ATTACHMENT E7-1

La Salle County Station
Units 1 & 2

Separation of Electrical Equipment Plant Wide Field Audit Procedure

Project No. 4266-02

Commonwealth Edison Company

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La Salle County Station
Units 1 & 2

Separation of Electrical Equipment
Plant Wide Field Audit
Procedure

Issue Summary

Rev. No.	Issue Date	Purpose of Issue
0	7-1-80	Comments

La Salle County Station
Units 1 & 2

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La Salle County Station
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1. Scope

1.1 Perform a detailed field audit to verify that the installed electric equipment and systems conform to the separation criteria described in the La Salle Final Safety Analysis Report (FSAR), subsections 8.3.1.3 and 8.3.1.4 as projected in Electrical Work Specification J-2559. The audit shall include a sample of not less than 10% of the installed Safety-Related equipment and cables.

2. General

2.1 The audit shall be conducted by a Separation Task Force Audit Team (Task Force) consisting of an engineer Task leader with supporting engineering and technical personnel designated by Sargent & Lundy and the Owner, who are familiar with separation criteria, standards and guides as they apply to the La Salle County Station electrical equipment and systems. No member of the Task Force shall have participated in the design and installation of any equipment and systems subject to this audit.

2.2 The existing onsite Commonwealth Edison Construction Offices shall be used by the Task Force for an audit control center. (Telephone

2.3 The Owner shall designate a participating staff (CECo) Task Force member as Safety Coordinator to perform liaison functions between Operations/Construction forces and the Task Force. The Safety Coordinator shall arrange for tags or clearances, when required, for access to energized circuits, electrical equipment, panels, enclosures, switchgear and motor control centers. In addition, he shall arrange for scaffolding, ladders or other items required to visually inspect cable trays or enclosures which are not readily accessible.

2.4 The audit shall include samples of (but not limited to) the following general categories:

a. Separation of redundant Class 1E equipment.

b. Separation of redundant Class 1E cables.

2. General (Cont'd)
2.4 (Cont'd)

c. Separation of associated circuits.

d. Identification (marking) of redundant Class 1E equipment and cables.

e. Identification (marking) of associated circuits to a level indicative of the Class 1E with which they are associated.

f. Separation of redundant wiring, indicators and controls at panels and control boards.

2.4.1 The audit will include a review of conduit and conduit supports, cable tray and cable tray supports, cable in conduit and trays, cable at control boards, and control board wiring for portions of those systems listed in Table 1.

2.4.2 The specific equipment and systems to be audited are shown on Separation Audit Forms and Cable Tabs which are listed in Table 2.

2.4.3 Separation violations discovered during the audit of equipment and systems which do not appear in Table 2 shall be documented on additional Separation Audit Forms. Miscellaneous items will be listed in Table 2A and will form an integral part of this audit.

3. Audit Criteria

3.1 The safety evaluation report for La Salle County Station construction permit was issued on September 10, 1973. Since Regulatory Guide (RG) 1.75 (Rev. 1) "Physical Independence of Electrical Systems" applies to plants whose safety evaluation report was issued after February 1, 1974, compliance with RG 1.75 shall be in accordance with LSCS FSAR Appendix B, Amendment 48, Page B.194.

3.2 Independence of redundant Class 1E systems and equipment shall be installed to ensure availability during any design-basis event as described in FSAR subsection 8.3.1.4 "Physical Independence of Redundant Systems," 8.3.1.4.2.2 "Cable Routing Criteria" and 8.3.1.3 "Physical Identification of Safety-Related Equipment." These criteria are transmitted to the field by the La Salle Electrical Installation Work Specification J-2559, Amendment 2, dated December 13, 1978.

3.3 Cable fire protection shall comply with FSAR subsections 8.3.3.2, 8.3.3.3, 8.3.1.4.2 and FSAR Appendix R, Fire Hazards Analysis.

3. Audit Criteria (Cont'd)

3.4 The criteria referred to in paragraphs 3.2 and 3.3 (above) shall be the basis for performing this audit.

4. Systems Selected for Audit

4.1 The audit shall be performed on sample portions of systems and related electric equipment as shown in Table 2. The approximate total number of Class 1E cables installed for each system and those to be audited are also included.

4.2 The cables selected represent a variety of physical locations; i.e., the AP system represents portions of various switchgear and motor control centers, DG represents cables related to each diesel generator, etc.

5. Audit Procedure

5.1 The Task Force shall review those cables, raceways and equipment listed in Table 2, to verify that the Installer has properly implemented the design referred to in paragraphs 3.2 and 3.3.

5.2 The Task Force auditor shall visually verify that cable routing, raceway separation, control panels and boards, terminations, barriers, isolation devices and equipment identification do not present deficiencies that, under single failure conditions, could result in the simultaneous loss of redundant safety-related equipment with possible subsequent loss of safety function. Any violation of the separation criteria shall be considered as a deficiency.

5.3 Field audit forms listed in Table 2, shall be used with the respective Cable Tab, for recording data.

5.4 Those criteria listed in paragraphs 3.2 and 3.3 are assigned identification numbers for use in this audit as shown in Table 3. The Task Force shall become familiar with contents and numbering system assigned to various separation criteria described.

6. Separation, Identification and Fire Barrier Requirements

6.1 Separation, identification and fire barrier requirements referred to in Table 3 shall be used by the Task Force to record deficient or acceptance items for those cables included on the Audit Forms.

6. Separation, Identification and Fire Barrier Requirements (Cont'd)

6.2 Missile, high energy pipe and Fire Hazard Areas shall be considered those shown on Sargent & Lundy Electrical Installation Drawings. The Task Force shall be alert to observe additional areas that may be hazardous to redundant electrical systems and equipment and shall document them in accordance with paragraph 2.4.3 of this procedure.

6.3 Segregation codes shall meet the requirements of Tables 4 and 5.

7. Audit Progress

7.1 A Task Force member shall periodically meet with a Representative designated by the Owner, to discuss audit progress and to evaluate audit findings.

7.2 The Owner shall designate a time and location for such meetings.

8. Audit Results

8.1 The audit results shall be prepared by the Task Force in a report format which is acceptable to the Owner, for transmittal to the NRC.

8.2 The results shall contain a discussion of the corrective action taken for those items found deficient during the audit.

8.3 In the event a large number of deficient items are discovered during this audit, the report to the NRC shall contain the Owner's proposal for any additional audit.

Table 1

Systems Selected for Audit

AP	- Auxiliary Power
DC	- Battery and DC Distribution
DG	- Diesel Generator
DO	- Diesel Fuel Oil
HG	- Primary Containment Instrument Nitrogen
HP	- HPCS
LC	- MSTV Leakage Control
LD	- Leak Detection
LP	- LPCS
NB	- Auto Depressurization
NR	- Neutron Monitoring
PC	- Primary Containment and Reactor Vessel Isolation
RH	- RHR
RI	- Reactor Core Isolation Cooling
RP	- Reactor Protection
SC	- Standby Liquid Control
VC	- Control Room - Aux. Elect. Rm. HVAC
VD	- Diesel Generator Room Vent
VE	- Auxiliary Elect. Equip. Rm. Ventilation
VG	- Standby Gas Treatment System Vent
VX	- Switchgear Heat Removal
VY	- Core Standby Cooling System Equip. Cooling (CSCS)

Table 2

Index

Separation Audit Forms and Cable Tab Page Numbers

System	Total No. of Safety-Related Cables	Total No. of Associated Cables	No. of Safety-Related Cables to be Audited	No. of Associated Cables to be Audited	Cable Tab Pg. No.	Audit Form Pg. No.
AP	56	63	8	8	AP07 AP09 AP17 AP31 AP32	AP1 of 5 AP2 of 5 AP3 of 5 AP4 of 5 AP5 of 5
DC	31	36	4	4	DC01 DC04	DC1 of 2 DC2 of 2
DG	112	27	12	4	DG01 DG02 DG04 DG13	DG1 of 4 DG2 of 4 DG3 of 4 DG4 of 4
DØ	18	18	3	3	DØ04	DØ1 of 1
HC	55	9	6	3	HC02 HC04	HC1 of 2 HC2 of 2
HP	162	72	17	7	HP01 HP21 HP25	HP1 of 3 HP2 of 3 HP3 of 3
LC	173	23	17	4	LC07 LC08 LC15	LC1 of 3 LC2 of 3 LC3 of 3
LD	71	145	8	13	LD02 LD09 LD10	LD1 of 3 LD2 of 3 LD3 of 3
LP	43	34	6	4	LP01	LP1 of 1
NB	294	219	28	21	NB01 NB02 NB12 NB13 NB18 NB35 NB73	NB1 of 7 NB2 of 7 NB3 of 7 NB4 of 7 NB5 of 7 NB6 of 7 NB7 of 7
NR	408	221	40	20	NR03 NR14 NR25 NR38 NR42 NR44	NR1 of 6 NR2 of 6 NR3 of 6 NR4 of 6 NR5 of 6 NR6 of 6
PC	97	18	10	3	PC06 PC13	PC1 of 2 PC2 of 2
RH	403	238	61	24	RH01 RH02 RH04 RH14 RH17 RH40 RH50 RH51	RH1 of 8 RH2 of 8 RH3 of 8 RH4 of 8 RH5 of 8 RH6 of 8 RH7 of 8 RH8 of 8
RI	178	69	20	7	RI01 RI02 RI21	RI1 of 3 RI2 of 3 RI3 of 3
RP	502	42	50	4	RP03 RP04 RP08 RP12 RP20 RP32 RP42	RP1 of 7 RP2 of 7 RP3 of 7 RP4 of 7 RP5 of 7 RP6 of 7 RP7 of 7
SC	-	45	-	5	SC03	SC1 of 1
VC	151	12	13	2	VC02 VC10 VC13	VC1 of 3 VC2 of 3 VC3 of 3
VD	67	18	10	3	VD01 VD03	VD1 of 2 VD2 of 2
VE	30	21	7	2	VE01 VE11	VE1 of 2 VE2 of 2
VG	52	21	5	3	VG03	VG1 of 1
VX	34	13	4	2	VX03 VX05	VX1 of 2 VX2 of 2
VY	51	29	6	3	VY01 VY07	VY1 of 2 VY2 of 2

Table 3

Separation and Identification Requirements

Criteria Group 1
Physical Separation

Criteria	Condition	Physical Separation
1a	Cable tray within the same division	1. 1 foot vertical separation 2. 3 inch horizontal separation
1b	Cable tray or conduit of different divisions in Protected Zones (low probability of being subject to damage from missiles and/or conflagration)	1. 3 feet horizontal from side rail to adjacent tray side rail 2. 5 feet vertical from bottom of upper to top of lower tray 3. Where horizontal or vertical distance cannot be met, barriers of 1 inch transite and 6 inch air space shall be provided
1c	Cable tray or conduit of different divisions in Hazard Zones (high probability of being subject to damage from missiles and/or conflagration) Missile Areas / Fire (Conflagration Areas) Turbine Bldg. (Main Floor) / Oil Storage Room Reactor Feed Pump Turbines / Turbine Oil Tanks Reactor Bldg. Operating Floor / Inside Turbine Shield Walls Beneath Main Floor Diesel Fuel Oil Storage Generator Hydrogen System	1. 20 feet separation or a 6 inch reinforced concrete wall
1d	Open cable trays of different divisions in General Plant Zones	1. 3 feet horizontal fire air space 2. 5 feet vertical fire air space 3. Fire resistant barrier with dimensions sufficient to maintain minimum free air spacing of 1 and 2 4. Where horizontal and vertical distances cannot be met, limitations of Criteria 1b shall be met
1e	Cable trays or conduits of different divisions that cross each other (in Protected Zones)	1. 12 inch vertical separation and tray must be covered for 5 feet each side of intersection of centerlines of trays
1f	Class 1E Control Boards and Panels of different divisions in Protected Zones (Control Room and Aux. Equip. Room)	1. Cables entering panel must have 3 foot separation between divisions 2. Where 3 foot separation cannot be met, cable of one division should be installed in conduit to a point where 3 foot separation is attained
1g	Class 1E Control Boards and Panels of different divisions in General Plant Zones	1. Not more than one division in panel 2. 1 inch air space between panels
1h	Containment Electrical Penetrations serving Class 1E Circuits (same division)	1. See Criteria 1a
1i	NSSS/PCIS, AFS Systems	Routed in accordance with FSAR subsection 8.3.1.4.2.2
1j	Conduits within the same division	1 inch horizontal and vertical separation

Criteria Group 2
Identification

Criteria	Equipment	Identification
2a	Cable tray and conduit	In accordance with Table 4
2b	Cable	1. In accordance with Cable Tab 2. Cable tag with permanent material to each cable end and where it passes through a wall or an enclosure
2c	Nameplates	In accordance with Tables 4 & 5

ATTACHMENT [illegible]

Surveillance Date: February 12, 1981 File No. 33.5.1

LASALLE Q.A. SURVEILLANCE REPORT NO. 81-79

Follow Up

Audit No. 1-80-63

Contractor/Organization Observed: Project Construction
Category: (10)

Finding #1 (Question #2):

Contrary to the LaSalle County FSAR, 24% of the 398 Class 1E cables [illegible] equipment audited were improperly marked.

Auditee Response:

Project Construction takes exception to the general wording of this finding. The discussion portion of the finding makes no attempt to indicate any established trends or attach severity level to the audit results listed in Attachment 2. In addition, the auditors did not review any of the electrical contractors quality procedures to analyze the measures established to control the types of items that were identified. The following is a list which categorizes all of the safety-related items contained in Attachment 2:

	Number of Conduit/Cable	% of 398 Cables Reviewed
A. Safety Related Conduit Identification		
1. Not tagged properly or not tagged at terminal boxes of equipment, valves, cable tray, etc.	47	11.8%
2. Broken off or missing tags	5	1.25%
3. Tagged with two separate seg. tags	1	0.25%
4. Incorrectly marked	1	0.25%
B. Safety Related Cable Identification		
1. "Brady" tags not legible	9	2.26%
2. Incorrectly tagged		
(a) number transposition	2	0.50%
(b) wrong color tag	5	1.25%
3. Not tagged inside panel or JB	6	1.50%
4. Tagged twice	1	0.25%
5. Auditor errors		
(a) stated cable service did not match cable tab description	(2)	(0.50%)
(b) stated cable was not tagged above equipment	(11)	(2.76%)

PCD's response to each of the above categories is as follows:

Category A.1: Discussion with the auditors indicated that the specific problem in this category was that the segregation tags were not physically at the piece of equipment. That is, the segregation tag was at the end of the rigid conduit but not at the equipment end of the flexible conduit which

connects the rigid conduit to the equipment.

Project Construction is quite aware of this practice and does not consider it a separation "violation" because the flexible conduit is limited to 18" minimum and 6' maximum. This interpretation was agreed to by both SNED and S&L in a meeting on October 21, 1980.

Category A.2:

This item involves segregation tags that were broken off or missing. H. P. Foley (HPF) Work Instructions 301 and 302 requires that these tags are installed and this is verified by HPF QC on checklists HPFCo-028 and 030. There are numerous reasons why these tags could have been knocked off after the conduit was installed. Therefore, the area walkdown procedure which is being generated by Project Construction and HPF contains a check for missing segregation tags. Because a missing segregation tag is easily identified, Project Construction feels that the area walkdown procedure is the correct mechanism to replace any of these missing tags.

Category A.3 and A.4:

These items involve one conduit which had two segregation tags and one conduit which had the wrong color tag. There is no evident reason why this was not identified during HPF's QC inspections. The area walkdown procedure indicated above requires another review of these tags and should be a sufficient control to correct the low percentage of this type of misidentifications.

Category B.1:

This item concerned cable tags which were not legible. Because of the low percentage identified as illegible during the audit and the fact that a cable's number can be verified by drawing reference, this item is not considered significant. Field cables are and will continue to be re-tagged whenever it is identified that they require it. The audit results support that no additional action in this area is warranted.

Category B.2.a and B.2.b:

This item involves cables that were incorrectly tagged either by number transposition or wrong color tags. Many times the correct number is evident, for example, Unit #1 instead of Unit #2 or "IS" instead of "SI". HPF WI400, Cable Pulling, requires that cables are marked and this is verified by HPF QC.

Category B.2.a and B.2.b con't:

As in Category B.1, Project Construction feels that the very low percentage of cables found incorrectly marked indicates that this work instruction is providing a realistically acceptable control in this area.

Category B.3:

This item involves cables not being labeled inside of a panel or JB. HPF WI500, Cable Terminations, requires cable to be identified inside of a panel and this is verified by HPFCo. QC. In addition, WI500 also requires that the cable is identified above a panel which is not a requirement in the LaSalle FSAR. This additional marking was added to aid the termination crews and QC inspectors. Many of the cables not identified inside the panel were indeed, identified just above the panel. This fact and the very low percentage found not marked indicates that no additional action is warranted.

Category B.4:

This item involves a cable being marked twice. It is very similar to Categories B.2 and B.3 in that the HPF controls (WI400 and 500) are the same. Only one example of this does not warrant any additional action, besides one of the markers was correct.

Category B.5:

As stated in S&L Letter 659 dated 10/31/80 (copy attached), thirteen safety-related cables should not have been found unacceptable by the audit team. This was a misinterpretation of the LaSalle identification criteria and these cables do meet the requirements of the LaSalle FSAR. (For Item B.5.b. please note that the tagging of cables above a panel is a requirement of HPF WI500, but because these cables were identified inside the panel, the LaSalle FSAR cable identification criteria was not violated.)

Corrective Action and Date of Full Compliance:

The field is correcting the specific [illegible] listed in Attachment 2. The status of [illegible] is [illegible] complete as indicated on the attached copy. [illegible] walkdowns mentioned above will be conducted on a schedule which is commensurate with the scheduled area turnover to the LaSalle Operating Department. As shown above, it is Project Construction's opinion that no further action than this is justified.

Follow Up Action:

Category: A1 - T. E. Watts letter dated December 23, 1980 to T. E. Quaka (see attached) concurs with Project Contruction that the segregation tag at the end of the rigid conduit instead of the equipment end of the flexible conduit, was a legitimate and acceptable method of tagging the conduit.

Categories A2, A3 & A4 -
Foley Procedure QCP-15 (Area Walkdown) is currently being implemented at LaSalle. The procedure specifically requires an examination verifying the cable and conduit identification tags are correct and in place. In the T. E. Watts letter dated December 23, 1980, Project Engineering agreed with Project Construction that the walkdown inspection will be an effective means of identifying and correcting tagging deficiencies on an area basis, rather than trying to repair or replace each tag individually.

Category B1 - In reference to the T. E. Watts letter dated December 23, 1980, Project Engineering agreed with Project Construction that illegible identification tags on cable is not a major problem. The basis for their decision was that there was a low percentage identified in the audit along with the fact that there is a mechanism whereby cable numbers can be readily verified by the drawing. Also the area walkdown will be identifying these types of discrepancies prior to system turnover.

Category B2 & B4 -
For approximately the past two years Foley work instruction WI-400 has required Q.C. verification of the cable tag identifications for all safety related cables. It is quite possible that the small percentage of cables that were discovered to be incorrectly tagged, were pulled prior to the present inspection requirement and were not part of the sample that were selected for inspecting at that time. Project Construction indicated in their response that tagging deficiencies which were a result of transposition errors were generally evident as to their correct cable numbers. They also indicated that Foley's work instruction provides a realistic acceptable control in this area. QA verified that cables VR090 and VC021, which S&L agreed were cable marking deficiencies, (see attached letter 659 dated 10-31-80) were found to have been corrected. Although Cable VC021 could only be verified above the panel.

Category B3 - In the letter dated 2-4-81 (see attached), T. E. Watts states that the low percentage of cables found without identification marking inside the panels does not constitute a problem of concern, since the majority of cables were marked just above the panels per H. P. Foley Work Instruction WI-500.

Category B5 - The T. E. Watts letter 2-4-81 states that there appears to have been a misinterpretation of the identification criteria as pointed out in S&L letter 659 dated October 31, 1980. In fact cables not being marked above panels is a violation of a H. P. Foley procedure and not the LaSalle FSAR.

Deficiencies from area walkdown #48 were examined, which was conducted in the Unit I Reactor building at elevation 673, between A-J & 8.9-15 and performed on 11-1-80. Also examined were deficiencies that were discovered in area walkdown #5 performed on 1-31-81 and conducted in the Unit I Reactor building, at elevation 786 between A-J & 8.9 - 15. These deficiencies appeared to have identified many tagging deficiencies for both conduit and cable, which indicates that procedure QCP-15 is apparently being properly implemented and providing the necessary control for identifying these type of deficiencies.

Several discrepancies between the cable segregation and the conduit code which resulted from errors on the S&L EI drawings were verified to have been corrected. The affected cables were 1HP219, 1RR154, 1RH406, 1RR152 and 1RR158 and the discrepancies are described in the attached S&L letter 659, dated 10-31-80 on page 2. Based upon Project Engineerings concurrence with Project Construction and S&L responses to this audit and the fact that the types of deficiencies identified for the most part will be controlled by the final area walkdown, this finding is considered closed.

Reported by: Edward J Ostrzel Date: 2/11/81

Reviewed by: D.N. Gruenbacher Date: 2-20-81

Approved by: R A Bauman Date: 2/20/81

cc: W. J. Shewski/G. F. Marcus
L. J. Burke/W. H. Donaldson
T. E. Quaka/Q. A. File
Contractor
B. R. Shelton
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Project Construction response to each category is as follows:

Category C.1.a: Discussion with the auditors indicated that the specific problem in this category was that the segregation tags were not physically at the piece of equipment. That is, the segregation tag was at the end of the rigid conduit but not at the equipment end of the flexible conduit which connects the rigid conduit to the equipment.

Project Construction is quite aware of this practice and does not consider it a separation "violation" because the flexible conduit is limited to 18" minimum and 6' maximum. This interpretation was agreed to by both SNED and S&L in a meeting on October 21, 1980.

Category C.1.b: This item involves associated segregation tags that have a solid white background instead of a striped background. All of the associated conduit segregation tags purchased for LaSalle have a white background and are stamped with a number to indicate the division association. This type of tag has been accepted by Project Construction, QA and the NRC for many years. However, in a meeting on October 21, 1980 SNED and S&L recommended that a striped tape be added in addition to the white metal tag to further indicate the division association. The striped tape for each of the three associated divisions has been ordered and will be added to the conduits when it is received. This additional taping will be verified during the area walkdowns mentioned in Finding #1.

Category C.2:

This item involves segregation tags that were broken off or missing. H.P. Foley (HPF) Work Instructions 301 and 302 requires that these tags are installed and this is verified by HPF QC on checklists HPFCo-028 and 030. There are numerous reasons why these tags could have been knocked off after the conduit was installed. Therefore, the area walkdown procedure which is being generated by Project Construction and HPF contains a check for missing segregation tags. Because a missing segregation tag is easily identified, Project Construction feels that the area walkdown procedure is the correct mechanism to replace any of these missing tags.

Category C.3:

These items involve one conduit which had two segregation tags and one conduit which had the wrong color tag. There is no evident reason why this was not identified during HPF's QC inspections. The area walkdown procedure indicated above requires another review of these tags and should be a sufficient control to correct the low percentage of this type of misidentifications.

Category C.4:

This involves an associated (11K) cable 1VX052 which was routed in a conduit with Div. 1 cables. The auditor indicated the conduit should have been marked 1?K. This is incorrect; the conduit is and should be marked 11K. This was confirmed in S&L's letter 659 dated 10-31-80, page 2.

Category C.5:

This involves seven junction boxes which were identified during the audit as not having a permanent marker (six) or had the wrong color permanent marker (one). HPF has just recently started to put on junction box covers (normally where the permanent tag is placed) because the cable pulling in Unit #1 is nearly complete. This is another item on the area walkdown checklist that will be verified during the walkdowns.

Category D.1:

This item concerned cable tags which were not legible. Because of the low percentage identified as illegible during the audit and the fact that a cable's number can be verified by drawing reference, this item is not considered significant. Field cables are and will continue to be re-tagged whenever it is identified that they require it. The audit results support that no additional action in this area is warranted.

Category D.2a and D.2b:

As stated for Category B.2.a, the low percentage of cable tags having number transpositions and the fact that cable numbers can be readily verified by drawing or cable tab reference, indicates that no further control in this area is required. Item D.2.b involves cable tags which are the wrong color. PCD feels that the primary purpose of the color coded cable tag is to verify cable segregation during cable pulling. Once the cable is installed, there is no safety significance to the cable tag color coding. It is Project Construction's position that the Audit results indicate that this color code marking is being controlled within acceptable limits.

Category D.3a:

This item involves cables not being labeled inside of a panel or JB. HPF WI500, Cable Terminations, requires cable to be identified inside of a panel and this is verified by HPFCo. QC. In addition, WI 500 also requires that the cable is identified above a panel which is not a requirement in the LaSalle FSAR. This additional marking was added to aid the termination crews and QC inspectors. Many of the cables not identified inside the panel were indeed, identified just above the panel. This fact and the very low percentage found not marked indicates that no additional action is warranted.

Category D.3b:

This item involved associated cables which were marked with one piece of white tape and one piece of colored tape instead of the normal striped marker. This was done by HPF Production on a temporary basis because they ran out of associated markers. This was written up by HPF QC on a Corrective Action Report. This controlled document will be required to be closed out prior to Project Construction turning over the particular areas to LaSalle Operating. It is Project Construction's opinion that this has been and will be the best method to control the remarking and assure its completion.

Category D.4:

This item involves a cable being marked twice. It is very similar to Categories B.2 and B.3 in that the HPF controls (WI 400 and 500) are the same. Only one example of this does not warrant any additional action, besides one of the markers was correct.

Category D.5a & D.5b:

As stated in S&L Letter 659 dated 10-31-80 (copy attached), thirteen safety related cables should not have been found unacceptable by the audit team. This was a misinterpretation of the LaSalle identification criteria and these cables do meet the requirements of the LaSalle FSAR. (For Item B.5.b please note that the tagging of cables above a panel is a requirement of HPF WI 500, but because these cables were identified inside the panel, the LaSalle FSAR cable identification criteria was not violated.)

Corrective Action and Date of Full Compliance:

The field is correcting the specific items listed in Attachment 2. The status of this is nearly complete as indicated on the attached copy. The area walkdowns mentioned above will be conducted on a schedule which is commensurate with the scheduled area turnover to the LaSalle Operating Department. As stated in Finding #1, it is Project Construction's opinion that no further action than this is justified.

Follow Up Action

Category C.1.a

The T. E. Watts letter dated December 23, 1980 to T. E. Quaka (See attached) concurs with Project Construction that the segregation

tag at the end of the rigid conduit instead of the equipment end of the flexible conduit, was a legitimate and acceptable method of tagging the conduit.

Category C.1.b, C.2, C.3, C.5

Striped Brady marker tags have been ordered by Project Construction to be placed on the conduits containing associated cables. These markers have not been recieved on site thus far. This item can be closed though, based upon the fact that Foley Procedure QCP-15 (Area Walkdown) is currently being implemented at LaSalle. This procedure requires the verification of cable and conduit identification tags. Also missing tags, and wrong color tags on conduits as well as no permanent markers or the wrong permanent colored markers on junction boxes would be identified in the Area Walkdown. Additionally in the T. E. Watts letter dated December 23, 1980, Project Engineering agreed with Project Construction that the walkdown inspection will be an effective means of identifying and correcting tagging deficiencies on an area basis, rather than trying to repair or replace each tag individually.

Category C.4

S&L letter 659 dated 10-31-80 confirmed that the 1YK tagging on the conduit which contained associated cable 1YX052 (11K) was correctly marked.

Category D.1

As indicated in Finding #1 category B.1, Project Engineering agreed with Project Construction that illegible identification tags on cable is not a major problem. The basis for their decision was that there was a low percentage identified in the audit along with the fact that there is a mechanism whereby cable numbers can be readily verified by the drawings. Also the area walkdown will be identifying these types of discrepancies prior to the system turnover.

Category D.2 and D.4

Only a small percentage of associated cables are verified by Foley Q.C., per Foley work instruction WI-400. It appears that with the small percentage of these cable tagging deficiencies identified that an acceptable control exists in the area of associated cable. Cables VR090 and VC021 which S&L agreed were cable marking deficiencies (See attached letter 659 dated 10-31-30) were found to have been corrected. But cable VC021 could only be verified above the panel.

Category D.3.a

As indicated in Finding #1, Project Engineering (T. E. Watts letter dated 2-4-81) did not feel that cables found without identification marking inside the panels constituted a problem of

concern, since the majority of the cables were marked just outside the panels per H. P. Foley Work Instruction (WI-500). Since Foley's work instruction requires identification both above and inside the panels, it appears that reasonable control is established to address these types of deficiencies in the future.

Category D.3.b

Based upon the fact that associated cables were marked with one piece of colored tape and one piece of white tape on a temporary basis, and Foley Corrective Action Reports have documented the locations where this practice was used, a system of control is in place.

Category D.5

In reference to S&L letter 659 dated 10-31-80 (See Att'd) neither the FSAR nor S&L's Cable Identification Criteria for LaSalle County Station require that a cable be tagged where it enters an enclosure. Consequently, twenty six associated cable identified during the audit as having this deficiency are to be dropped, based upon Project Engineerings concurrence (letter dated 2-4-81) with S&L and Project Construction that no violation of the FSAR exists.

As indicated in Finding #1 deficiencies from area Walkdown # 48 were examined, which was conducted in the Unit I Reactor building at elevation 675, between A-J and 8.9-15 and performed on 11-1-80. Also examined were deficiencies that were discovered in area walkdown #5 performed on 1-31-81 and conducted in the Unit I Reactor building, at elevation 786 between A-J and 8.9-15. These deficiencies appeared to have identified many tagging deficiencies for both conduit and cable, which indicates that procedure QCP-15 is apparently being properly implemented and providing the necessary control for identifying these type of deficiencies.

Several discrepancies between the cable segregation and the conduit code which resulted from errors on the [illegible] EI drawings were verified to have been corrected. The affected cables were 1HP219, 1RH406, 1RR152, and 1RR153 and the discrepancies are described in the attached S&L letter 659, dated 10-31-80 on page 2. Based upon Project Engineerings concurrence with Project Construction and S&L responses to this audit and the fact that the types of deficiencies identified for the most part will be controlled by the final area walkdown, this finding is considered closed.

cc: W.J. Shewski/C.F. Marcus
L.J. Burke/W.H. Donaldson
T.E. Quaka/Q.A. File ✓
Contractor
B.R. Shelton
B.B. Stephenson

Reported by Edward R Butler Date 2/11
Reviewed by D.H. Danielson Date 2-2
Approved by R C Brown Date 2/1

LaSalle Q.A. Surveillance Report No. 81-94

Follow Up

Audit No. 1-80-63

Contractor/Organization Observed: Project Engineering Category: C

Finding #3 - Question #4

Contrary to the LaSalle County Station FSAR, five panels were identified as having wiring separation violations at the controls or terminal blocks inside the panels.

The following internal panel wiring deficiencies were identified during the audit:

1. Panel 1H13-P614 has Cable 1RR092 blue-associated and Cable 1RR089 yellow-associated terminating into Recorder B33-R639. Cables are in contact with each other and terminate at same block.

   Also, in same panel, Cables RR369, RR184, RR089 yellow-associated and Cables 093, 092, 363 blue-associated terminate into Recorder B33-R601.

2. At Panel 1PM10J, Main Control Room Division 1 associated cables were terminated with Division 2 associated cables at the same terminal blocks.

3. At Panel 1PM09J, Main Control Room Division 1 associated Cable 1FC025 is bundled together with Division 2 associated cables and terminated at TB12 with cables.

4. Panel 1H13-P611, NSSS/RPS Trip System B. Division 2 Cables 1PC076, 1PC082, 1PC090, and 1PC091 are bundled and terminating together with RPS Cables B2C at same Terminal Block.

5. Panel 1H13-P609 NSSS/RPS Trip System A. Division 2 Cables 1NBC45, 1PC051, 1PC140, and 1RR389 are bundled and terminating together with RPS Cables A2C at same Terminal Block.

Auditee Response

S&L's letter 659 dated 10-31-80 states that Items 1, 2 and 3 of this finding do not violate the LaSalle Separation Criteria. The letter goes on to say that for items 4 and 5, the existing field installation do not directly violate any stated criteria, but does state that the criteria is vague at this transition point in the cable's routing. Project Construction does not feel that any rebundling is warranted until additional criteria is finalized; namely, to what extent should the rebundling occur and once bundled what is the separation requirements of the bundles.

Corrective Action and the Date of Full Compliance:

Until additional criteria is received from SNED or S&L, Project Construction maintains that the existing field installations do not violate the LaSalle Separation Criteria.

Follow Up Action

Project Engineering is in agreement with S&L's decision that items 1, 2, and 3 identified in this finding do not violate the LaSalle Separation Criteria (reference Watts letter dated 2-4-81). In addition, Project Engineering is in agreement with S&L and Station Construction that rebundling or reterminating of cable is not justifiable at this time, since items 4 and 5 are not directly violating any stated criteria. Consequently this finding is considered closed.

Reported by [illegible] Date [illegible]

Reviewed by L.W. Lentz Date 2-19

Approved by R.A. Brown Date 2/20

cc: W. J. Shewski/G. F. Marcus
L. J. Burke/W. H. Donaldson
T. E. Quaka/Q.A. File ✓
Contractor
B. R. Shelton
B. B. Stephenson

Issuance Date: February 10, 1981 File No. 13.1.1

[illegible] A. SURVEILLANCE REPORT No. 81-07

Follow Up

Audit No. 1-80-1

Contractor/Organization Observed: Project Construction
Category: (1b)

Observation No. 1 (Question #1):

Contrary to LaSalle County Station FSAR, 4 safety associated cables were found to have violated physical separation criteria. This constituted a total of 1% of the total associated cables examined and 0.5% of all associated and class 1E cables audited.

Conduit carrying cable 1DC043 does not have a one inch horizontal and vertical separation with cable tray at mod. 352B. Also cables 1RH171, 1RT071 and 1R0061 are bundled together or crossing different division cables in panels where a 3 foot separation is to be attained. See Attachment I of the audit results for locations of deficiencies.

Licensee Response:

Project Construction agrees that the conduit carrying 1DC043, violates the separation criteria. This conduit will be raised to a 1" minimum clearance with the cable so that it conforms to the criteria. S&L letter 650 dated 10/31/80 states that the panel entry points for cable 1R0061, 1RT071 and 1RH171 violate the LaSalle separation criteria. Project Construction agrees and will revise the panels as directed by S&L.

Corrective Action and Date of Full Compliance:

The conduit for 1DC043 has been raised in the field and is now in conformance with the LaSalle separation criteria. Entry points for cable 1R0061, 1RT071 and 1RH171 and any additional work to fill panels will be completed when revised drawings are received from S&L.

Follow Up Action:

The conduit for cable 1DC043 was verified to have been raised in the field about 4" above the cable pan. This provides the necessary clearance for the cable so that it now conforms with the LaSalle separation criteria. S&L has revised the drawings for cables 1RT071 and 1RH171 to conform to the LaSalle separation criteria.

Follow Up Action Con't

Foley Work Instruction 103 provides a traveller and the sequence to be followed in order to assure that wiring type design changes on safety related items are incorporated and inspected. Traveller packages for cables 1RT061 and 1RT071 have been written and issued to Foley for field revision. These two traveller packages are scheduled to be completed no later than 3-9-81.

It was established in discussion with the senior S&L audit team member, that during the course of the audit additional panels other than the panels being audited were also examined for separation criteria which included entry point violations. This audit coverage constituted examining at least 90% of all Unit I safety related panels. Since a low percentage of panel entry point violations were identified for the large sample examined, it appears that these were isolated cases. Based upon the fact that the work has been scheduled to correct the panel entry point violations for cables 1RT061 & 1RT071, plus 1RH171 will be scheduled within the same system, which requires Q.C. verification. This observation is considered closed.

Reported by: Edward Whitel Date: 3/5/81

Reviewed by: [illegible] Date: 3-5-81

Approved by: [illegible] Date: 3/5/81

cc: W. J. Shewski/G. F. Marcus
L. J. Burke/W. H. Donaldson
T. E. Quaka/Q. A. File
Contractor
B. R. Shelton
B. B. Stephenson

December 23, 1980

Subject: Audit 1-80-63, Electrical Separation

Mr T.E. Quaka:

Station Construction takes exception to Category A.1: Locations of conduit segregation tags, and does not consider it a separation violation. Their feeling is that, since the flexible conduit length is limited to between 18" and a 6' maximum, this practice is a legitimate and acceptable method of tagging the conduit. Both MED and S&L are in agreement with this interpretation of the related specification.

An exception is also taken on Category A.2. It is felt that while construction is still underway it would be extremely difficult, if not impossible, to protect the integrity of segration tags. Upon completion of construction, prior to an area being turned over, comprehensive walkdown inspection of this area will be performed by Station Construction and any tagging deficiencies should be located and corrected at this time. Engineering agrees that the walkdown inspection which will be done by procedures, will be an effective means of correcting deficiencies on an area by area basis rather than trying to repair/replace tags on an individual basis.

The third and final exception to items in this audit is taken on Category B.1, which involves cable tags which were not legible. Station Construction's stand in this instance is that since other cable identifying methods are available and the percentage of tags that were not legible is quite low, no further action other than replacing illegible tags on an as found basis is required. SMED & S&L are in agreement with Station Construction's disposition on this problem and also feel that the illegible tags are not a major problem.

It appears that most deficiencies pointed out in the audit are in the area of identification rather than separation isolations and that the criteria set forth in the LaSalle County FSAR for separation are being adhered to.

T.E. Watts

JFP/sb/0191A

February 4, 1981

Subject: Supplemental Response to Audit 1-80-63
Electrical Separation

Mr. T.E. Quaka:

Station Construction has taken exception to certain additional items not addressed in the letter from T.E. Watts to T.E. Quaka dated December 23, 1980. The purpose of this letter is to resolve or answer these exceptions.

Category B.3. addresses marking of cables inside panels. Station Construction's position on this category is that due to the low percentage of cables found unmarked inside the panel (6/393 or 1.5%) and the majority of the cables were marked outside the panels (per H.P. Foley procedure) no further action is required. Project Engineering concurs with this decision.

Due to the low percentage (.25%) of cables found in category B.4 Station Construction feels no further action is required on this item. Project Engineering agrees that this does not appear to be a major problem and agrees with Station Construction's resolution in this category.

Category B.5 appears to have been a result of misinterpretation of the identificaion criteria as pointed out in S&L letter 659 dated October 31, 1980. Category B.5.b. addresses cables not marked above the panel, which is in fact a requirement of H.P. Foley company rather than the LaSalle FSAR. Project Engineering concurs with Station Construction's decision that no action is necessary.

Observation #1 addresses violations of the LaSalle criteria which were identified by the audit team. These violations have been or will be corrected upon receipt of revised S&L drawings. Engineering is in agreement with the resolution of these violations.

Several apparent internal panel wiring deficiencies were identified by the audit team in finding #3. Items 1,2 and 3 of this finding were addressed by S&L letter 659 dated October 31, 1980 as not violating the LaSalle separation criteria. Project Engineering is in agreement with S&L's decision on these items.

Items 4 & 5 are addressed as not directly violating any stated criteria. Therefore, Project Engineering and S&L are in agreement with Station Construction's position that rebundling is not justifiable at this time and reterminating of the cables is not necessary.

RECEIVED

FEB 05 1981

CECO La SALLE
SITE Q A

T.E. Watts

JFP:mnh/0163B
cc: J.F. Phelan
E. Hetzel (QA)

SARGENT & LUNDY
ENGINEERS
55 EAST MONROE STREET
CHICAGO, ILLINOIS 60603
TELEPHONE 312/269-2000

PLEASE DO NOT DESTROY

SUBJECT

PAGE __ OF __

J-2559-659
October 31, 1980
Project No. 4266-00

Commonwealth Edison Company
La Salle County Station - Unit 1

Audit Report 1-80-63
Electrical Separation
S&L Specification J-2559
C. E. Co. P.O. 4106454

Mr. K. W. Steele
Commonwealth Edison Company
c/o La Salle County Station
R. R. # 1
Marseilles, IL 61341

Dear Mr. Steele:

The following is in response to those audit items which we agreed to address during our meeting of October 21, 1980:

Findings #1 & #2

Identification Criterion 2B2 is incorrect. Neither the FSAR nor Sargent & Lundy's Cable Identification Criteria for La Salle County Station require that a cable be tagged where it enters an enclosure. Therefore, the findings in Attachment 2 against the following cable numbers on Pages 2-21 thru 2-27 and on Page 2-30 should be dropped:

DG019, DG020, LP013, LP015 thru LP019, MB119, MB732, PC064*, RH401, RH402, RH403, RR012, RR022, RR215, VC102, VC105, VC108, VD018*, VE013, VE015, VY011, VY075, AR035, IN022, IN037, IN038, RR102, RR105, RR108, WR037, VQ174, VQ178, ND384, DT017, PI215, RR324

*These items have an additional finding which must be addressed by the field.

Also, in Attachment 2, Pages 2-18 and 2-19, the descriptions in the cable tabulation for cables AP313, AP323 and AP329 are correct. Therefore, the findings against these cable numbers should also be dropped (besides, these "findings" are beyond the scope of this audit).

We have reviewed the electrical installation drawings for the following cables listed in Attachment 2 with discrepancies between the cable segregation code and the conduit code. These are the results:

HP219 (Page 2-3) Conduit should be marked 1GK (green) per EI drawing.

*RH406 (Page 2-6) Conduit is marked 12C on EI drawing, should have been 1BC.

VX052 (Page 2-9) Conduit is correctly marked 1YK per EI drawing.

*RR152 (Page 2-14) Conduit is marked 1YK on EI drawing, should have been 11K.

*RR154 (Page 2-14) Conduit is marked 1YK on EI drawing, should have been 11K.

*RR158 (Page 2-14) Conduit is marked 1BK on EI drawing, should have been 12K.

VQ175 (Page 2-17) Conduit tag (1BC) is correct for additional cables in same conduit.

VQ179 (Page 2-17) Conduit tag (1YC) is correct for additional cable in conduit.

VR090 (Page 2-19) Cable is incorrectly marked, should be 11C per tab.

VC021 (Page 2-20) Cable is incorrectly marked, should be 1VC021 per tab.

*EI drawings will be revised and reissued immediately.

Finding #3

There is no requirement in the La Salle FSAR for the separation of "associated" cables within panels. The only requirements for separation of associated cables at La Salle apply to cables routed in trays and conduit. Therefore, Items 1, 2 and 3 of this finding should be dropped.

The criteria for Reactor Protection System cables require that they be routed with no other system's cables. However, there are no rules preventing termination of these cables on the same terminal block with non-RPS cables. The General Electric Company

Criteria upon which the La Salle Separation Criteria is based is unclear on how the transition from cable routing to cable termination is made. We might suggest that they be unbundled from other cables but we see no need to reterminate them.

Observation #1

Cables 1RT061, 1RT071 and 1RH171 do not meet the criteria for separation of cables entering panels. Sargent & Lundy will issue details to correct the installation of these cables.

We have noted that there are some unassigned cables and ZZ system cables which have been disconnected at panels but which remain within the panel section to which they were originally assigned. These cables should be removed from the panels, especially if their segregation code differs significantly from other cables terminated in the same panel section. This will eliminate some of the questions raised relative to the mixture of associated cables in panels.

If you have any comments or questions related to the above, please contact me at your convenience.

Yours very truly,

W. G. SCHWARTZ

W. G. Schwartz
Senior Electrical
Project Engineer

WGS/jmd
In duplicate
Copies:
B. R. Shelton
R. E. Watts
T. E. Quaka
D. C. Haan

* This is not directly related to this audit. Mr. W. G. Schwartz indicated that the idea that this recommendation was meant to be mainly cosmetic. This will be addressed as a separate item. See site QAL # 3173.

D. N. Hunterford
2-20-81

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Enclosure 8

Item 9 Technical Specifications (16)

Commonwealth Edison provided a response to the last (August, 1980) full BWR Standard Technical Specification issue on December 17, 1980. Since that time three additional partial revisions to that "Standard" dated January 14, 1981, February 5, 1981 and March 13, 1981 have been received. On the assumption that no further changes are forwarded by the NRC Staff, Commonwealth Edison expects to be prepared to review the then current "Standard" specification in mid-April, 1981.

It is our firmly held view that future technical specification discussions must be conducted with the technical branches responsible in addition to the NRC QA Branch. It is our judgement that remaining differences between Commonwealth Edisn involve technical substance rather than format, and therefore, demand the participation of the technical branch having responsibility for the review of any area in contest.

Enclosure 9

Item 10 Quality Assurance (17)

The NRC Staff has in the form of additional questions on the LaSalle County Safety Analysis Report, requested clarification and augmentation of the "Q-list". Specifically, questions 421.6, 421.7, 421.8 and 421.9 each addresses itself to systems, components, structures and procedures existing prior to TMI as well as similar items which came under review after TMI. The initital response to certain of these questions was docketed in FSAR Amendment 54 (Q421.6, Q421.7), supplemental information will be submitted in Amendment 56 which will be transmitted in early April, 1981.

Numerous meetings and conferences have taken place between Commonwealth Edison and the Staff regarding the intent of these questions. Although in general, this interaction was productive, it led to the clear recognition on the part of the applicant that the Staff is proposing a major expansion of the Q-list philosophy, an expansion which unfortunately is so broad as to be ambiguous and we believe unenforceable.

In general, it can be said that the Commonwealth Edison Quality Assurance Topical Report applies to safety-related and ASME Section III activities and items, and related consumables plus fire protection, security, emergency planning, meteorology and rad waste shipments. This commitment is clear, and has been clearly documented. However, the apparently trivial addition of such items as fire protection or emergency paln to a "Q-list" introduces uncertainties in interpretation which are broad and, therefore, ominous. Although specific commitments to the degree of applicability of the QA program to such areas as have been named have already been accepted by the NRC Staff, the addition of the Emergency Plan to the list, for example, would raise questions regarding specific intent. Would all emergency facility design require QA? Would all emergency communications systems require QA? Would all public notification systems require QA? We contend the answer is a clear no. Not even the NRC "red-phone" system is designed, purchased installed or maintained under a QA program.

In recent discussions with the Staff, it has been contended that this is not an expansion of previous licensing requirements. However, specific facts suggest to the contrary.

1. Although the Staff has agreed that certain BWR components are not safety-grade and has, through intensive discussions, allowed the use of these components based on augmented technical specification surveillance, the QA Branch requires Q-listing which for non-safety grade components raises serious questions on requrements for replacement; e.g. level-8 trip, turbine bypass system, and main steam pipng downstream of outboard isolation valve.

2. Although the NRC has explicitly excluded safety-grade requirements from most systems and structures requied for the emergency preparedness program, the QA Branch specifically requires the SPDS system, Emergency Response Facilities and meteorological programs (including dose assessment program software) to be Q-listed. This requirement is, in our view contrary to the intent of NUREG-0696, and in fact is so broad a requirement that almost any system, component or structure in the plant could fall under the QA program if these same rules were to be applied uniformly.

3. NUREG-0660 Task I.F.1, "Expanded Quality Assurance List," and I.F.2, "Development of More Detailed QA Criteria" were not incorporated into NUREG-0694 "TMI Related Requirements for New Operating Licenses" or its subsequent clarification, NUREG-0737. These tasks were in fact clearly relegated a lesser priority - not to be resolved until December, 1983.

Although we recognize the well intentioned dedication of the Staff in its imposition of conservative requirements which appear to address long term tasks under NUREG-0660, until a uniform, understandable and enforceable regulatory position has been established, it is not reasonable to require upgrading everything which has an apparent relation to safe plant operation. Without definitive guidance, such a policy is so subjective that enforcement would be almost impossible.

Commonwealth Edison will continue to appropriately delineate all sysems, components and structures which are, in fact, "safety grade". In addition, we will continue to vigorously enforce through our own Quality Assurance Program all procedureal and programmatic commitments made to date including those related to fire protection, security, emergency planning and meteorology. We would also be happy to work with the Staff in the developement of a response to NUREG-0660 Task I.F.

However, in the event the Staff persists in requiring the addition to a Q-list of all items "affecting safety", including such items as SPDS or emergency facilities, we must formally request a management appeal. That appeal should be at or above the level of Assistant Director of the Division of Engineering in as much as numerous discussions and negotiations have already taken place with the Chief of the NRC Staff - QA Branch.

Enclosure 10

Item II. TMI Issues (22)

II.a.(I.C.8) Emergency Procedures

The NRC Staff effort to monitor selected LaSalle County Emergency procedures is substantially complete. This effort, which was initiated in August, 1980, has resulted in the use at LaSalle County Unit I of the so-called "sympton based emergency procedues" which implement the BWR Owners Group emergency procedures guidelines . The Staff has reviewed drafts of these procedures, and in November, 1980 conducted a simulator verification of the procedure adequacy. Training on the procedures was initiated at LaSalle County in March, 1981. All that remains prior to final procedure signoff is verification of plant specific analytical information upon which the operator response is based. This analysis verification is in process and is scheduled to be completed in early April, 1981. It is expected that final completed procedures will be submitted to the Staff by April 15, 1981. Any slippage in that date is expected to be minor. However, it is judged that the substance of the review is complete and final procedure implementation could be verified by the Regional Inspection and Enforcement authority. For these reasons, it is udged that this item can be closed.

II.b (II.B.7 and II.B:8) Hydrogen Control & Degraded Core Rulemaking

Commonwealth Edison committed in November, 1980 to the inerting of the LaSalle County Mark II containments. The operability of the Containment Purge Valves, which was discussed with the Staff in February, 1981 is currently being verified. However, as was indicated to the Staff, Commonwealth Edison will complete the program of qualification defined in the D. L. Ziemann letter to D. L. Peoples dated October 23, 1979 and will implement any interim required measures defined in that Staff position. The detail design of the LaSalle County hydrogen control (inerting) system was documented in FSAR Amendment 55.

II.c. (II.E.4.2) Containment Isolation Dependability

This item also remains open pending satisfactory resolution of the containment purve valve operability discussed in item II.b. above.

II.d. (II.F.2) Instrumentation for Detection of Inadequate Core Cooling

As indicated in NUREG-0519, the applicant has, with the assistance of the BWR Owners Group, justified the adequacy of the existing instrumentation for detection of inadequate core cooling. Although we recognize the existence in RG 1.97 of a backfit

requirement for what has been called core-exit thermocouples, the Guide implementation date is in mid-1983. This applicant will participate with the BWR Owners in the generic resolution of the requirements for this future modification. At this time, however, no new information can be supplied, nor is any expected prior to the scheduled issuance of the LaSalle County operating license. In as much as the requirement for the device in question is more than 2 years off and continuing contriversy exists between the BWR Industry and the NRC Staff and the ACRS and the NRC Staff on the efficacy of the device, we request that the item not be held open. Its resolution will result from final modifications made on all operating plants, including LaSalle County to satisfy RG 1.97.

II.e (II.K.3.18) B&O Task Force - ADS Logic

This item remains open in expectation of the submittal by April 1, 1981 of the BWR Owners Group feasibility study for the ADS logic modification to eliminate the need for manual actuation. The results of this analysis are currently being reviewed by the the Owners Group and will be submitted to the NRC Staff on schedule. It can be pointed out, however, that the concurrent development at LaSalle County of improved emergency procedures (as discussed under task I.C.8) supports the advantage of the increased flexibility and increased diversity for some event sequences afforded by the present design. It is on this basis, which will be justified in greater detail by the owners group submittal, that no modifications at LaSalle County Station are judged to be necessary.

II.f.(II.K.3.44) Analysis of Transients with Single Failure

The BWR Owners Group submitted the analysis required for this task in the D.B. Waters letter to D. G. Eisenhut dated December 29, 1980. That report, which is applicable to LaSalle County, was used as a basis for the LaSalle County submittal contained in Section L.34-22 of Appendix L of the FSAR. The fundamental conclusion of this analysis is that BWR fuel remains covered during the worst anticipated transient with the worst single failure and a stuck open relief. This is true without any operator action to manually initiate ECCS or other make-up systems. Manual ADS may be required under certain scenarios. The symptom based emergency procedures implemented at LaSalle County Station were developed to minimize reliance on event oriented training. These procedures, it is judged, resolve the NRC Staff open item regarding operator response under degraded system conditions.

11.g (III.A.1.2) Final Emergency Facility Design

As you are aware, the NUREG-0696 facility design definition date is June 1, 1981. It is unlikely that submittal of information in advance of that date is possible. However, as was indicated in NUREG-0519 the location and structural design of the LaSalle County Technical Support Center and Operational Support Center are discussed in Appendix L of the FSAR. The permanent LaSalle County EOF has not been discussed as yet but it will be a facility whi satifies Option 2 of NUREG-0696 i.e. it will be located betwee 10-20 mi. of the TSC. The detailed instrumentation design description and additional configuration information will be provided by June 1. In as much as implementation of this final design is required after LaSalle County Unit 1 licensing, the issue should not prevent license issuance. However, the applicant recognizes the need for a license condition to control the ultimate resolution of this issue.

11.h. (III.A.2) Long Term Emergency Preparedness

Resolution of the four outstanding issues discussed in Appendix D of NUREG-0519 has in part been accomplished.

Each of those items will be addressed separately.

1. Provide predetermined EALs for high range effluent monitors.

   Resolution: This item will be completed as soon as practicable after final installation and calibration of the subject monitors. In as much as these components are not required until January 1, 1982, it will be some months before this effort is complete. We expect this effort to be concluded prior to LaSalle CountyUnit 1 fuel loading, however, and recommend a condition for the license to verify adequate incorporation of the information. In as much as no controversy exists over what specifically is required, all that is needed to close the issue is final calibration completion. This approach is reasonable because Region III is already conducting the emergency plan review.

2. Provide description of and completion schedule for permanent EOF.

   Resolution: As was discussed in item 11.g. above, this information will be provided as required by June 1, 1981 with the implementation schedules defined in

NUREG-0696 expected to be met, barring unforeseen problems with equipment deliveries or other circumstances beyond the control of the applicant.

3. Provide upgraded Adverse Weather Evacuation Time Estimates.

   Resolution: This information was provided in the L. O. DelGeorge letter to D. G. Eisenhut dated March 27, 1981.

4. Provide clarification of health physic drill content and schedule and exercise schedules.

   Resolution: This additional information is addressed in Section 8.3 of the updated Commonwealth Edison Generating Station Emergency Plan for LaSalle County Station (April, 1981) transmitted by the L. O. DelGeorge letter to H. R. Denton dated March 27, 1981.