No. 8 Date 2/5/71

file 50-247

DIVISION OF COMPLIANCE
NOTIFICATION OF AN INCIDENT OR OCCURRENCE

Facility CONSOLIDATED EDISON COMPANY - INDIAN POINT 2

Problem

A total loss of AC power occurred at the Indian Point 2 site on January 28, 1971. The plant status at the time of the incident was as follows:

1. The hot functional test at 530°F and 2200 psig was in progress.
2. Only one of three offsite power lines was functioning.
3. The emergency diesel generators were inoperable.
4. The four main coolant pumps were operating.

The failure was traced to a control relay that malfunctioned. The malfunction resulted in the loss of a 138 kv intertie between IP-2 and an offsite substation. Power was restored in 45 minutes when a 13.8 kv cross tie was made to IP-1.

Hot functional testing was temporarily resumed using two main coolant pumps. The other two pumps were locked out of service for inspection for possible damage due to the loss of seal cooling water. Hot functional testing was terminated on February 3, 1971 for detailed examination of the main coolant pumps. The duration of the shutdown and extent of pump damage are unknown at this time.

Action

CO will review the status of this problem during our next inspection.

Contact

Further information on this problem can be obtained from:

1. F. J. Nolan - X7421
2. J. P. O'Reilly - X7421
3. R. H. Engelken - X7356

Distribution

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JAN 20 1971

R. C. DeYoung, Assistant Director for Pressurized Water Reactors, DRL (2)

CONSOLIDATED EDISON COMPANY - INDIAN POINT 2, CO REPORT NO. 247/70-12

The enclosed report of a special meeting with licensee and Westinghouse personnel on December 2, 1970, is forwarded for your information. The purpose of this meeting was to discuss our review of the details of the preoperational and startup testing program for Indian Point 2.

Since the December 2, 1970, meeting, the licensee informed our Region I (Newark) office that they do not plan to conduct additional testing of the safety injection system and the control rod drive system, or to conduct a meaningful loss of A.C. power test. The licensee also stated that only minor improvement would be made to the hot functional testing program. It is our view, based on the information made available to CO, that the proposed testing does not meet the licensee's commitments as described in Section 13 of the Final Safety Analysis Report.

We discussed the above issues with cognizant members of your staff on January 12, 1971. It is our understanding that you concur in our position. As a result, we are currently conducting additional discussions with the licensee. We will inform you of developments.

Original signed by
R. H. Engelken

R. H. Engelken, Assistant Director
for Inspection and Enforcement
Division of Compliance

Enclosure:
CO Report No. 247/70-12

cc w/enclosure:
E. G. Case, DRS (3)
P. A. Morris, DRL
R. S. Boyd, DRL (2)
D. J. Skovholt, DRL (3)
P. W. Howe, DRL (2)
A. Giambusso, CO
L. Kornblith, Jr., CO
Regional Directors, CO
REG Files
N. C. Moseley, CO:I

OFFICE ▶	CO	CO				
SURNAME ▶	FNolan:ee JPOReilly	RHEngelken				
DATE ▶	1/18/71	1/19/71				

N. C. Moseley
Region I

X

RE: CONSOLIDATED EDISON COMPANY - INDIAN POINT NO. 2, DOCKET NO. 50-247

The report transmitted by your memo of 12/31/70 is considered to be a good summary of our meeting with Con Ed and Westinghouse.

50-247
Insp

OFFICE ▶		CO	CO			
SURNAME ▶			J. P. O'Reilly		1/13/71	
DATE ▶						

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

U.S. GOVERNMENT PRINTING OFFICE : 1968 O—296-617

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-3942

December 31, 1970

J. P. O'Reilly, Chief, Reactor Inspection and Enforcement Branch, Division of Compliance, HQ

CONSOLIDATED EDISON COMPANY - INDIAN POINT NO. 2
DOCKET NO. 50-247

The attached report documents the meeting we held with Con Ed, Westinghouse and Wedco on December 2, 1970 to discuss Preoperational and Startup Testing.

Subsequent to the meeting the inspector, Mr. Madsen, received responses to our major concerns from Con Ed's Messrs. Nicholson, Corcoran and Kohler, as follows:

1. Rod Drop Tests - Con Ed agreed to expand their present program to measure the drop times of two additional rods in the cold flow and the hot no flow condition.

2. Loss of AC Power While the Reactor is Operating at Power - No change in the previously stated position that the present test of loss of power (with the reactor not operating) is adequate.

3. SIS Test with Primary System at Temperature and Pressure - No change from the previously planned testing.

4. Hot Functional Test

   a. Con Ed does not intend to rewrite the present procedure; they believe that sufficient detail and signoffs are included in present control document (procedure) and individual system procedures.

   b. Operator involvement and checkout of operating procedures is still under review. The inspector believes some action will be taken in these areas.

With the exception of item 4b above, these responses are considered to be inadequate to resolve the concerns which we expressed during the meeting. The responses by Con Ed will be documented more fully in a subsequent inspection report. In view of the shortness of time before some of these

/S/ O'R/Staff 1/13/71

05052

tests are scheduled, this report is being forwarded for action. It is recommended that action on these matters be instituted as soon as possible.

N. C. Moseley
Senior Reactor Inspector

Enclosure: (21 cys)
CO Report No. 247/70-12
by G. L. Madsen dtd 12/21/70

cc: A. Giambusso, CO
L. Kornblith, CO
R. H. Engelken, CO

U. S. ATOMIC ENERGY COMMISSION
REGION I
DIVISION OF COMPLIANCE

Report of Inspection

CO Report No. 247/70-12

Licensee:	Consolidated Edison Company Indian Point No. 2 (IP-2) License No. CPPR-21 Category B
Date of Inspection:	December 2, 1970
Dates of Previous Inspections:	November 4, 5, 24, 25, 1970

Inspected By: G. L. Madsen — 12/21/70
G. L. Madsen, Reactor Inspector — Date

Reviewed By: N. C. Moseley — 12/21/70
N. C. Moseley, Senior Reactor Inspector — Date

Proprietary Information: None

DETAILS

I. SCOPE

A meeting was held with representatives of Con Ed, Wedco and Westinghouse at the IP-2 construction site on December 2, 1970. The purpose of the meeting was to provide Compliance an opportunity to present views relating to a sample review of the IP-2 preoperational procedures and proposed guidance for preoperational testing programs. Messrs. J. P. O'Reilly, Chief, Reactor Inspection and Enforcement Branch and F. J. Nolan, Senior Reactor Inspection Specialist represented CO:HQ and Messrs. N. C. Moseley, Senior Reactor Inspector, and G. L. Madsen, Reactor Inspector, represented CO:I at the meeting. Persons representing the other organization are as follows:

A. Consolidated Edison Company

J. A. Prestele, Manager, Nuclear Power Generation Dept.
A. W. Flynn, Mechanical Plant Engineer
J. A. Corcoran, Construction Project Superintendent
A. D. Kohler, Staff Nuclear Engineer
J. M. Makepeace, Reactor Engineer
W. A. Mont, Asst. Production Superintendent
A. J. Nesterok, Associate Engineer

(2/1/70)

B. Westinghouse

O. M. Hauge, Manager, Project Engineering
R. J. Nath, Lead Engineer, Nuclear Operations
R. H. Faas, Fluid Systems Engineer
G. Werber, Driveline and Instrumentation Engineer
W. J. Kearns, Operation Engineer, Startup Services

C. Wedco

R. A. Matheny, Manager, Startup Operations

II. Results of Meeting

Mr. Moseley opened the meeting with a statement that the purpose of the meeting was to provide Compliance an opportunity to present views relating to a sample review of IP-2 preoperational procedures and proposed guidelines for preoperational testing programs with the intent that all parties would gain a better understanding relative to the context of acceptable preoperational test programs today and for the future.

Mr. O'Reilly presided over the meeting. The items discussed are summarized below:

A. Proposed Guide for Planning of Preoperational Testing Programs

The context of the proposed guide for preoperational testing was presented by Mr. O'Reilly. Items discussed included contents of the FSAR, review by DRL, and involvement of Compliance.

B. Indian Point No. 2 Preoperational Program

1. General

Mr. O'Reilly pointed out that a sample of IP-2 preoperational procedures were reviewed by Compliance and resulting comments included the following:

a. Many of the procedures were in draft form only and had not received approvals by Con Ed.

b. Some procedures have not been prepared even though actual testing is near at hand.

c. Acceptance values are frequently not specified.

d. Initial conditions and prerequisites are not specific.

e. Data sheets to be employed are not included.

2. Control Rod Drop Test (SU 4.10.2)

Mr. O'Reilly indicated that the proposed rod drop testing program is considered inadequate when compared to CO acceptance criteria. The minimum acceptable testing for IP-2 was presented as testing all rods in the cold-no-flow, cold-flow, hot-no-flow, and hot-flow conditions; plus, 10 additional drop tests of the slowest and fastest rod. Mr. O'Reilly stated that this amount of testing is less than the present CO guidance. This test coverage is based on past experiences and the need for obtaining an acceptable degree of confidence. Westinghouse representatives indicated that their proposed test program was based on the following considerations:

a. All rods are drop tested in the cold-no-flow condition in that it is the first withdrawal and scramming of each rod.

b. Ten rods are drop tested in the cold-flow and hot-no-flow conditions for determination of variations due to a parameter change.

c. All rods are drop tested at hot-flow as a demonstration of the actual and important dropping.

Westinghouse further pointed out that their past experience is that rods have stuck during withdrawal and not during dropping and that they are of the opinion that little additional confidence would be gained by the proposed CO drop testing coverage.

Mr. O'Reilly indicated that there apparently is a difference of opinion relating to level of confidence and perhaps Westinghouse could provide other acceptable alternates and justifications; however, at this time it is a CO position that the rod drop testing for IP-2 must be expanded to the minimum levels as indicated above.

3. Part Length Rod Mechanism Brake Test (SU 4.10.4)

General deficiencies identified were lack of acceptance values and drive speed not measured. Mr. Matheny stated that the objective of the procedure was to check out the brake mechanism only, which is verification of the fail safe condition. This item is to receive additional consideration by CO.

4. Dynamic Rod Testing (SU 9.6)

This procedure is generally considered to be adequate.

5. Hot Functional Testing

Mr. O'Reilly indicated that the Hot Functional Test Procedure review raised the following concerns:

a. The procedure appears to be a program outline only.

b. The document contains many general statements where specifics should be identified.

c. Con Ed's involvement in the program is not apparent. The procedure does not include provisions or definition for involvement of operators, checkout of operating procedures, or checkout of Technical Specification requirements.

d. Functional testing of the safety injection system with the reactor coolant system in the hot-pressurized condition is not included. Mr. Matheny indicated that the system test procedure for the safety injection accumulators has been modified to include blowdown to the hot-pressurized vessel and a comparable test for the safety injection pumps is being considered.

6. Safety Injection System - Hydraulics (SU 4.5.1)

Mr. O'Reilly indicated that this procedure was found to be generally detailed; however, some acceptance values are missing and the concerns relating to checkout of the safety injection system, as discussed under Hot Functional Testing, applies.

7. Safety Injection Check Valve Leakage (SU 4.5.2)

Mr. O'Reilly stated that testing is not conducted at a ΔP of 100 psi as required by the FSAR. Mr. Matheny stated that they were aware of this point and the procedure will be altered.

8. Containment Leak Rate Test

Mr. O'Reilly stated that this procedure was not reviewed, however, past experience warrants mentioning the following performance deficiencies which have been encountered:

a. Data collected was marginal for calculation of leak rates.

b. Instrumentation in service and accuracy of measurements was questioned.

c. Pressures were not held long enough to establish equilibrium conditions.

d. Modes of testing were changed without justification for a change.

Mr. O'Reilly indicated that CO:HQ wishes to review this procedure in its final form.

9. Loss of AC Power

Mr. O'Reilly stated that because of past occurrences of loss of off-site power and failure of diesels to start that CO is taking the position that a loss of AC power test with the reactor a power (about 25 percent) should be performed. Westinghouse personnel indicated that this item would be given further consideration.

10. Initial Fuel Loading

Mr. O'Reilly stated that the fuel loading procedures reviewed did not include core loading details such as loading patterns, sequences, etc. Mr. Matheny indicated that an additional procedure covering these items is presently available.

11. Startup Physics Testing

Mr. O'Reilly indicated that the startup procedures reviewed were generally satisfactory; however, improvement in the following areas should be considered for implementation:

a. More details should be included relative to status of plant, position of rods, position of bypasses, control of jumpers, and control specification on dilution rates.

b. Predicted results and acceptance values should be readily available.

c. Standard data sheets should be used and made available for review in conjunction with the written procedures.

Westinghouse personnel displayed a tabulation of predicted and acceptance values and indicated that they are giving consideration to methods of incorporation of this information.

C. Observations Relating to Other Plant Startups

Mr. O'Reilly presented the following previous observation questions for consideration:

1. Are the lifting devices such as the polar and fuel storage cranes dead weight tested?

2. Why not have boron present in the reactor coolant system during hot functional testing?

3. Is an emergency boron system delta boron test performed prior to loading?

4. Is a checkout of the communication and evacuation system completed prior to fuel loading?

5. Is the hydrogen removal system for the containment tested?

6. Are the charcoal filters tested?

7. Is the safety injection pumping checked out using emergency power?

8. Is the radwaste systems functional checked and are operating procedures fully implemented?

9. Has the adequacy of the stack monitor calibration been evaluated?

D. Summary

Upon inquiry, Mr. O'Reilly made the following summary of primary consideration items as it relates to IP-2:

1. Needed revisions to the rod drop test (SU 4.10.2).

2. Consideration relating to checking out the safety injection system with the reactor coolant system in the hot-pressurized condition. (SU 4.5.1)

3. Consideration of performing a total loss of AC power test at some reactor operating level.

4. Revisions of the hot functional program to incorporate involvement of Con Ed operator training, operating procedure checkout, technical specification surveillance checking, operation of equipment, including valves which have not been previously operated at temperature.

5. Upgrading existing procedures in the areas of initial conditions, prerequisites, and data sheets.

Mr. Prestele indicated that the items presented in the meeting would be given consideration by all parties and responses would be provided by Con Ed.

50-247

RE: CONSOLIDATED EDISON COMPANY - INDIAN POINT 2

N. C. Moseley X
Region I

Enclosed for your information are excerpted pages from Section 13 of the Final Safety Analysis Report for the subject facility. Frank Nolan has underscored a number of items relating to specific preoperational and startup testing requirements that were discussed during our December 2, 1970, meeting with licensee and Westinghouse personnel.

Enclosure:
As Stated w/o encl.

bcc w/o enclosure:
F. Nolan

50-247

OFFICE ▶		FNolan:bjm	CO			
SURNAME ▶			J. P. O'Reilly		1/18/71	
DATE ▶		1/18/71				

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

U.S. GOVERNMENT PRINTING OFFICE : 1968 O—296-617

RE: CONSOLIDATED EDISON COMPANY, INDIAN POINT 2 - REACTOR PRESSURE BOUNDRY, TABLE A

X

The following comments are provided in response to your November 6, 1970, memorandum regarding the subject Table A. We have discussed this issue with DRL, K. Kneil, (i.e., The licensee's position regarding the seven valves with unradiographed discs). Based on the discussion, we and DRL are in agreement that the licensee meets the intent of Table A in that each of the seven valves is separated from the reactor coolant system by at least two other isolation valves. We consider this issue to be resolved.

cc: D. Muller w/cc 11/6/70 memo & encl
K. Kneil w/cc 11/6/70 memo & encl
F. Nolan w/cc 11/6/70 memo & encl

JPO'R

OFFICE ▶	CO	CO				
SURNAME ▶	FNolan:ee	JPOReilly				
DATE ▶	J. P. O'Reilly 1/7/71				January 7, 1971	

Form AEC-318 (Rev. 9-53) U.S. GOVERNMENT PRINTING OFFICE : 1969— O-364-598

UNITED STATES
ATOMIC ENERGY COMMISSION
DIVISION OF COMPLIANCE
REGION I
970 BROAD STREET
NEWARK, NEW JERSEY 07102

201 645-3942

November 6, 1970

J. P. O'Reilly, Chief, Reactor Inspection and Enforcement Branch, Division of Compliance, HQ

CONSOLIDATED EDISON COMPANY, INDIAN POINT NO. 2
REACTOR PRESSURE BOUNDARY - TABLE A

Con Ed and Westinghouse have completed their review of documentation relating to code compliance and/or Table A for the reactor pressure boundary components*. The inspector was presented a letter addressed to the Con Ed Vice President of Engineering, which indicated that the IP-2 plant is consistent with the Table A requirements, except for seven valve discs which were not radiographed. A copy of this letter is included as Appendix A of this memorandum and was written with the intent of supplying a position relative to state of compliance to Table A and to include deviation dispositions for the identified deviations from Table A requirements. The initial letter included an incorrect implication relating to the Pittsburgh Pipe Company records. An amendment letter was issued on this item and is included as Appendix B.

Previous compliance reports** contain some of the details relative to work accomplished and description of the valves discs which were not radiographed.

The Con Ed and Westinghouse position relating to Table A is that their investigative efforts are complete and no further actions are contemplated.

Region I considers the Westinghouse-Con Ed position relating to the seven valves with unradiographed discs to have some credibility because of valve design pressures and location of the valves.

Based on previous compliance inspections, the remainder of the components meet the Table A requirements.

*CO Report No. 247/70-10, Section II. F.
**CO Report No. 247/8, Section II. D. and 247/10, Section F.

04242

RECEIVED

1970 NOV 9 PM 3 31

U.S. ATOMIC ENERGY COMM.
DIVISION OF COMPLIANCE

This memorandum is forwarded for Compliance Headquarters, DRL, and DRS review. The CO:I regional office will await a positive regulatory position on this subject before further pursuit is undertaken.

N. C. Moseley
Senior Reactor Inspector

Enclosures:
Appendices A and B

APPENDIX A

memorandum

October 6, 1970

Re Indian Point Unit No. 2
AEC Table "A"

Mr. William J. Cahill, Jr.
Vice President

The purpose of this memorandum is to provide a synopsis of the investigation by Con Edison into the extent of Westinghouse Indian Point Unit No. 2 compliance with the inspection and tests on the reactor coolant system pipe valves and pumps.

Last October during an Indian Point Unit No. 2 meeting, the AEC Staff presented Con Edison with a list of Non-Destructive Testing Requirements commonly called Table "A". Con Edison was specifically asked to indicate the degree of compliance with Table "A" as part of a general investigation that the AEC was conducting on comparable vintage plants. At the Con Edison - AEC meeting in Bethesda, Maryland on November 21, 1969, it was established by the Commission that Con Edison was required to submit written certification to the AEC attesting to the degree of NDT testing performed on Indian Point Unit No. 2. Later, the AEC indicated that written certification was not required to be submitted, but instead normal contacts were to be maintained with the compliance division. Con Edison prepared a listing of all components that required NDT certification and requested Westinghouse to conduct a 100% check and certify the degree of conformance of these items with Table "A". This detailed list was forwarded to Westinghouse on January 27, 1970 with the stipulation that Con Edison would audit the Westinghouse NDT records. Westinghouse did not respond until April 10, 1970, however, this response was in error and required further Con Edison correspondence and visits to Pittsburgh. Westinghouse again responded on June 30, 1970 and a Con Edison audit of Westinghouse records took place on August 3 and August 4, 1970. Engineering assumed the responsibility of reviewing the records of reactor coolant system loop piping and fittings, the reactor coolant pumps and all the valves within the Table "A" boundaries. The Construction Department, as a result of their prior review of piping records, assumed the responsibility of reviewing the piping within Table "A" boundaries with the exception of the main loop piping. The Construction Department reports that it is felt that no additional inspection is required to comply with Table "A" and the AEC should be advised of their findings. For pipe supplied by Pittsburgh Pipe all but 8% of the records of the required area were inspected and met the criteria. Dravo piping records are considered acceptable. Tubeco records are considered acceptable.

Considerable time was spent by Westinghouse and Wedco in compiling NDT data for the subject components, as well as time spent by Con Edison in reviewing this material. Records consisted of manufacturers files of chemical and physical properties, ultrasonic test reports, radiographic reports, penetrant

Mr. William J. Cahill

October 6, 1970

Re Indian Point Unit No. 2
AEC Table "A"

test reports or certificates of compliance with applicable codes and standards. A 100% review of Westinghouse records by Con Edison was not accomplished because the intent of the investigation was to provide historical information and not to revise the NDT requirements of the various items on Indian Point Unit No. 2. In some cases it was necessary to review representative records; that is to say records of a group of valves or other components some of which were used in the IP-2 plant although their exact location is not certain.

The reactor coolant system pipe, pipe fittings and pump records reviewed by Mr. Wasilenko were found to be in accordance with Table "A". The valve records reviewed by Mr. Nesterok were found to be in accordance with Table "A" except for some exceptions. These exceptions result because of the NDT requirements at the time of manufacture were not interpreted as stringently as those in Table "A".

The specific valve NDT exception to Table "A" involve disc radiography. Specifically, Table "A" suggests that all containment isolation valves with cast discs possess radiographed discs. Some valves within this category on Indian Point Unit No. 2 do not possess radiographed cast discs as this was not a part of the original purchase specifications. However, on Unit No. 2 Westinghouse upgraded certain critical valves in the reactor coolant system and safety injection system by radiographing the discs. The specific valves upgraded were the pressurizer safety valves, pressurizer relief valves and the second loop isolation valves in the safety injection system lines to the RHR heat exchanger. In addition, the pressurizer safety valves had the bodies and nozzles radiographed.

The seven valves which do not contain radiographed discs presently as suggested by Table "A" are the safety injection pump discharge isolation valves 850A, and 850B, the safety injection pump suction valves 888A and 888B, the CVCS system reactor coolant pump seal water containment isolation valve 222 and the CVCS system containment isolation valves on the inlet to the regenerative heat exchanger 205 and 374.

In all cases the above valves are separated from the reactor coolant system by at least two other isolation valves and, therefore, in the remote event that their discs fail no loss of coolant will occur. These valves are, therefore, not part of the reactor coolant system boundary. Furthermore, the integrity of their discs has been proven by hydrostatic tests.

There is, therefore, no technical reason to require the discs in these valves to be radiographed.

Mr. William J. Cahill

October 6, 1970
Re Indian Point Unit No. 2
AEC Table "A"

In summary, the Indian Point Unit No. 2 plant is consistent with the Table "A" requirements except for some valves for which disc radiography is not technically required.

This synopsis, therefore, completes our efforts with regard to Table "A" compliance and no further investigation in this matter is contemplated for Indian Point Unit No. 2.

John J. Grob, Jr.
Chief Mechanical Engineer

GW:jr

Copies to Messrs. G. C. Nicholson
A. W. Flynn
F. D. McElwee
J. A. Corcoran
H. C. Bremer
G. Wasilenko
A. J. Nesterok

APPENDIX B

Con Edison memorandum

October 13, 1970

Re: Indian Point Unit 2
AEC Table "A"

Messrs. J. J. Grob, Jr.
A. W. Flynn

The Table "A" memorandum of October 6, 1970 incorrectly implied that 8% of Pittsburgh Pipe Co. records were not reviewed and there was, therefore, some question as to the final disposition of Pittsburgh Pipe Co. acceptability.

The Mechanical Engineering Department performed the Pittsburgh Pipe audit and results indicate that all data is acceptable to Table "A" standards. This conclusion is based on a sampling audit.

The second paragraph should read...For pipe supplied by Pittsburgh Pipe, records were reviewed and are considered acceptable.

This completes all action with regard to Table "A".

A. J. Nesterok
A. J. Nesterok
Associate Engineer

Copies to: H. C. Bremer
G. Wasilenko

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

October 21, 1970

Chairman Seaborg
Commissioner Ramey
Commissioner Johnson
Commissioner Thompson
Commissioner Larson

STATEMENT BY DR. STERNGLASS

Enclosed for your information is a press release issued by the "National Committee to Stop Environmental Pollution" --a Larry Bogart group--on testimony today by Dr. Ernest Sternglass. Dr. Sternglass is appearing before the Pennsylvania Senate Select Committee. He contends that operation of the Dresden reactor has resulted in the death of 2,500 children from gaseous radioactive effluents.

We have already had one inquiry from a Chicago newspaper, Chicago Today. We pointed to the Public Health Service's recently completed study of Dresden, and to Dr. Sternglass' past errors in interpreting data. We also urged the reporter to talk with the Illinois State Health Department. Commonwealth Edison also has talked to the newspaper.

Pending receipt and analysis of Dr. Sternglass' full text, we plan to continue to use the information in the Public Health Service report which concluded:

> "...exposure to the surrounding population through consumption of food and water from radionuclides released at Dresden was not measurable. External exposure from radioactive gases discharged from the Dresden stack was detectable, but it was only a small fraction of the natural radiation background over an extended period of time and well within Federal Radiation Council guidance."

(signed) John A. Harris

John A. Harris, Director
Division of Public Information

cc: R. E. Hollingsworth, General Manager
H. L. Price, Director of Regulation

Rec'd Off. Dir. of Reg.
Date 10/22/70
Time 2:00

Dresden

Newsletter from the National Committee to Stop Environmental Pollution, 214 Third St., N.E., Washington, D.C.

SCIENTIST CHARGES NUCLEAR POWER PLANTS RESPONSIBLE FOR 2,500 INFANT DEATHS

Harrisburg, Pa., October 21--Evidence that the Dresden, Illinois, nuclear power plant's normal operation has been the cause of the death of 2,500 children was introduced today in a public hearing before a Pennsylvania Senate Select Committee.

In reviewing public health data, Dr. Ernest J. Sternglass, a Professor of Radiology in the Division of Radiation Health, University of Pittsburgh, told eight senators who are weighing a moratorium on nuclear power plants in the commonwealth, the radioactive gaseous wastes from the 180-megawatt reactor, 50 miles southwest of Chicago, were involved in the excess deaths of the children who lived in the towns downwind from the Dresden site. The count included all infants who failed to survive the first year of life.

The Senate Committee, chaired by Senator Edwin G. Holl, heard Dr. Sternglass describe the effects of low doses of radioactivity at an earlier hearing on August 20. This new data, Dr. Sternglass said, has just become available. He urged a tightening of emissions from nuclear plants because standards used by the Atomic Energy Commission were set before the greater susceptibility of women and children to ionizing radiation was recognized. Also, federal standards take no account of the biological reconcentration of some radioactive fission products.

The scientist recommended that all boiling water type reactors be shut down to prevent further loss of life. He said this type of device, made by General Electric, sends up the stack 10,000 times more harmful gases than the naval submarine type reactor.

The Dresden reactor, near Morris, Illinois, has been in operation since 1959. The 2,500 excess deaths were calculated for the ten-year period ended in 1968. The rise in deaths correlated with rises in gaseous radioactive discharges, Dr. Sternglass claimed. Reports of the U.S. Public Health Service of the Department of HEW were used in making the calculations.

Small boiling water reactors are in operation at Humboldt Bay, Eureka, California; Big Rock Point near Charlevoix, Michigan and LaCrosse, Wisconsin.

Large reactors, three times the size of Dresden, have recently started up at Oyster Creek, New Jersey, on Barnaget Bay; Nine Mile Point, near Oswego, New York; and Monticello, Minnesota, and New London, Connecticut. The largest reactor in the world is about to start operation right next to the Dresden plant.

There are other units nearing completion at Vernon, Vermont; Plymouth, Massachusetts; Browns Ferry, Alabama, and Rock Island, Illinois. Boiling water reactors are proposed for Monroe, Michigan; Brunswick County, North Carolina; Baxley, Georgia; York County, Pennsylvania; Limerick, Pennsylvania; Bordentown, New Jersey and Shoreham and Peekskill, New York.

#