Commonwealth Edison
One First National Plaza, Chicago, Illinois
Address Reply to: Post Office Box 767
Chicago, Illinois 60690

December 16, 1981

Mr. James G. Keppler, Regional Administrator
Directorate of Inspection and
Enforcement - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Roa
Glen Ellyn, IL

Subject: LaSalle County Station Unit 1
Response to Inspection Report
No. 50-373/81-28
NRC Docket No. 373

Reference (1): C. E. Norelius letter to C. Reed
dated November 6, 1981

Dear Mr. Keppler:

The following is in response to the inspection conducted by Messrs. I. Jackiw, J. Hopkins, R. Lanksbury, F. Maura, M. Ring, D. Robinson, C. Williams and J. Peschal on August 11, 12, 17-21, 25-28; September 1-4, 8-11, 15-81; and October 8, 1981 of activities at LaSalle County Station Unit 1. Reference (a) indicated that certain activities appeared to be in noncompliance with NRC requirements. The Commonwealth Edison response to this notice of violation is provided in the enclosure.

In recognition of the seriousness of the concern you expressed relative to the preoperational test result review process (Item 1 in Appendix A of Reference (a)), a thorough review of this process has been conducted. The nature of that review and the conclusions reached based upon it were discussed with Messrs. C. E. Norelius, R. L. Spessard, et.al of your staff on November 10, 1981 in your offices. As is discussed in the enclosure, our program for resolving this concern includes the following:

(a) Augmented Review by the LaSalle County Project Engineering Group;

(b) Independent Review by Commonwealth Edison - with senior engineering staff participation.

(c) Improved Documentation of Test Evaluations by all parties involved.

Although the examples of noncompliance reported taken separately are arguably not of equal significance, it is acknowledged that the highest level of importance must be attached to the completion of the LaSalle County Initial Test Program.

If there are any further questions in this regard, please direct them to this office.

To the best of my knowledge and belief the statements contained herein and in the attachment are true and correct. In some respects these statements are not based on my personal knowledge but upon informaton furnished by other Commonwealth Edison employees. Such information has been reviewed in accordance with Company practice and I believe it to be reliable.

Very truly yours,

C. Reed

Cordell Reed
Vice President

Enclosure
cc: NRC Resident Inspector - LSCS

SUBSCRIBED and SWORN to
before me this 16th
day of December, 1981

Rosalie A. Pienta
Notary Public

3041N

Enclosure
Response to Notice of Violation

The response to the items of apparent noncompliance identified in IE Inspection Report 50-373/81-28 is provided in the following paragraphs.

I. 10 CFR 50, Appendix B, Criterion V, requires that activities affecting quality shall be prescribed by documented instructions, procedures, or drawings, of a type appropriate to the circumstances.

10 CFR 50, Appendix B, Criterion XI, requires that all testing required to demonstrate that structures, systems, and components will perform satisfactorily in service is identified and performed in accordance with written test procedures which incorporate the requirements and acceptance limits contained in applicable design documents. It also requires that test results be documented and evaluated to assure that test requirements have been satisfied. The QA Manual, Quality Requirement 11.0, Section 11.3 requires that test results be evaluated following each test to assure conformance with design and performance requirements.

a. Contrary to the above, the licensee failed to incorporate applicable design requirements into two preoperational tests:

(1) The licensee wrote a test procedure, approved it, performed the test, and reviewed and approved the test results of PT-SC-101 which did not include testing of the air sparging subsystem to ensure that it would promote adequate mixing of the sodium pentaborate solution, as required by FSAR Table 14.2-54, Test Procedure Item #5 and Acceptance Criteria #7. In addition the licensee failed to write a deficiency noting the above, as required by LSU 200-2, to ensure that the FSAR commitment would be complied with prior to fuel load.

(2) The licensee wrote a test procedure, approved it, performed the test, and reviewed and approved the test results of SD-PS-101 which did not include verifying that all sensors in the process sampling system are properly located in accordance with the design, as required by FSAR Table 14.2-71, Test Procedure item #4.

b. Contrary to the above, the licensee failed to properly evaluate test results to assure that test requirements had been satisfied:

(1) The licensee performed, reviewed, and approved the results of PT-NB-101, Nuclear Boiler System, including

a second review by the Station Nuclear Engineering Department (SNED), all of which failed to note a potential safety system degradation through an apparent malfunction of the system's associated trip switches.

(2) The licensee performed, reviewed and approved the results of PT-AP-102 without identifying the fact that:

(a) During the service test of the 250 volt battery, step 10.3, B.2.C was not complied with in that the temperature of every cell was not taken and recorded.

(b) During the performance of the 24 volt batteries acceptance tests, step 10.3.G.2.g, and other similar steps, were not complied with in that the cell voltages for the three hour and 15 minute interval were not taken and recorded.

(3) The licensee evaluated, reviewed, and approved test PT-VP-101 which contained incorrect torque switch settings for four motor operated valves.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

Item 1.a. Failure to Incorporate Design Requirements

1. (PT-SC-101) Standby Liquid Control

(i) Discrepancy identified by RIII had already been discovered by LSCS and resolution incorporated in Startup Checklist.

(ii) Discrepancy identified by RIII had been discovered by GO (Proj. Eng.) and discussed with LSCS. Resoluton by incorporation into Startup Checklist was agreed upon. However, checklist did not explicitly require mixing demonstration. Although standard practice is expected to have resulted in the proper demonstration of mixing, this could not be documented by the record.

(iii) Deficiency Report PT-SC-101-198 has subsequently been prepared to verify adequate mixing of sodium pentaborate prior to fuel load.

Note: Formal G.O. review implemented in response to IE Rpt. 50-373/81-20 was implemented. However, documentation of that review had not been received at LSCS causing what appears to be an isolated deficiency in LSCS followup. The procedure developed for verification of mixing performance will be submitted to Project Engineering for review.

2. (SD-PS-101) Process Sampling

(i) Verification that all process sample system sensors were properly located was not formally done as part of SD-PS-101

(ii) Verification adequate to satisfy the FSAR (CH. 14) test abstract was performed (at least twice) during the Release for Preoperational Testing Process

(iii) The RIII inspector was advised at the exit interview that verification had been made, although not incorporated formally as a part of the test (SD-PS-101)

(iv) Deficiency Report SD-PS-101-181 has subsequently been prepared and dispositioned based on the activities described in (i) above.

Note: Formal G.O. review implemented in response to IE Rpt. 50-373/81-20 had not been backfit to apply to this test. Current procedural controls are expected to minimize the potential for discrepancies of this type

Item 1.b. Failure to Properly Evaluate Test Results

1. (PT-NB-101) Nuclear Boiler

(i) The Nuclear Boiler System preoperational test results were reassessed in relation to the concern expressed in this item of noncompliance. This review concluded that the data taken was inaccurate and that the most probable cause was either inherent inaccuracies in the measurement techniques or test engineer error. This conclusion was based on the fact that the switches in question are not physically capable of exhibiting behavior consistent with the data and on a recheck of the trip and reset points by the Instrument Maintenance Department. Additional checks of Nuclear Boiler System water level instrumentation are included in the startup test program as STP-9, Water Level Measurements. This test is performed at several test conditions.

(ii) This conclusion has been reviewed with and concurred in by LSCS, G.O. (Proj. Eng.) and G.E.

(iii) The test apparatus and procedure to be used on LSCS-2 will be reviewed prior to performance of that test to correct any equipment or procedural problems applicable to Unit 2.

2. (PT-AP-102) DC Distribution

(a).(i) IEEE STD 450 (1976 & 1980) has been used to justify taking data for every sixth cell. This justification has been reviewed with the RIII inspector.

(b).(i) The readings subsequent to the time interval for which no data was recorded were reviewed and the state of the battery charge verified to be acceptable. The absence of data for the missed interval does not effect the validity of the other test results. Not further corrective action was judged necessary. This position has been reviewed with the RIII inspector.

Note: Formal G.O. review implemented in response to IE Rpt. 50-373/81-20 has not been performed for this test. Current procedural controls are expected to minimize the potential for discrepancies of this type.

3. (PT-VP-101) Torque Switch Settings

(i) The four motor operated valves in question were reset to the proper torque switch settings prior to the exit interview.

(ii) Based on the review of similar work performed by the test engineer involved, this discrepancy is judged to be an isolated occurrence resulting from a clerical error in selecting the torque settings to be used.

CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE

Although certain of the examples identified in Item 1 have been demonstrated to be isolated occurrences not expected to recur, Commonwealth Edison has now implemented a program which is expected to further improve the preoperational test result review process. It should be understood at the outset that in our response to findings reported in IE Report 50-373/81-20, the Project Engineering review process was augmented to promote uniformity and preclude oversight of significant engineering requirements. That augmented review process had been only recently implemented at the time of the inspection report in Reference (a). This will account for some of the discrepancies left undetected by the Station evaluation of the test results. Even though we acknowledge that it is within the discretion of the NRC to audit the review process prior to its completion, it is expected that the full process will in the future prevent, as far as practicable, discrepancies of the type reported here.

Furthermore, Commonwealth Edison has undertaken to reassess the overall adequacy of the review process and through the implementation of clear program guidelines communicated to all involved personnel, has improved that process in the following ways;

(i) The improved G.O. (Proj. Eng.) test evaluation implemented in response to IE Rpt. 50-373/81-20 is in place and being used on all test evaluations.

(ii) An additional review of selected Preoperational Tests and System Demonstration by independent personnel with extensive nuclear experience has been implemented. It is expected that this review will help avoid minor inconsistencies such as several of the examples idenfied in this item of noncompliance and will eliminate the NRC's concern that major problem areas could remain undetected.

(iii) Thorough indoctrination of personnel conducting the test evaluations has been conducted to assure that each individual is aware of:

(a) The significance of the review effort
(b) The procedure to conduct a review, and
(c) The required documentation to support conclusions reached as a part of the review.

Some of the data discrepancies reported (e.g. Items 1.b.1, and 1.b.3) are such that discovery is not straightforward, especially were as in Item 1.b.1 no procedural acceptance criterion was violated. However, personnel have been cautioned to be attentive to these and similar problems in order to prevent a recurrence.

DATE OF FULL COMPLIANCE

The program augmentation discussed has been completed and is implemented as of this date. Resolution of specific deficiencies discussed herein will be completed prior to fuel loading unless otherwise identified as complete in this enclosure.

II. 10 CFR 50, Appendix B, Criterion III, requires that measures be established to assure that applicable regulatory requirements and the design basis, as defined in Paragraph 50.2 and as specified in the licensee application, for those structures, systems, and components to which Appendix B is applicable, are correctly translated into specifications, drawings, procedures and instructions. The QA manual, Quality Requirement 3.0, Section 3.1 states that, "The extent of the design review and evaluation of the original designs and modifications will be determined by the complexity of the system and any safety-related function to be performed by that system. Design evaluation of modifications will be commensurate with those applied to the original design. Review and evaluation by the Architect Engineering or the Station Nuclear Engineering Department, as well as Level III's for NDE and for concrete inspection and tests, will assure that designs, specifications and procedures will conform to the ASME and other applicable codes, standards, regulatory requirements, SAR commitments and appropriate quality standards, as applicable."

Contrary to the above:

Modified sections of pipe in the 1B and 2B diesel generators starting air, cooling water and fuel oil systems had not been designed and built to meet ASME Section III-1974 as stated in FSAR Table 3.2-1.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

Commonwealth Edison Company NCR #538 was issued which pertained to all diesel generators in Unit I and II. Fuel oil, service water, and starting air piping, as specifed in NCR #538, was replaced per ASME Section III, 1974 Edition requirements.

CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE

The vendor supplied piping modifications were necessary for the attachment of Sargent & Lundy designed interconnecting piping. As specified in Note 21 of FSAR Table 3.2-1, only the diesel generator vendor supplied piping is exempted for Quality Group C requirements. Nonconformance #538 specifically documented all instances in the diesel generator system where vendor supplied piping was improperly modified.

Because Note 21 of FSAR Table 3.2-1 only exists in Diesel generator System section and other modifications such as those to the skid air receiver tanks were properly controlled, it is felt this is an isolated occurrence and no further corrective action is necessary.

DATE OF FULL COMPLIANCE

Full compliance has been achieved.

III. 10 CFR 50, Appendix B, Criterion VIII requires that measures shall assure that identification of the item is maintained by heat number, part number, serial number, or other appropriate means, either on the item or on records traceable to the item, as required throughout fabrication, erection, installation, and use of the item. The QA Manual, Quality Requirement 8.0, Section 8.1 requires that the unique identification assigned to materials, parts, and components, including partially fabricated subassemblies, will be documented and maintained by the respective vendors, contractor or organizations having responsibility for the items involved throughout fabrication, installation or erection and use of the item and be verified as to being correct prior to release for fabrication, assembling, shipping or installation.

Contrary to the above, the as-built construction isometric drawing under the control of the piping contractor did not maintain correct traceability for five items in the standby liquid control system; and, one item in the drywell pneumatic system was found to have two heat numbers identifying it.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

A. The heat number descrepancies in the standby liquid control system appear to result from the following:

1. QC Inspector error made in May, 1978 at the Morrison Construction Company - Hammon Fab. Shop.

2. Drafting mistakes made in the revision of the installation isometric drawing to the "as built" isometric drawing issued to Sargent & Lundy for hanger and piping verification.

In reference to the QC error, the transfer of Identity Form #PC-70 for iso F-SC-1201 at the Hammond Shop listed the correct heat numbers and was signed by the same QC Inspector. A spot check of several drawings completed in the shop at the same time period were correct and the error appeared to be an isolated condition. The last fabricated spool was shipped to LaSalle in mid-1979.

A further check of the installation copy of isometric F-SC-1201 indicated drafting errors in the revision to the "as-built" drawing. The QC inspections are documented on the installation copy of the isometric drawing and these are maintained in the site files as a permanent record.

The errors were corrected in revision M of isometric drawing F-SC-1201.

B. In reference to the two heat numbers on a drywell pneumatic system spool detailed on isometric drawing IN-215, the error appears to result from improper transfer of heat numbers after the pipe was cut to fabricate a spool piece. Morrison Construction Company nonconformance report #941 was written to remove the incorrectly engraved heat number.

CORRECTIVE ACTION TO PREVENT RECURRENCE

Additional inspections were made of the SLCS piping above elevation 820' which included approximately 150 items listed on eleven (11) isometric drawings. The heat numbers on the items matched the installation copies of the drawings.

Items on isometric drawings IN 213, 214, 216, and 218 which contained heat numbers 745333 and 783234 were inspected in the field for the following:

1. The heat number on the item matched the drawing.

2. Only one heat number exists on the item.

No descrepancies were noted.

Due to the following, it is our position that the descrepancies were an isolated instance and no further corrective action is necessary:

1. Traceability was maintained with existing documentation.

2. Further inspections revealed no additional problems.

DATE OF FULL COMPLIANCE

Full compliance has been achieved.

VI. Criterion XVII requires that sufficient records be maintained to furnish evidence of activities affecting quality. Criterion IX requires that special processes, including welding and nondestructive testing be accomplished by qualified personnel using qualified procedures in accordance with applicable codes, standards, specifications, criteria, and other special requirements. The QA Manual, Quality Requirement 9.0, Section 1.0, states in part, that "For some processes, the required level of quality defined in ASME Code and other applicable codes, standards and specifications cannot be assured by inspection of the item alone. For these processes, quality assurance is obtained through reliance on personnel qualification and procedural control in force as appropriate for the processes being employed for a specific task in connection with plant contract work, maintenance repairs and modifications. The Edison Site Quality Assurance Superintendent or designee and the Quality Assurance Engineer or Inspector at the operating station is responsible for assuring that records of qualified personnel are maintained by the contractor for work performed for Edison.

Contrary to the above, "temporary" brackets were welded to, and removed from the primary liner by the licensee subcontractors without instructions, procedures or drawings authorizing their installation.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The inspector viewed 13 temporary attachments in Unit I and only 2 temporary attachments were welded to the 1/4" liner plate. One (1) arc gouge was observed and it appears this gouge was made during the initial liner construction and not repaired. It has been determined by Sargent & Lundy Engineers that an isolated grouge less than 1/32" deep is not detrimental to the containment liner leak boundary function. Two (2) burn marks were observed which resulted from removal of temporary attachments. One (1) of the burn mark areas had recorded in writing on the affected area that a PT test was completed, the date and results acceptable. In addition, five (5) Structural Integrity Test (SIT) attachments were noted as temporary attachments. However, these attachments were installed with approved procedures and qualified welders. They are to be left in place along with all other SIT attachments for possible future utilization.

We acknowledge the item of noncompliance on the basis of temporary attachments to the 1/4" liner plate do exist in Unit I and the lack of documentation on welding and repair activities prevent proving work was completed prior to the ILRT. In the final analysis, a successful completion of another ILRT will prove the leak tightness of the Reactor Containment Liner.

A. The following actions will be taken in Unit I:

1. An inspection made of the liner to identify any other temporary attachments and are gouges on 1/4" liner plate.

2. Temporary attachments deemed detrimental to the liner function will be removed and the area repaired and tested. Otherwise the temporary attachments will be left in place.

3. If required, arc gouge areas will be repaired and tested.

4. The one (1) burn mark area has been visually examined and will be UT examined.

5. As stated in Inspection Report No. 50-373/81-28, another ILRT will be completed.

B. Prior to the Unit II ILRT, a full liner inspection will be made.

CORRECTIVE ACTION TO PREVENT RECURRENCE

A letter will be issued to all site contractors stating the following:

1. In accordance with S&L direction, all temporary liner attachments must be made to thickened insert plates.

2. No temporary attachments can be made to the 1/4" liner plate.

3. Qualified procedures and personnel must be utilized.

4. After the full liner inspection;

   a) The welding procedure and welder ID must be documented by the individual contractor.

   b) All removed attachments must have the removal area Dye-Penetrant tested.

5. Acknowledgement by the individual contractors that they have instructed their craft supervisory and QC people of these rules.

DATE OF FULL COMPLIANCE

The specified letter will be written by December 15, 1981. The Unit I inspection and, if required, any repairs will be completed by January 15, 1982.

V. 10 CFR 50, Appendix B, Criterion VI, requires measures to be established to control the issuance of documents, such as instructions, procedures, and drawings, including changes thereto, which prescribe all activities affecting quality. The QA Manual, Quality Requirement 6.0, Section 6.1 requires that changes to controlled documents be reviewed and approved by the same organization that performed the original review and approval unless delegated by the orginating organization to another responsible organization. Also that each document recipient is responsible for insuring that only the latest authorized documents are in use and the void documents are so identified. Section 6.4 states that, the Project Engineering Project Engineer has the responsibility to establish document control procedures and methods during design, construction, preoperational and startup testing. The plant modification is to provide that documents are reviewed for adequacy and are approved by authorized personnel for issuance and use at locations where prescribed activity will be performed before the activitiy is started.

Contrary to the above, the licensee did not establish adequate measures to control the use of the "Motor Operator Data" Book as evidenced by the fact that the book was not annotated for at least four months as being incorrect for three valves found during the performance of PT-VP-202. Additionally, the book was not updated for at least four months to account for six valves (3 in Unit 1 and 3 in Unit 2) which were missing.

CORRECTIVE ACTION TAKEN AND RESULTS ACHIEVED

The "Motor Operator Data" Book has been annotated to indicate the correct torque switch settings for the valves in question.

CORRECTIVE ACTION TAKEN TO PREVENT RECURRENCE

Electrical Maintenance procedure LEP-GM-102 has been revised to provide a mechanism for identification of incorrect values in the "Motor Operator Data" Book. All torque switch settings for safety relatead valves which are found to be incorrect will be identified in the "Motor Operator Data" Book.

DATE OF FULL COMPLIANCE

Full compliance will be achieved by January 4, 1982.