (286/77-01-01): Installation of ARM Co⁶⁰ check sources. The licensee has had difficulty obtaining acceptable check sources and this has delayed resolution of this item. Recently received sources were being installed during the inspection. This remains an Unresolved Item pending installation of the check sources.

(Closed) Unresolved Item (286/77-01-02): Verification of monitor calibration factors and establishment of a mechanism for periodically verifying the factors. As of June 20, 1977, calibration factors for R-11, R-12, R-13, R-14, and R-18 had been established. As of June 27, 1977, a quarterly program had been implemented to reverify those factors.

Paragraph 5.c of Combined Inspection Report 50-247/77-12 and 50-286/77-13 indicated the licensee's rationale for setting the alarm point of R-18 would be reviewed with this Unresolved Item. In the past the licensee used the maximum range (10^6 cpm) on the liquid radwaste monitor (R-18) meter face as the setpoint for the automatic isolation valve in the discharge line to the environment. An analysis documented in an October 5, 1973, memorandum indicates the R-18 monitor responds to dissolved gases and that setting the trip point at 10^6 cpm would not result in discharge limits being exceeded. The licensee has discontinued that practice and now sets the trip point at 150,000 cpm based on the maximum discharge rate of the waste pump, minimum circulating water flow for dilution, and a conservative value (1×10^{-3} uci/cc) for waste.

Paragraph 10 of Combined Inspection Report 50-247/77-12 and 50-286/77-13 indicated the licensee's voluntary actions to remedy problems with the radioiodine monitoring system would be reviewed with this Unresolved Item. As of June 27, 1977, all of the corrective actions listed in Paragraph 10 had been completed by the licensee.

(Closed) Unresolved Item (286/77-01-05): Setpoint checks of R-11, R-12, R-13, and R-14 during releases. A review of September 1977, gaseous release permits indicated that operating personnel were implementing the recommendations of the General Chemistry Supervisor outlined in a May 11, 1977, memorandum to the Chief Operations Engineer.

(Closed) Unresolved Item (286/77-01-03): Routine method for maintaining R-18 decontaminated. The licensee has implemented a program to maintain the trip point of R-18 at 150,000 cpm. In the event the monitor becomes contaminated to the extent that the trip point will not allow releases to be made, the monitor will be removed and decontaminated.

(Open) Unresolved Item (286/77-21-03): As-found connections differ from print. The licensee determined that Engineering Change Notices 70050 and 70058 did not relate to the as-found field connections which were different from the print. The licensee determined that the as-found connections were correct and resulted from the submerged valve modifications made prior to issuance of the operating license. The print (113E700) was never updated to reflect the modification. A licensee review revealed that there are no other prints which have not been revised. As of November 23, 1977, Sheets 36 and 37 of Print 113E700 had been revised. Sheet 18 also needs revising and this is in process. This remains an Unresolved Item pending the revision of Sheet 18 of Print 113E700.

(Open) Unresolved Item (Inspection Reports 50-286/76-04, Paragraph 7, and 50-286/76-06, Paragraph 7): Completion of ventilation system testing. The status of the ventilation system testing is as follows:

- a. Enclosures 3.2, 3.6, 3.10, and 3.11 of Preoperational Test 4.11.1 are complete. This resolves the concern in Paragraph 7.c of Inspection Report 50-286/76-04.
- b. Technical Specification 4.5.A.6.c(2) requires a freon test of the Fuel Storage Building charcoal filters at $\pm 20\%$ of the accident design flow rate prior to handling irradiated fuel. This resolves the concern identified in Paragraph 7.a of Inspection Report 50-286/76-04.
- c. Technical Specification 4.5.A.6.c(3) requires a DOP test of the Fuel Storage Building HEPA filters at $\pm 20\%$ of the accident design flow rate prior to handling irradiated fuel. This resolves the concern identified in Paragraph 7.d of Inspection Report 50-286/76-04.

- d. Enclosure 3.4 of Preoperational Test 4.11.1 is complete and, with one exception, the test appeared to demonstrate the Fuel Storage Building ventilation system will perform as described in the licensee's response to FSAR Question 9.1. The test did not appear to demonstrate that the carbon filter dampers fail safe (emergency mode of operation) on loss of air. The licensee stated that installed accumulators preclude the dampers from not failing safe on loss of air.

This remains an Unresolved Item (76-04-01) pending the inspector reviewing the accumulator installation in the Fuel Storage Building carbon filter damper air supply which assure the dampers fail safe on loss of air.

(Closed) Unresolved Item (Combined Inspection Report 50-03/76-05 and 50-247/76-08, Paragraph 4): Delegation of authority to issue work permits. The inspector determined that a memorandum issued on March 29, 1976, was intended to authorize certain personnel other than Watch Foremen to sign and issue Radiation Work Permits as well as Work Permits. This delegation of authority was consistent with the intent of procedure SA0-105.

(Closed) Unresolved Item (247/76-26-02): Traceability of test equipment to NBS standards. This item has been elevated to an Item of Noncompliance (77-38-02) of the Infraction level as follows:

Technical Specification 6.8.1 requires in part that procedures be implemented that meet or exceed the provisions of Appendix A of Regulatory Guide 1.33. In May 1976, procedure PE-AD-8, "Calibration and Control of Measuring and Test Equipment," implemented the provisions of Paragraph A.1 of Appendix A of Regulatory Guide 1.33 and required in Section 5.4 that measuring and test equipment used on Class A systems be calibrated against reference standards whose calibration has a known valid relationship to nationally recognized standards.

Contrary to the above, on May 22, 1976, procedure 2PC-R5b, "6.9 KV Underfrequency Relay Calibration," was conducted on Class A components using a frequency generator which had not been calibrated against a known nationally recognized standard.

No response to this item is necessary since corrective action has been taken by the licensee to achieve compliance and to prevent recurrence. The instrument in question (ROC Generator #3768) was recalled and verified to be in calibration with an NBS traceable standard as of June 28, 1977. Procedure 2PC-R5b was revised to use a scaler-counter (traceable to NBS) to measure frequency generated by the ROC instrument which is used as a high power, variable frequency signal source. The Instrument and Control Engineer also discussed this matter with his staff and issued a memorandum on November 28, 1977, to remind personnel that only properly tagged measuring and test equipment be used for calibrating equipment on Class A systems.

(Open) Unresolved Item (Inspection Report 247/75-07, Paragraph 9): Modification of waste drumming facility. Modifications are nearing completion and are expected to be in operation about February 1978.

(Open) Unresolved Item (Inspection Report 247/75-07, Paragraph 10): Clean/contaminated interfaces. This remains an Unresolved Item pending installation of a continuous monitor on the auxiliary boiler.

(Closed) Deviation and Unresolved Item (Inspection Report 247/75-07, Paragraphs 3.c and 3.d): Calibration of instruments and monitors. The licensee's calibration methods have been evaluated and found to be acceptable.

(Closed) Noncompliance (Combined Inspection Report 03/76-03 and 247/76-05, Paragraph 6): Failure to post notice of violation. This item was corrected at the time of the inspection. Permanent corrective action was accomplished by a change to Station Administrative Order 110 which clarified the requirement for posting notices of violation.

(Closed) Noncompliance (Inspection Report 286/76-14-02, Paragraph 7): Failure to post a radiation area. The inspector found posting of radiation areas satisfactory on two plant tours. Personnel had been reinstructed and retrained.

(Closed) Noncompliance (Inspection Report 247/76-14, Paragraphs 5 and 7): Failure to follow procedures. Personnel had been reinstructed and disciplinary actions instituted for personnel failing to follow procedures. The inspector examined records of air samples

taken after the reinstruction and verified that technicians were counting for alpha activity when beta gamma activity was greater than 1×10^9 uCi/ml.

(Closed) Deviation (Inspection Report 286/76-14, Paragraph 8): Alternate entrance and exit point contrary to FSAR Section 11. The licensee completed a safety analysis of the use of the new Controlled Area entry and exit point and concluded that such use does not constitute an unreviewed safety question.

(Closed) Noncompliance (03/76-12-02, 247/76-25-02, 286/76-27-01): Failure to perform surveys. The procedure governing steam generator primary water box entries was revised to include requirements for surveys and personnel were instructed. The requirement for airborne iodine sampling during waste drumming has been incorporated on Radiation Work Permits governing waste drumming. The inspector examined records of the surveys to verify that they were taken. Health Physics procedure HP 4.1 and Health Physics instruction HPI 4.19 incorporate requirements for evaluation of dosimetry when discrepancies occur between film and pocket dosimeters.

(Closed) Noncompliance (03/76-12-03, 247/76-25-03, 286/76-27-02): Failure to follow procedures. The inspector examined the licensee's three corrective actions and verified that they were implemented by reviewing the Steam Generator procedure for sign-offs and air sample results for alpha evaluation. During plant tours, the inspector observed that RWPs were being adhered to and procedures followed.

(Open) Unresolved Item (286/77-01-09): Discrepancies between film and GM vs TLD and ion chamber. The licensee is currently evaluating energy dependence of film and GM detectors. This remains an Unresolved Item pending completion of the licensee's evaluation.

(Closed) Noncompliance (03/77-04-03, 247/77-11-02, 286/77-12-02): Failure to follow procedure. The inspector examined control points, dosimeters, step-off pads, use of anti-contamination clothing, and access control to the Radiation Control Area to verify the licensee's corrective actions and found them to be acceptable.

(Closed) Noncompliance (03/77-07-02, 247/77-19-04, 286/77-19-02): Failure to follow procedure. The inspector reviewed the licensee's new method of scheduling instruments for calibration and examined access control to the Radiation Control Area to verify the licensee's corrective action. No inadequacies were identified.

(Closed) Inspector Followup (247/77-02-03; 286/77-03-03): Records of audit response. The inspector reviewed records of corrective actions taken in response to audits performed by the Nuclear Facilities Safety Committee. The inspector had no further questions in this area.

(Closed) Inspector Followup (03/77-01-08; 247/77-02-11; 286/77-03-11): Qualifications of health physics personnel. The inspector reviewed the qualifications of Health Physics supervisors and technicians against the criteria of ANSI N18.1 (1972). The inspector had no further questions in this area.

(Closed) Inspector Followup (03/77-01-09; 247/77-02-12; 286/77-03-12): Evaluation of continuous air monitors. The licensee has evaluated continuous air monitors and will use them only as trend indicators when they are used with hoses.

(Open) Inspector Followup (03/77-01-11; 247/77-02-14; 286/77-03-14): Evaluation of dosimetry. The licensee's evaluation of dosimetry is ongoing and reaching the implementation stage. This item will be reviewed at a subsequent inspection to verify the effectiveness of the licensee's action.

3. Drawing Control

The inspector reviewed the licensee's efforts to control drawings associated with Modification Procedure ESG-76-2-07, "Modify ECCS Valve Circuitry." Procedure QA-GAD-8, "Control Policy on Drawing Distribution," requires in Section 3.1.d that personnel possessing controlled drawings will maintain security for the drawings and return them promptly to the Central Files Controller (CFC) when notified the job is completed. Controlled copies of drawings associated with ESG-76-2-07 issued to the Construction Department in June 1976, were recalled by the CFC in a memorandum to the Construction Department dated August 16, 1976; however, the Construction Department failed to respond to the memorandum. As of December 2, 1977, the Construction Department was attempting to locate the drawings for return to the CFC.

Failure to control drawings in accordance with procedure QA-GAD-8 is contrary to Criterion V of Appendix B, 10 CFR Part 50. This is an Item of Noncompliance (77-38-01) of the Deficiency level.

4. Surveillance Intervals - Unit 2

The Unit 2 Technical Specifications require monthly, quarterly, and annual periodic testing of emergency power system components. The TSs do not define the intervals as do the Standard Technical Specifications (STSs) in numbers of days or months. For example, the STSs define monthly as 31 days and quarterly as 92 days. The inspector informed the licensee that the STS interval definitions should be used for the emergency power system periodic tests specified in TS 4.6. In addition, the inspector said it was permissible to apply the STS interval extension to these tests so that the maximum allowable extension does not exceed 25% of the test interval and the maximum combined interval for any 3 consecutive tests does not exceed 3.25 times a specified test interval.

The inspector suggested that the licensee request a TS change if additional clarification is needed in the area of surveillance intervals. The licensee indicated he would pursue that course of action.

5. IE Circular 77-13 - Units 2 and 3

The inspector reviewed IE Circular 77-13, "Reactor Safety Signals Negated During Testing," with the licensee to verify that the licensee had reviewed all items in the circular, to discuss conclusions reached by the licensee, and to determine if the licensee proposes to take any corrective actions. The licensee reviewed the circular during SNSC Meeting No. 97 on October 12, 1977, and determined that existing administrative controls preclude the type of event described in the circular from occurring at Indian Point Station.

The inspector reviewed the following surveillance/calibration procedures to determine the licensee's method for controlling surveillance and calibration of safety related equipment:

Unit 2

PT-M1, "Nuclear Power Range Channels"
 PT-M3, "Reactor Coolant Flow Analog Test"
 PT-M4, "Pressurizer Level Analog Channel Test"
 PT-M16, "Cable Tunnel Ventilation Fans Test"
 PT-M17, "Safety Injection Pump Functional Test"
 PT-M21, "Emergency Diesel Generators Functional Test"
 PT-Q7, "Boric Acid Electrical Heat Tracing"
 PC-R17A, "Accumulator Level Transmitter Calibration"

PC-R17B, "Accumulator Pressure Transmitter Calibration"
 PT-M23, "Motor Driven ABFP Functional Test"
 PT-A8, "Charging Pumps Operational Test"

Unit 3

3PT-M5, "Pressurizer Pressure Analog Channel Functional Test"
 3PT-M17, "Containment Spray Pump Functional Test"
 3PT-M9, "Containment Pressure"
 3PT-M8, "Steam Generator Level"
 3PT-M2, "OTΔT and OPΔT"
 3PT-M12, "Turbine Electrical O/S Analog"
 3PT-M14A, "Safety Injection System Channel I"
 3PT-M14B, "Safety Injection System Channel II"
 3PT-M19, "Auxiliary Component Cooling Pump"
 3PT-M10, "Steam Line Pressure"

The inspector determined that the above listed procedures contained sufficient precautionary statements to prevent negating safety signals and to prevent exceeding Technical Specification limits on operable equipment. For example, the procedures contained necessary limits on the number of components that could be tested at any one time and limits on the plant operational conditions.

All of the licensee's surveillance and calibration procedures require Watch Supervisor permission be obtained before activities can commence. The procedures also require Watch Supervisor notification and signature after the activities have been completed. These requirements assure that the first-line supervisor (licensed as senior reactor operator) responsible for safe operation of the unit controls all calibration and surveillance activities in progress. Therefore, an individual thoroughly trained in system functions, system interactions, and Technical Specification requirements controls calibration and surveillance activities to avoid such unsafe operations as simultaneous calibration and surveillance of multiple redundant components.

The licensee did not consider it necessary to conduct special training of plant personnel on this particular circular. However, the LER review program for licensed and non-licensed personnel which was instituted as a result of IE Circular 76-07 will include the LER which was the basis for IE Circular 77-13. In addition, a new training course for non-licensed personnel was recently initiated which covers system functions, system interactions, and some Technical Specification requirements.

The licensee determined that his management controls did not need to be strengthened to avoid events as described in IE Circular 77-13.

6. Plant Modifications - Unit 2

The inspector reviewed Maintenance Work Requests 6151 and 6152, Modification Procedure ESG 77-2-02, and procedure P-MT-25, which were related to the installation and testing of (1) key lock switches used to defeat the automatic safety injection signal during cold shutdown conditions and associated annunciators, and (2) second pressure transmitter to provide independent pressure interlocks for RHR isolation valves 730 and 731. These actions complete the licensee commitments made in licensee letters to NRR dated November 29, 1976, and February 28, 1977.

7. Radiation Protection and Exposure Controls - Unit 3

Several mechanics working at Unit 3 approached the inspector with concerns related to radiation exposure controls and records. These concerns only related to Unit 3 and included the following matters:

- a. Current quarterly exposures were not available at the Unit 3 checkpoint for mechanics as they were at the Unit 2 checkpoint.
- b. Exposure information given to a mechanic at the Unit 3 checkpoint by a supervisor was different (lower) than the exposure given to the mechanic by the health physics supervisor in charge of official exposures.
- c. Maintenance foremen were shortcutting radiation protection measures in order to expedite jobs.
- d. Supervisory personnel were not adhering to the provisions of Radiation Work Permits.
- e. Radiation exposures of mechanics were not being equalized.

As a result of the concerns of the mechanics, the inspector conducted a backshift inspection on November 31, 1977, within the Unit 3 containment to determine if radiation protection controls were being adhered to. Work areas around the steam generators and reactor coolant pumps were examined to determine if the areas were being properly controlled and if workers were adhering to the

controlling Radiation Work Permits. The only discrepancy identified was also identified and corrected on-the-spot by the work foreman. The discrepancy related to one worker not removing enough outer protective clothing (coveralls) and one worker removing too much outer protective clothing (gloves) at an intermediate control point around a reactor coolant pump. To prevent recurrence of this item the licensee issued a memorandum on December 1, 1977, which emphasized the necessity for all personnel to follow radiation protection requirements.

The licensee issued another memorandum to Unit 3 health physics supervisors on December 2, 1977, which instructed the supervisors to assure health physics technicians direct workers to comply with RWP provisions. In addition, the memorandum stated that any person wishing radiation exposure information should be directed to an individual having access to the official exposure record.

The inspector verified that the mechanics who voiced concerns to him were knowledgeable of the two licensee memoranda. The inspector also informed the mechanics that the NRC did not have any requirements for the equalization of exposures or the availability of exposure records at specific checkpoints. The mechanics were also aware of the results of the inspector's backshift inspection efforts. A spokesman for the mechanics informed the inspector that the mechanics were satisfied that their concerns had been addressed and that acceptable corrective measures appeared to be in progress by the licensee.

8. Management Audits of Plant Operations

The inspector interviewed the member of the operations staff who has been assigned the responsibility of performing periodic audits of plant operation. The audit program as described to the inspector was consistent with the licensee's commitment documented in a letter from the licensee to Region I dated November 22, 1977. The licensee's audit program results will be examined during a subsequent inspection.

9. Review of Plant Operations - Unit 2

a. Shift Logs and Operating Records

- (1) The inspector reviewed the following logs and records for the periods indicated.

- (a) Senior Reactor Operator Log, September 1 - October 31
- (b) Watch Supervisor Log, September 1 - October 31
- (c) Conventional Nuclear Plant Operator Log, September 1 - October 31
- (d) Nuclear Plant Operator Log, September 1 - October 31
- (e) Night Order Book, August 30 - November 21
- (f) Jumper Log, all 12 outstanding jumpers
- (g) Temporary Procedure Change Forms, September 1 - November 15
- (h) Significant Occurrence Reports, July 13 (77-2-100) - November 15 (77-2-171)
- (i) Daily Containment Leakage Calculation Sheets, September 1 - October 31
- (j) Flux Difference Log Sheets, September 1 - October 31
- (k) Reactor Coolant System Leakage Surveillance Data Sheets, September 1 - October 31
- (l) Rod Position Indication Logs, September 1 - October 31
- (m) Thermal Power Calculation Data Sheets, September 1 - October 31
- (n) Control Room Log Sheets, September 1 - October 31
- (o) Conventional Area Log Sheets, September 1 - October 31
- (p) Locked Gate List, September 1 - October 31
- (q) Nuclear Area Log Sheets, September 1 - October 31
- (r) Quadrant Power Tilt Calculations, September 1 - October 31

- (2) The logs and records were reviewed to verify:
 - (a) log book reviews are being conducted by the staff;
 - (b) instructions in Night Order Books do not conflict with Technical Specifications;
 - (c) jumper log entries do not conflict with Technical Specifications;
 - (d) Significant Occurrence Reports confirm compliance with Technical Specification reporting and LCO requirements;
 - (e) log book entries involving abnormal conditions are sufficiently detailed;
 - (f) log sheet entries are filled out and initialed;
 - (g) log sheet reviews are being conducted by the staff; and,
 - (h) off-normal readings are treated as required.
- (3) The inspector used the following acceptance criteria for the above reviews.
 - (a) Technical Specifications
 - (b) Licensee Procedures OAD-3, "Plant Surveillance and Logkeeping Policy," SAO-126, "Jumper Log," and SAO-124, "Reporting of Anomalous Conditions"
 - (c) Inspector Judgment
- (4) Findings:

No Items of Noncompliance or Unresolved Items were identified during the review of logs and records.

b. Plant Tour

- (1) The inspector toured accessible plant areas at various times during the inspection including the following areas.

- (a) Emergency Diesel Room
 - (b) Primary Auxiliary Building
 - (c) Turbine Building
 - (d) Auxiliary Feedwater Pump Room
 - (e) Safeguard Pump Area
 - (f) Switchgear Areas
 - (g) Relay Rooms
 - (h) Control Room
- (2) The following determinations were made.
- (a) Radiation controls: step-off pads, storage/disposal of radiation protection clothing, and control of high radiation areas (including locked gates and posting) were observed in all areas toured.
 - (b) Fluid leaks: All areas toured by the inspector were observed for any evidence of fluid leaks.
 - (c) Monitoring instrumentation: recorders were observed to be properly operating for containment radiation monitors (R11/R12), rod position indication system, nuclear instrumentation channels, and steam generator pressure.
 - (d) Piping vibration: piping in all areas toured was observed for evidence of excessive vibration.
 - (e) Control room and nuclear operator station manning: the inspector observed control room manning to be in conformance with regulatory requirements.
 - (f) Equipment tag information: selected tags related to radiation monitor R-20 (20069), steam generator blowdown flow transmitter (20073), main steam trip valve #3 bypass root stop valve (20074), No. 22

diesel auxiliaries: MCC-29 (20071) and boric acid evaporator (20031) were examined and reviewed to verify that tags were positioned as required.

- (g) Selected start positions/valve positions: Proper switch positions were verified on the diesel generator and safety injection pumps. Proper positioning for the following valves was also verified: 894A, 894B, 894C, 894D, 983, 638, 885A, 885B, 1810, 882, 1805, 1831, 1821, 1822, 337, 364, 360, 336, 334, 749A, 749B, 749C, 749D, 749E, 749F, 787, 865A, 865B, 869A, 869B, 878A, 878B, and 1806. No inadequacies were observed.
 - (h) Control room overhead annunciators were observed for alarms that should not be in effect for the existing plant conditions. None were identified. Control room operators were knowledgeable of the reasons for all lighted annunciators.
 - (i) Seismic restraints: hydraulic restraints and hangers were observed for proper levels and settings in all areas toured.
 - (j) Licensee policies and practices regarding plant tours conducted by the Plant Manager and Watch Supervisors: No changes to the licensee's policies were noted in this area.
- (3) The inspector used the following acceptance criteria for the above items.
- (a) Technical Specifications
 - (b) 10 CFR 50.54(k)
 - (c) 10 CFR 20.203
 - (d) Tags 20031, 20069, 20071, 20073, and 20074
 - (e) System flow diagram mounted in control room
 - (f) Inspector judgment
 - (g) COL-51, Locked Valves

(4) Findings:

The inspector had no further questions on the items examined.

10. In Office Review of Licensee Reported Events

The inspector reviewed licensee reports received in the NRC:I office to verify that details of the events were clearly reported including the accuracy of the cause description and adequacy of corrective action, and the inspector determined whether further information was required from the licensee, whether generic implications were involved, and whether the event warranted onsite followup. The following licensee event reports (LERs) and technical engineering information reports (TEIRs) were reviewed.

- LER 77-2-17(B), No. 21 Boric Acid Storage Tank boron concentration low.
- LER 77-2-18(B), No. 23 Emergency Diesel inoperable due to a defective pre-lube oil pump pressure switch.
- LER 77-2-19(B), No. 23 Emergency Diesel Generator inoperable due to jacket water cooler tube leaks.
- LER 77-2-20(B), No. 22 Emergency Diesel Generator inoperable due to a defective exhaust hood blower motor.
- *LER 77-2-21(B), Process Radiation Monitors R-11 and R-12 inoperable due to a seized sample pump.
- *LER 77-2-22(A), Axial Flux Difference outside of target band for more than one hour cumulative in preceding 24 hour period, contrary to the requirements of TS 3.10.2.
- *LER 77-2-24(A), Air Ejector Diversion Line containment isolation valve control circuitry does not meet single failure criteria for a postulated short circuit or imposed foreign voltage, contrary to the requirements of Appendix A, 10 CFR 50.
- TEIR 77-2-5, No. 22 Charging Pump inoperable due to fluid drive coupling failure.
- TEIR 77-2-6, No. 23 Bleed Holdup Tank collapsed during transfer operations.

- TEIR 77-2-7, Feedwater System Seismic Restraint excessive fluid leak.
- TEIR 77-2-8, No. 26 Service Water Pump packing gland leak.
- TEIR 77-2-9, No. 22 Boric Acid Transfer Pump shaft seal leak.
- TEIR 77-2-10, Main Steam System Seismic Restraint fluid leak.
- *TEIR 77-2-11, Position Indication for control rod N-5 greater than 13 steps from associated bank demand position.
- TEIR 77-2-12, No. 22 Cable Tunnel Ventilation Fan support bolts broke.
- TEIR 77-2-13, No. 26 Service Water Pump packing gland leak.
- *TEIR 77-2-14, Independent Overspeed Logic Train B protection system relays tripped.

Except as noted in Paragraph 11 below, the inspector had no further comments on this item.

11. Onsite Licensee Report Followup

For those reports selected for onsite followup, the inspector verified that reporting requirements of Technical Specification and Regulatory Guide 1.16 had been met, that appropriate corrective action had been taken, that the event was reviewed by the licensee in accordance with his administrative procedures, and that continued operation of the facility was in accordance with the Technical Specification limits. The reports selected for onsite review are denoted by an asterisk (*) in Paragraph 10 above. No inadequacies were identified. The inspector noted that the RPI calibration problem addressed in TEIR 77-2-11 is being followed as Unresolved Item 77-29-05.

12. Radiation Controlled Area Tour

The inspector toured the Radiation Control Area of Units 1, 2, and 3 on December 5 and Unit 3 on December 6 to observe radiation safety practices and procedures. Posting of radiation areas and high radiation areas was examined and found to be in compliance

with 10 CFR 20.203. Work sites were visited to verify compliance with Radiation Work Permits and radiation protection procedures and instructions. Radiation, contamination, and airborne surveys and survey records were examined for compliance with 10 CFR 20.201. Access control and contamination control were examined for compliance with procedures HPP 2.2, HPP 2.3, HPP 2.4, HPI 2.22, HPI 2.24, and HPI 2.25. High Radiation Areas were found to be locked in accordance with 10 CFR 20.203. Independent measurements were made to verify licensee surveys and posting. No items of noncompliance or Unresolved Items were identified.

13. Exit Interview

The inspectors met with licensee representatives (denoted in Paragraph 1) at the conclusion of the first phase of the inspection on December 2, 1977, and at the conclusion of the second phase on December 7, 1977. The inspectors summarized the purpose and the scope of the inspection and the inspection findings. A subsequent discussion of the inspection findings occurred on January 6, 1978, in a telephone call from Mr. J. Streeter to Mr. J. Makepeace.

The licensee representatives acknowledged the inspection findings including the two Unit 2 Items of Noncompliance (247/77-38-01, Paragraph 3, and 247/77-38-02, Paragraph 2). The inspector informed the licensee representatives that a response would only be required for item 247/77-38-01.