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ILLINOIS POWER COMPANY

CLINTON POWER STATION, P.O. BOX 678, CLINTON, ILLINOIS 61727

August 12, 1985

PRIORITY ROUTING

Docket No. 50-461

Mr. James G. Keppler
Regional Administrator
Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, Illinois 60137

Subject: Illinois Power (IP) Company Request for Concurrence to Remove Additional Commodities from the Overinspection Program

Dear Mr. Keppler:

Illinois Power Company hereby requests NRC concurrence to terminate the Overinspection Program for cable tray, conduit, cable and cable terminations. The technical justification for this request is set forth in Enclosure 1 to this letter.

The NRC letter dated April 11, 1985, (J. G. Keppler to IP Attn: W. C. Gerstner) stated in Enclosure 3 that the questions and comments, concerning the February 1985 IP report entitled "Results of Quality Programs for Construction of Clinton Power Station" and contained in Enclosure 2 to that NRC letter, should be addressed by IP for any future proposal to terminate the Overinspection Program for additional commodities. Enclosure 2 to this letter contains IP's answers to the NRC questions and comments set in Enclosure 2 to the NRC's April 11, 1985, letter.

IP believes that the enclosures provide a complete base of information for an NRC Region III decision on the subject IP request for concurrence at the earliest possible time.

Sincerely yours,

D. P. Hall
Vice President

JEK/jsp

Enclosures

cc: Director, Office of I&E, USNRC, Washington, D.C. 20555
B. L. Siegel, NRC Clinton Licensing Project Manager
NRC Resident Office
Illinois Department of Nuclear Safety
Allen Samelson, Assistant Attorney General, State of Illinois

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ENCLOSURE 1
TECHNICAL JUSTIFICATION FOR IP'S REQUEST
FOR NRC CONCURRENCE TO TERMINATE
THE OVERINSPECTION PROGRAM FOR
ADDITIONAL COMMODITIES

References:
1) IP Report, "Update to Results of Quality Programs for Construction of Clinton Power Station", April 1985.
2) NRC letter (J. G. Keppler to IP Attn: W. C. Gerstner), dated April 11, 1985.
3) NRC letter (J. G. Keppler to IP Attn: W. C. Gerstner), dated June 28, 1985.

This IP request for NRC concurrence to terminate the Overinspection Program covers cable trays, conduit, cable and cable terminations.

The basic data and evaluations that support this request have been previously provided to NRC in reference 1. Reference 1 reported the results of the Overinspection Program for all commodities as of December 31, 1984, and included engineering evaluations of the safety significance of all nonconforming conditions identified by the Overinspection Program through that date.

The NRC letter, Reference 2, forwarded questions on IP's March 29, 1985, request for concurrence to terminate the Overinspection Program for Piping and Mechanical Supports. Enclosure 3 to that letter stated (NRC Comment A) that IP should provide answers to the applicable questions contained in Enclosure 2 to that letter for commodities other than piping and mechanical supports with any future requests to terminate the Overinspection Program for additional commodities. The following Enclosure 2 provides the answers to applicable NRC questions and comments in Enclosure 2 to Reference 2.

The technical justification for this request is provided below, as follows:

° Part A - A statement of the criteria for termination that incorporates the NRC position set forth in Reference 3.

° Part B - The pertinent results of the Overinspection Program as of December 31, 1984, for the commodities that are the subject of this request.

° Part C - The basis for the conclusions that the termination criteria are met for each commodity, and that IP's request should be granted.

A. The Termination Criteria

All of the following criteria shall be satisfied before the reinspection of a safety-related commodity under the Overinspection Program is terminated.

1. A sufficient number of reinspections have been conducted to provide high confidence that the results of reinspections are representative of overall quality for a specific commodity.

2. In the aggregate, the reinspections for a commodity did not identify a significant number of nonconforming attributes. This criterion will be satisfied if the rate of conforming attributes is at least 95%.

3. The reinspections for a commodity did not identify any nonconformance which had safety-significance with generic implications*. A safety-significant nonconformance is defined as a nonconformance which, were it to have remained unidentified by the Overinspection Program, could have resulted in the loss of capability of a structure, system, or component to perform its intended safety function. This criterion will be satisfied by an engineering evaluation, similar to that performed for the "Results of Quality Programs for Construction of Clinton Power Station".

*Refer to IP letter U-600017 of April 26, 1985, for clarification of the term "generic implications".

B. The Results of the Overinspection Program through December 31, 1984

The results of the Overinspection Program through December 31, 1984, are reported in Reference 1. The Field Verification results pertinent to Criterion 1, above, are presented in the following table:

Table 1

Commodity	Total Plant[2]	Reinspected By FV	Items With NCRs	Safety Significant NCRs	Reliability Based on 95% Confidence[1]
Cable Tray	1,432	398	100	0	99%
Conduit	6,162	751	52	0	99%
Cable	5,755	1,598	280	0	99%
Cable Terminations[1]	11,510	1,472	435	0	99%

[1] Reliabilities are calculated using the equation:

$$R = 1 - \frac{2.995}{n}$$ where,

R = Reliability at 95% confidence level assuming an infinitely sized lot
n = Number of items inspected

[2] Cable trays and conduit are in number of pieces, cable is number of cables and terminations are calculated as two per cable.

Based on the number of attributes inspected for each commodity, Figure 1 shows that the uncertainty associated with the reinspections is low, and further inspections are not expected to significantly reduce this uncertainty. In addition, Figure 2 shows that the 95/95 criterion, which is the basis for Overinspection Program sample inspection, is also satisfied for cable tray, conduit, cable and cable terminations.

Based on the number of items reinspected, the associated low uncertainties and the fact that the 95/95 criterion has been satisfied, IP Criterion 1 for termination of reinspection has been met.

The Field Verification results pertinent to Criterion 2 above are presented in the following table:

Table 2

Commodity	Attributes Inspected	Nonconforming Attributes	Conformance Rate
Cable Tray	87,361	111	99.9%
Conduit	22,716	59	99.7%
Cable	22,020	501	97.7%
Cable Terminations	116,901	453	99.6%

For cable tray, conduit, cable and cable terminations, the 95% conformance criterion is satisfied.

In regard to Criterion 3, above, the engineering evaluations of all nonconformances identified by the Overinspection Program, as reported in Reference 1, Chapter V and Appendix D, show that none of the nonconformances were safety significant, and thus Criterion 3 is satisfied. Additional qualitative and quantitative information concerning these evaluations is presented in Enclosure 2, IP Responses to Enclosure 2 NRC Question A.3 and Comment C.3. The results of the engineering evaluations are summarized as follows:

FIGURE 1

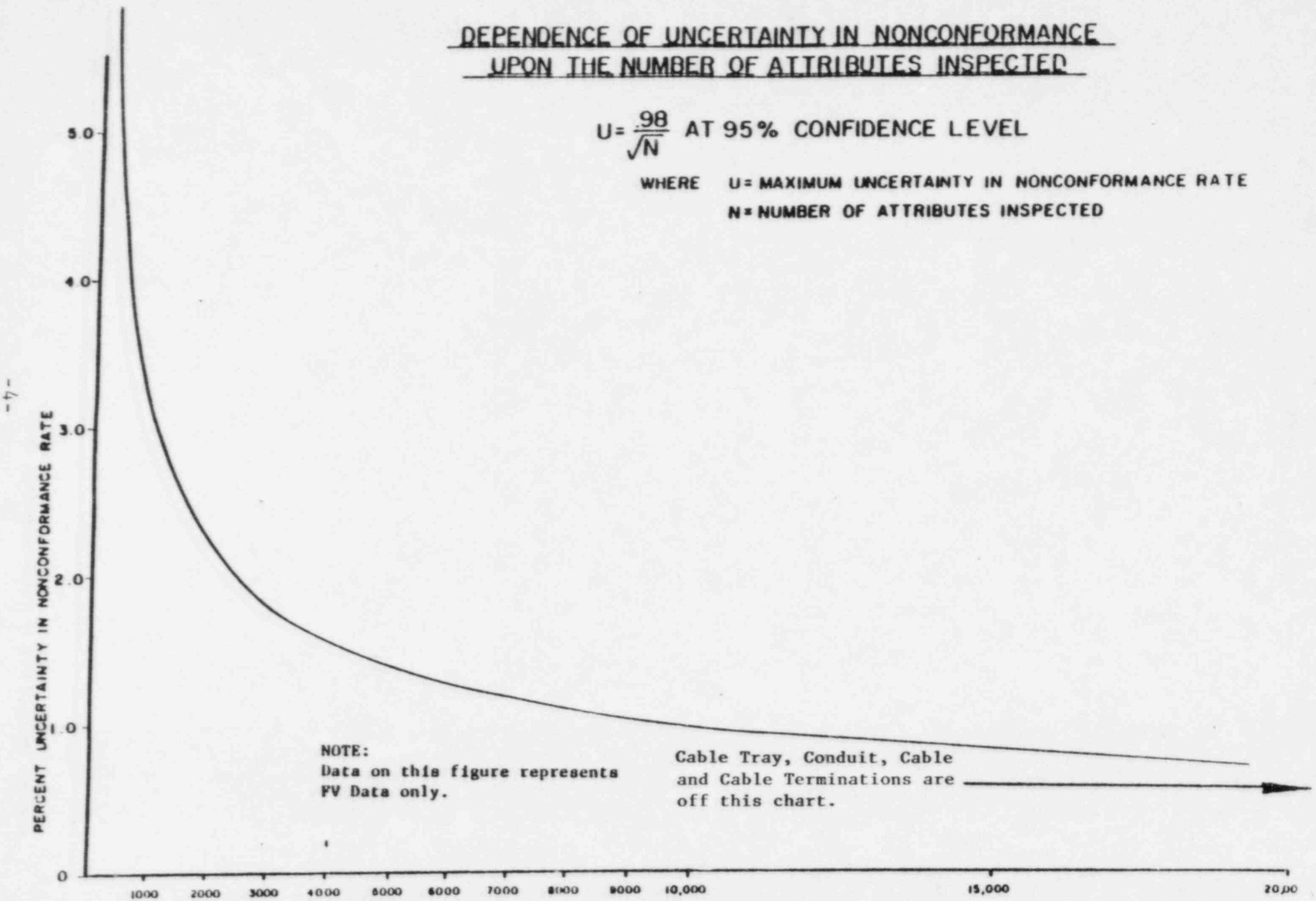
DEPENDENCE OF UNCERTAINTY IN NONCONFORMANCE UPON THE NUMBER OF ATTRIBUTES INSPECTED
U = 98/√N AT 95% CONFIDENCE LEVEL
WHERE U = MAXIMUM UNCERTAINTY IN NONCONFORMANCE RATE
N = NUMBER OF ATTRIBUTES INSPECTED
PERCENT UNCERTAINTY IN NONCONFORMANCE RATE
5.0
4.0
3.0
2.0
1.0
0
1000
2000
3000
4000
5000
6000
7000
8000
9000
10,000
15,000
20,000
NOTE:
Data on this figure represents FV Data only.
Cable Tray, Conduit, Cable and Cable Terminations are off this chart.

FIGURE 2

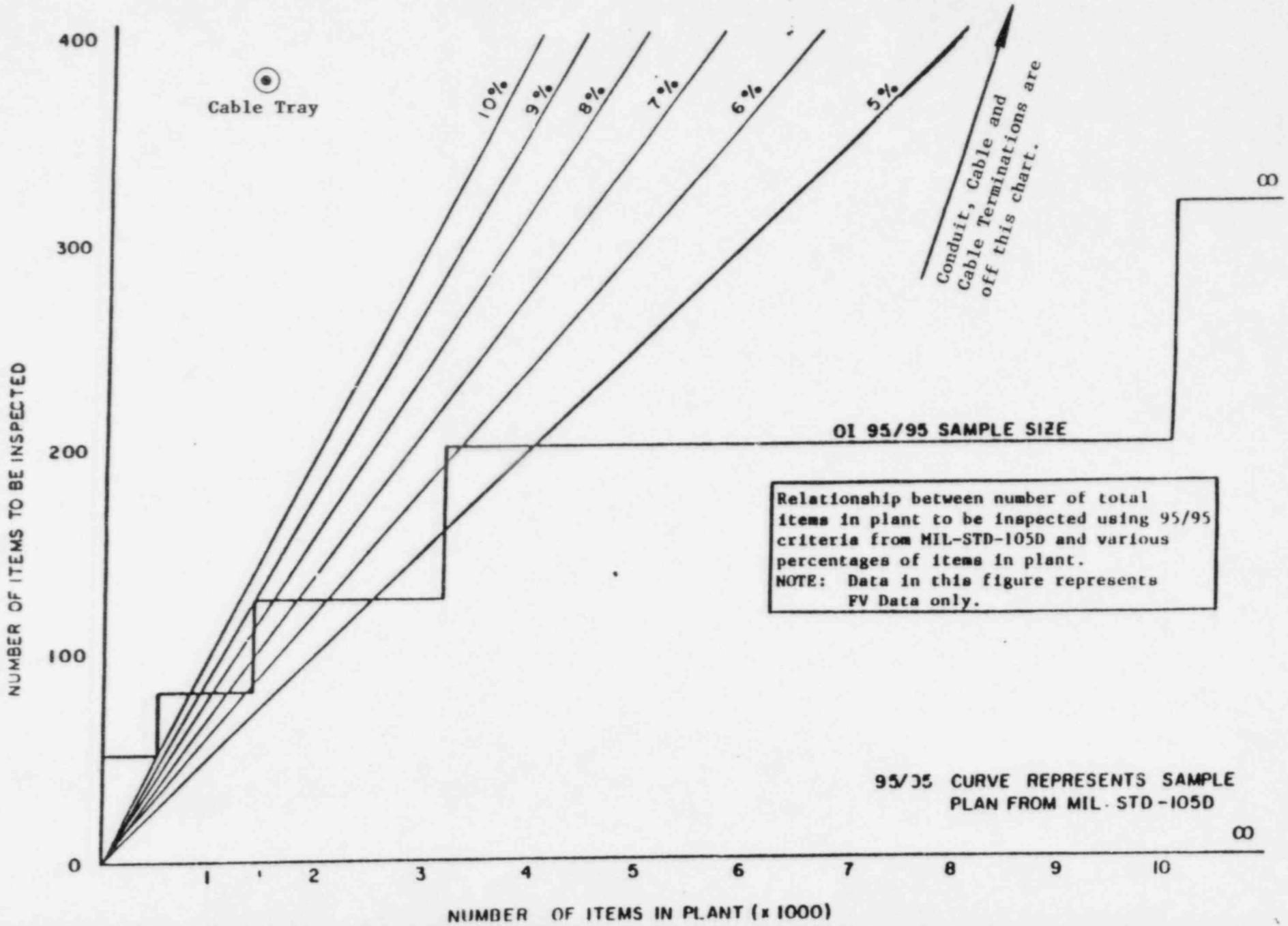
400
300
200
100
0
NUMBER OF ITEMS TO BE INSPECTED
Cable Tray
10%
9%
8%
7%
6%
5%
Conduit, Cable and Cable Terminations are off this chart.
∞
01 95/95 SAMPLE SIZE
Relationship between number of total items in plant to be inspected using 95/95 criteria from MIL-STD-105D and various percentages of items in plant.
NOTE: Data in this figure represents FV Data only.
95/95 CURVE REPRESENTS SAMPLE PLAN FROM MIL-STD-105D
∞
1
2
3
4
5
6
7
8
9
10
NUMBER OF ITEMS IN PLANT (x 1000)

Table 3

Commodity	Number of Nonconforming Conditions	Number of Safety Significant Nonconforming Conditions	Reliability[1] Based on 95% Confidence
Cable tray	113	0	99%
Conduit	59	0	99%
Cable	533	0	99%
Cable Terminations[1]	484	0	99%

[1] Reliabilities are calculated using the equation:

$$R = 1 - \frac{2.995}{n}$$ where,

R = Reliability at 95% confidence level assuming an infinitely sized lot
n = Number of items inspected

C. Conclusions

As shown in Table 1 above, the criterion for extent of inspection is satisfied for the commodities subject to this request.

As shown in Table 2 above, the criterion for conformance rate (95) is satisfied for the commodities subject to this request.

As shown in Reference 1, Chapter V and Appendix D and Table 3 above, the criterion for safety significance (no safety significant nonconformances) is satisfied for the commodities subject to this request.

These results and conclusions are based upon reinspection of a substantial portion of the plant for the subject commodities. The engineering evaluations provide high confidence in the ultimate capability of plant components to perform their intended safety function. The results of the Overinspection Program through December 31, 1984, confirm the quality of Clinton Power Station construction in general and the subject commodities in particular. NRC should grant IP's request to terminate the Overinspection Program for these commodities.

ENCLOSURE 2

ILLINOIS POWER RESPONSE TO NRC QUESTIONS
IN ENCLOSURE 3 TO NRC'S APRIL 11, 1983 LETTER
CONCERNING REQUESTS TO TERMINATE THE OVER INSPECTION PROGRAM
FOR COMMODITIES OTHER THAN PIPING AND MECHANICAL SUPPORTS

This enclosure responds to the NRC questions and comments regarding Illinois Power (IP) Report entitled, Results of Quality Programs for Construction of Clinton Power Station, Chapter V and Appendix D. The NRC comments and questions are quoted directly from Enclosure 2 of the NRC letter from J. G. Keppler to IP, attention W. C. Gerstner, dated April 11, 1985, and are followed by the IP responses. Where two or more questions are related to a single topic, these are grouped together and a single IP response is provided. It is noted that the NRC Questions as quoted relate to piping and mechanical supports. IP responses provide information relative to electrical hangers which are the subject of this request.

* *

ENCLOSURE 2 NRC COMMENT A.1: One of the objectives of the Overinspection (OI) Program is to prove that the structures, systems, and components (SSCs) at the Clinton Power Station (CPS) are properly installed in order to assure safety of operation. The data presented in references 2 and 3 concerning piping and mechanical supports are defined in terms of attributes which are sub-elements of plant SSCs. Plant SSCs are composed of varying quantities of these attributes, depending upon commodity and degree of complexity. In addition, some of these attributes do not necessarily act independently in achieving the safety function of the SSCs to which they apply (i.e., some attributes of a pipe support, would have a greater impact on the integrity of that support when taken together than when considered separately).

ENCLOSURE 2 NRC QUESTION A.1: Provide OI program results for piping and mechanical supports (including confidence factors) in terms of plant SSCs rather than SSC sub-elements.

IP RESPONSE TO ENCLOSURE 2 QUESTION A.1: The table below provides the requested data.

Data as of December 31, 1984

Commodity	Total Plant[2]	Reinspected By FV	Items With NCRs	Safety Significant NCRs	Reliability Based on 95% Confidence[1]
Cable Tray	1,432	398	100	0	99%
Conduit	6,162	751	52	0	99%
Cable	5,755	1,598	280	0	99%
Cable Terminations[1]	11,510	1,472	435	0	99%

[1] Reliabilities are calculated using the equation:

$$R = 1 - \frac{2.995}{n}$$ where:

R = Reliability at 95% confidence level assuming an infinitely sized lot
n = Number of items inspected

[2] Cable trays and conduit are in number of pieces, cable is number of cables and terminations are calculated as two per cable.

* *

ENCLOSURE 2 NRC COMMENT A.2: Reference 2, attachment 2, provides IP's response to open item 461/84-37-01. That response is data in terms of percent complete and number of attributes inspected for safety related piping and mechanical supports.

ENCLOSURE 2 NRC QUESTION A.2: Provide more detailed information concerning piping and mechanical supports which forms the basis for the data provided (e.g., total linear feet of safety related large bore piping and the number of feet actually inspected; total number of safety related pipe supports and the number actually inspected, etc.).

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION A.2: The information is provided in response to Enclosure 2 NRC Question A.1 above.

* *

ENCLOSURE 2 NRC COMMENT A.3: The data presented in references 2 and 3 related to piping and mechanical supports are presented quantitatively with only limited qualitative information. This presentation does not provide a meaningful basis for an independent reviewer to judge the actual significance of OI findings.

ENCLOSURE 2 NRC QUESTION A.3: Provide additional qualitative data related to piping and mechanical supports which was the basis for statements contained in references 2 and 3 regarding the significance of OI findings (e.g., refer to the Byron report provided to IP at the meeting in Region III last October 25; Exhibit C-2, page 8 of 15, Table CE-9). The response should consider all applicable attributes inspected.

ENCLOSURE 2 NRC COMMENT B.3: Because of the dependent nature of certain sub-elements (attributes) of plant SSCs, the actual confidence achieved in terms of the ability of an individual SSC to perform its intended safety function has not been clearly established. For example, a pipe support may be composed of a concrete foundation, a base plate, anchor bolts, nuts, several structural shapes arranged in a defined geometry, interconnecting welds, connecting rods, U bolts, clamps, etc.. These individual parts of the support have attributes defined by IPOI. IP has demonstrated a high degree of confidence in the conformance of these individual attributes. However, the support must act as a unit in order to perform its safety function.

ENCLOSURE 2 NRC QUESTION B.3: Can IP demonstrate a high degree of confidence in piping and mechanical supports when the individual attributes are arranged as a unit (or item), considering the dependency of certain attributes, using the data obtained to date under the OI program? Provide the detailed analytical results.

ENCLOSURE 2 NRC QUESTION B.4: Considering the response to item [B.3] above, is the conformance criterion sufficient when applied to piping and mechanical supports without restriction?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION A.3, B.3 and B.4: The objective of the engineering evaluations performed on the nonconformances was to determine the potential significance to plant safety had the nonconforming condition(s) been undetected by the Overinspection Program. These engineering evaluations demonstrated that the identified nonconformances would not have impaired the ability of the components to perform their safety related design function. The design margins of each component, considering the reported nonconformances, were determined to be within the specified design limits.

The engineering evaluations considered the potential effect that all identified nonconforming attributes may have had on the components. This evaluation addressed both singular and cumulative effects.

The results of the engineering evaluations on a component basis have been divided into the three categories described below, and are summarized in the table following the description of the three categories. These categories have been developed in order to quantify the significance of the nonconformances with respect to the design or design margins.

Category A — The nonconforming attribute(s) reported on the components are acceptable because they do not affect the structural integrity or the functional capability or electrical integrity of the component. These items are not significant with respect to the plant design and, therefore, have no effect on the plant safety.

Category B — The nonconforming attribute(s) reported on the components resulted in an acceptable reduction in the functional capability or electrical integrity of the component.

Category C — The nonconforming attribute(s) resulted in a reduction in functional capability or electrical integrity beyond that allowed by the plant design basis. There are no components in this category.

SIGNIFICANCE OF IDENTIFIED NONCONFORMING CONDITIONS EXPRESSED IN TERMS OF CAPACITY OR DESIGN MARGIN REDUCTION:

Data as of December 31, 1984

Commodity	Category A (No Impact)		Category B		Category C		Total	
Cable Tray	65	(64%)	37	(36%)	0	(0%)	102	(100%)
Conduit	29	(56%)	23	(44%)	0	(0%)	52	(100%)
Cable	103	(34%)	196	(66%)	0	(0%)	299	(100%)
Cable Terminations	283	(61%)	182	(39%)	0	(0%)	465	(100%)
TOTAL	480	(52%)	438	(48%)	0	(0%)	918	(100%)

CATEGORY A NONCONFORMANCES

Nonconformances that were classified as Category A were those that could be shown to have no effect on an item's

ability to meet its design basis parameters or tolerances by comparison with the current design basis or consideration of mandatory programs which demonstrate compliance with the design basis. Typical nonconformances identified by the Overinspection Program that resulted in a Category A classification are cosmetic gouges, termination errors, dirt/-debris, and minor documentation errors.

Cosmetic gouges were comprised mostly of small scratches in the outer jacket of cables. The underlying conductor insulation was not damaged on any of these cables, and thus these nonconformances would not affect the design function of these cables.

Dirt and debris nonconformances were comprised mostly of material such as wood which was left in some cable trays. The trays and cables were not damaged and the system design capabilities were not impacted.

Conductor termination nonconformances were evaluated to determine if the design requirements for installation would be programmatically inspected or tested during startup or some other subsequent testing program. Programmatic tests such as preoperational testing is considered to be part of a design basis program to confirm that the designated design requirements relating to a component's installation will be met, not only from a component basis but also from a system basis. No further evaluations were performed to determine the design significance of these since they would have received subsequent inspection and correction.

Documentation errors and missing or damaged identification tags are typical discrepancies grouped under documentation. Since proper identification was established or recovered from other files, they were classified as Category A and no further evaluation effort was required to demonstrate design basis compliance.

Documentation discrepancies involving incorrect fabrication or construction drawings were, in most cases, previously reviewed for design impact by the originating design organization and decisions were made to utilize the as-installed configuration ("use-as-is") and make the appropriate corrections to the design drawings to reflect the "as-built" condition. These were readily determined to have no impact on design based on the disposition of the original NCR and, hence, were classified as Category A.

CATEGORY B NONCONFORMANCE

Nonconformances classified as Category B involved those nonconformances which required the comparison of the discrepancy to the component design margins. In some cases,

detailed engineering analysis and calculational comparison to the original design were required.

Typical nonconformances identified by the Overinspection Program that resulted in a Category B classification are missing hardware, control conductor bending radius and cuts on conductor insulation.

Missing hardware nonconformances were comprised mostly of missing cable supports and missing edge guards for cables. With respect to the missing cable supports, the cable manufacturer's cable support requirements are less restrictive than project requirements. When missing supports for cables were evaluated against the cable manufacturer's criteria, it was determined that the cables were adequately supported. Edge guards provide an extra margin of cable protection, but each multiconductor cable and each conductor's insulation was provided with a protective jacket. Thus, the conductor insulation, as per design, was adequately protected even though some edge guards were missing.

Bending radius nonconformances of control conductors occurred near the conductor termination point. The specifications for bending radius at CPS are more conservative than required by the manufacturer. The actual bending radius was compared to the manufacturer's requirements. Those found exceeding these requirements were further reviewed and found to be installed in a physically protected and controlled environment. Consequently, even if the insulation at the bend were to have developed a crack, the connection would not have been grounded.

Cuts on conductor insulation nonconformances occurred near the termination points. These cuts, which did not remove any insulation, were on conductors whose insulation is rated 600 volts (the applied voltage was only 125V AC, which is far lower than the rated 600 volts). Also, the cuts in the insulation were all locked inside a junction box, termination cabinet, or other such controlled environment which would prevent further damage. The locations of these cuts were evaluated and found not to provide a grounding fault path. Thus, none of these nonconformances affected the design function of the cables.

Two nonconformances involving cuts did not contain sufficiently detailed information for purposes of this evaluation, and the nonconforming items were reworked prior to commencement of the S&L evaluation. Therefore, it was not possible for S&L to evaluate the impact of those nonconformances on the integrity of the affected items.

One nonconformance involved a cut on a jumper wire inside the valve limit switch enclosure for valve 1E12-F027B. The location of the jumper wire and the cut on the wire was not

documented in enough detail to evaluate its significance. However, in the event that the jumper would fail, the valve indicating lights on the Main Control Board would go out. Also, an alarm in the Main Control Room would be annunciated, indicating a loss of valve control power.

Valve 1E12-F027B is the outboard containment isolation valve on the B-loop of the residual heat removal low pressure coolant injection line. This valve is open in all modes (normal and accident) of plant operation and can only be closed by independent operator action from the Main Control Room. Valve 1E12-F-027B is provided to comply with 10CFR50, General Design Criteria 56. There are no design basis events that require closure of this valve. Therefore, this would not result in a safety-significant condition.

The second nonconformance also involved a cut on a jumper wire inside the valve limit switch enclosure for valve 1FC037. The location of the jumper wire and the cut on the wire was not documented in enough detail to evaluate its significance. Therefore, it is not possible to evaluate whether this condition might have been safety-significant. However, in the event that the jumper fails, the valve would fail in its current position and the indicating lights on the Main Control Board would go out. Also, an alarm in the Main Control Room would be annunciated, indicating a loss of valve control power. Valve 1FC037 is the inboard containment isolation valve on the reactor vessel pool flooding line. This valve is normally open and closes on a containment isolation signal. Automatic closure of outboard containment isolation valve 1FC036 will provide for containment isolation.

Therefore, as is demonstrated above, except for the nonconformance involving valve 1FC037, S&L was able to determine that none of the nonconformances were significant to safety.

* *

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION B.3: As noted in the response to Question A.3 above, cumulative effects were considered where appropriate. Therefore, IP has demonstrated a high degree of confidence in the components that are the subject of this request (See response to Enclosure 2 NRC Question A.1 above).

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION B.4: Yes. Considering the responses to Enclosure 2 NRC Questions A.3 and B.3 above, the conformance criterion proposed in IP's letter of March 29, 1985, is sufficient when applied to the components that are the subject of this request.

* *

ENCLOSURE 2 NRC COMMENT A.4: The data presented in references 2 and 3 related to piping and mechanical supports does not provide sufficient relevant information (e.g., numbers of SSCs inspected, numbers of inspections performed, and OI findings broken down by discipline, by building and elevation, and by old vs. new work).

ENCLOSURE 2 NRC QUESTION A.4: Quantify OI results for piping and mechanical supports in terms of numbers of SSCs inspected, and numbers of inspections performed broken down by discipline, by building and elevation, and by old vs. new work.

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION A.4: The data requested are provided on the following charts, except for the craft discipline information requested. No specific data is available for this information. However, for cable tray, conduit, cable and cable terminations, the work is essentially all performed by electricians. As is demonstrated by these charts, the results of the Overinspection Program provide a representative sample of all buildings and elevations containing the components that are the subject of this request. This, coupled with the number of inspections performed, demonstrates that a large random sample has been reinspected and therefore the results represent the quality of these components at CPS.

* *

CABLE TRAY

OVERINSPECTION PROGRAM INSPECTIONS BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

AMERICAN

CABLE TRAY

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	0	0	0	0	0	0	0	0
657	0	0	0	0	0	0	0	0

CABLE TRAY

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE TRAY

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	0	62	0	0	0	17237	0	0
762	0	21	0	0	0	4637	0	0
737	0	8	0	1	0	2389	0	207
702	0	9	0	2	0	728	0	441

CABLE TRAY

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	0	0	0	0	0	0	0
755	0	30	0	0	0	7245	0	0
737	0	0	0	0	0	0	0	0
712	0	2	0	0	0	88	0	0

CABLE TRAY

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	1	18	0	4	82	6689	0	178
737	0	6	0	0	0	406	0	0
712	0	7	0	17	0	2347	0	1035

CABLE TRAY

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	11	0	5	0	2087	0	1048
737	0	0	0	1	0	0	0	210
712	0	0	0	0	0	0	0	0

CABLE TRAY

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	11	0	0	0	1292	0	0
800	0	33	0	8	0	2209	0	2901
781	0	108	0	1	0	20935	0	215
762	0	13	0	2	0	1990	0	428
737	0	21	0	1	0	6382	0	453
719	0	16	0	4	0	4764	0	1141
702	0	21	0	1	0	5854	0	713

CABLE TRAY

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CABLE TRAY

OVERINSPECTION PROGRAM NONCONFORMANCES BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CABLE TRAY

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	1	0	0	0	1	0	0	0
657	0	0	0	0	0	0	0	0

CABLE TRAY

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE TRAY

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	9	14	1	0	9	23	1	0
762	0	1	0	0	0	1	0	0
737	0	1	0	0	0	1	0	0
702	0	2	0	0	0	2	0	0

CABLE TRAY

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	0	0	0	0	0	0	0
755	0	25	0	0	0	17	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE TRAY

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	1	1	0	0	1	1	0	0
737	0	1	0	0	0	1	0	0
712	0	1	0	0	0	2	0	0

CABLE TRAY

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE TRAY

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	1	0	0	0	1	0	0
800	5	18	0	0	5	23	0	0
781	3	14	1	0	3	16	1	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
719	0	2	0	0	0	4	0	0
702	0	0	0	0	0	0	0	0

CABLE TRAY

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CONDUIT

OVERINSPECTION PROGRAM INSPECTIONS BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CONDUIT

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	0	102	0	0	0	3538	0	0
657	0	15	0	0	0	1084	0	0

CONDUIT

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CONDUIT

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	0	22	0	0	0	482	0	0
762	0	16	0	0	0	496	0	0
737	0	41	0	0	0	570	0	0
702	0	53	0	0	0	908	0	0

CONDUIT

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	53	0	0	0	1527	0	0
755	0	123	0	8	0	2252	0	224
737	0	18	0	3	0	234	0	62
712	0	100	1	2	0	4465	76	435

CONDUIT

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	0	43	0	0	0	1313	0	0
737	0	23	0	0	0	1044	0	0
712	0	8	0	0	0	317	0	0

CONDUIT

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	1	0	0	0	6	0	0
737	0	17	0	0	0	747	0	0
712	0	18	0	0	0	686	0	0

CONDUIT

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	5	0	0	0	51	0	0
800	0	38	0	9	0	1376	0	259
781	0	14	0	0	0	240	0	0
762	0	9	0	0	0	262	0	0
737	0	6	0	0	0	123	0	0
719	0	6	0	0	0	136	0	0
702	0	20	0	0	0	859	0	0

CONDUIT

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CONDUIT

OVERINSPECTION PROGRAM NONCONFORMANCES BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CONDUIT

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	0	3	0	0	0	3	0	0
657	0	0	0	0	0	0	0	0

CONDUIT

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CONDUIT

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	6	1	0	0	6	1	0	0
762	0	0	0	0	0	0	0	0
737	0	1	0	0	0	1	0	0
702	0	4	0	0	0	4	0	0

CONDUIT

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	1	0	0	0	2	0	0
755	1	18	0	0	1	18	0	0
737	0	1	0	0	0	1	0	0
712	0	3	0	0	0	4	0	0

CONDUIT

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CONDUIT

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	1	0	0	0	1	0	0

CONDUIT

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	0	0	0	0	0	0	0
800	0	5	0	0	0	8	0	0
781	0	7	0	0	0	9	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
719	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CONDUIT

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CABLE

OVERINSPECTION PROGRAM INSPECTIONS BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CABLE

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	6	69	2	24	88	973	25	306
657	0	0	0	0	0	0	0	0

CABLE

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	156	709	80	170	2072	9682	1948	2314
762	5	30	1	18	58	418	14	230
737	0	16	0	26	0	228	0	354
702	0	67	0	32	0	806	0	422

CABLE

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	0	0	0	0	0	0	0
755	1	155	0	32	44	2159	0	427
737	0	4	0	4	0	43	0	54
712	0	0	0	1	0	0	0	9

CABLE

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	0	10	0	2	0	136	0	28
737	0	22	0	11	0	321	0	160
712	0	14	0	9	0	186	0	116

CABLE

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	4	0	4	0	56	0	51
737	0	49	0	14	0	663	0	174
712	0	1	0	0	0	14	0	0

CABLE

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	1	48	0	11	15	745	0	139
800	8	72	24	13	156	1088	307	167
781	15		1	44	208	1733	11	749
762	0	0	0	0	0	0	0	0
737	0	8	0	2	0	114	0	26
719	0	1	0	2	0	14	0	28
702	0	0	0	0	0	0	0	0

CABLE

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CABLE

OVERINSPECTION PROGRAM NONCONFORMANCES BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CABLE

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	5	1	0	0	15	1	0	0
657	0	0	0	0	0	0	0	0

CABLE

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	8	35	2	9	39	55	2	21
762	0	3	1	0	0	6	1	0
737	0	4	0	0	0	4	0	0
702	0	7	0	0	0	21	0	0

CABLE

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	2	0	0	0	13	0	0	0
755	1	23	0	1	4	30	0	1
737	0	4	0	0	0	5	0	0
712	0	0	0	0	0	0	0	0

CABLE

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	0	3	0	1	0	3	0	2
737	0	9	0	0	0	9	0	0
712	1	0	0	0	6	0	0	0

CABLE

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	3	0	0	0	4	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	4	0	0	0	6	0	0
800	16	32	0	0	46	145	0	0
781	4	113	0	5	6	81	0	5
762	0	0	0	0	0	0	0	0
737	0	1	0	0	0	1	0	0
719	0	1	0	0	0	1	0	0
702	0	0	0	0	0	0	0	0

CABLE

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

OVERINSPECTION PROGRAM INSPECTIONS BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CABLE TERMINATIONS

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	4	60	1	44	252	4230	96	3121
657	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	21	531	60	221	2072	48010	3911	15807
762	0	38	1	14	0	2761	110	681
737	0	36	0	6	0	2942	0	265
702	0	51	0	13	0	3263	0	820

CABLE TERMINATIONS

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	0	0	0	0	0	0	0
755	3	108	0	65	385	8729	0	5392
737	0	14	0	5	0	1314	0	399
712	0	0	0	1	0	0	0	114

CABLE TERMINATIONS

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	0	11	0	9	0	850	0	744
737	0	15	0	4	0	918	0	141
712	1	9	0	2	5	388	0	57

CABLE TERMINATIONS

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	5	0	1	0	381	0	41
737	0	86	2	28	0	3213	31	1550
712	0	4	0	1	0	99	0	20

CABLE TERMINATIONS

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	42	7	32	0	1983	122	1335
800	17	250	31	98	1589	23382	1918	7109
781	1	157	2	82	33	9568	60	4153
762	0	0	0	0	0	0	0	0
737	0	6	0	3	0	448	0	132
719	0	2	0	2	0	86	0	84
702	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY INSPECTED				ATTRIBUTES INSPECTED			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

OVERINSPECTION PROGRAM NONCONFORMANCES BY:

- BUILDING - ELEVATION
- ITEM - ATTRIBUTE
- BA FV - IP OI
- OLD - NEW
- 12-31-84 DATA

CABLE TERMINATIONS

SCREEN HOUSE (BUILDING 22)

(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
699	0	6	0	3	0	6	0	3
657	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

TURBINE BUILDING (BUILDING 25)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
847	0	0	0	0	0	0	0	0
800	0	0	0	0	0	0	0	0
781	0	0	0	0	0	0	0	0
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
712	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

AUXILIARY BUILDING (BUILDING 26)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
781	32	189	0	18	27	197	0	18
762	2	31	0	0	2	32	0	0
737	0	20	0	0	0	22	0	0
702	0	15	0	1	0	16	0	1

CABLE TERMINATIONS

REACTOR BUILDING (BUILDING 27)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
828	0	0	0	0	0	0	0	0
755	0	27	0	1	0	32	0	2
737	0	2	0	0	0	2	0	0
712	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

FUEL BUILDING (BUILDING 28)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
755	0	5	0	0	0	5	0	0
737	0	3	0	0	0	3	0	0
712	1	3	0	0	1	3	0	0

CABLE TERMINATIONS

DIESEL GENERATOR AND HVAC BUILDING (BUILDING 29)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	12	0	0	0	12	0	0
712	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

CONTROL BUILDING (BUILDING 30)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
825	0	13	0	0	0	13	0	0
800	4	55	0	3	7	56	0	3
781	0	14	0	4	0	16	0	4
762	0	0	0	0	0	0	0	0
737	0	1	0	0	0	1	0	0
719	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

CABLE TERMINATIONS

RADWASTE BUILDING (BUILDING 31)
(12-31-84 DATA)

ELEV	QUANTITY NONCONFORMING				ATTRIBUTES NONCONFORMING			
	BA FV		IP OI		BA FV		IP OI	
	OLD	NEW	OLD	NEW	OLD	NEW	OLD	NEW
762	0	0	0	0	0	0	0	0
737	0	0	0	0	0	0	0	0
702	0	0	0	0	0	0	0	0

ENCLOSURE 2 NRC COMMENT B.1: Ten thousand attributes inspected does not appear to be a consistent criterion which can be meaningfully applied to different plant SSCs. For example, a simple beam installation may consist of 150 sub-elements (attributes) while a complex beam installation may consist of 800 or more attributes. Thus the 10,000 attributes criterion may be satisfied by inspecting as few as 13 complex beam installations or 67 simple beam installations. Neither number of installations appears to be an adequate basis for obtaining reasonable assurance in the total population of safety related beam installations at CPS. This comment is equally applicable to piping and mechanical supports.

ENCLOSURE 2 NRC QUESTION B.1: Quantify the minimum number of mechanical supports and the minimum number of feet of large and small bore pipe which would have to be inspected in order to achieve the 10,000 attributes criterion. Is that number an adequate basis for obtaining reasonable assurance in the total population of similar plant SSCs? Provide the technical basis for your determination.

IP RESPONSES TO ENCLOSURE 2 NRC QUESTION B.1: Considering the NRC's position on generic termination criteria and IP's response in Enclosure 1 to this letter, this question is no longer germane.

* *

ENCLOSURE 2 NRC COMMENT B.2: Five percent of the items (SSCs) inspected may be a reasonable basis for extrapolating confidence in the total population of similar SSCs installed, provided that:

1) The total population of similar SSCs is sufficiently large, or;

2) An adequate level of confidence can be established with smaller total populations of similar SSCs on some other basis.

3) Provided the 5% sample is a random sample of old work (pre-July 1982).

The basis for any determination regarding small populations of similar SSCs must be clearly established.

ENCLOSURE 2 NRC QUESTION B.2: Can IP demonstrate that required confidence levels will be achieved using the 5% criterion even when small total populations of SSCs are inspected under the OI program?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION B.2: Considering the NRC's position on generic termination criteria and IP's response in Enclosure 1 to this letter, this question is no longer germane.

* *

ENCLOSURE 2 NRC COMMENT B.5: Criterion C (related to defense in depth) appears to be a valid criterion, subject to the veracity of the engineering evaluations performed (see comment C.2).

ENCLOSURE 2 NRC QUESTION B.5: Can IP demonstrate that this criterion is met for piping and mechanical supports when the engineering evaluations performed for safety significance conform to the stated premises (refer to comment C.1. for premises)?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION B.5: Considering the information provided in response to Enclosure 2 NRC Questions A.1, A.3, and B.3 above and to Enclosure 2 NRC Question C.1 below, IP concludes that the criterion has been fully satisfied for cable tray, conduit, cable and cable terminations.

* *

ENCLOSURE 2 NRC COMMENT C.1: In the engineering evaluations documented in reference 2, attachment 2, third page last paragraph, and in reference 3, Chapter V, paragraph C.2.b.2)(f) and (j), IP takes credit for future activities, the scope, depth, and quality of which may be undefined. For example, the reference 2 paragraph states in part:

> Installation nonconformances on pipe supports involved loose or incomplete hardware installation, incorrect adjustment of supports, lack of clearance or interference, and construction tolerance non-conformances. Each nonconforming condition was evaluated to determine if the nonconformance was of a type that would be specifically examined in subsequent preoperational testing. Consequently, these nonconformances were not significant because they would not have been left unidentified and uncorrected if the Overinspection Program had not been performed (emphasis added).

This methodology for evaluating construction deficiencies is not in accordance with 10CFR50.55(e), and does not appear to be consistent with a premise stated in reference 2, attachment 2, first page, last paragraph, as follows:

> Although S&L evaluated each nonconformance identified by the Overinspection Program to determine whether it was safety significant, it should be emphasized that most of the nonconforming items have been reworked in accordance with applicable design drawings and specifications and the remainder have been determined to be acceptable as they are. Consequently, the evaluations below were performed to determine the safety significance of the nonconformances assuming they had been left uncorrected (emphasis added).

In addition, this methodology appears to depart from a stated premise in reference 3, Chapter V, paragraph C.2.a., as follows:

> For purposes of this report, a safety significant nonconformance is defined as a nonconformance which, were it to have remained unidentified by the Overinspection Program (emphasis added), could have resulted in the loss of capability of a structure, system, or component to perform its intended safety function.

Reference 3 adopts the above premise by reference.

ENCLOSURE 2 NRC QUESTION C.1: Does IP intend that engineering evaluations of OI findings conform to the requirements of 10CFR50.55(e) and the above premises? If so, what are the results of IP's evaluations of OI findings concerning piping and mechanical supports when performed in accordance with the stated requirements and premises?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.1: NCRs initiated under the Overinspection Program are reviewed with respect to 10CFR50.55(e) criteria as part of the normal IP corrective action program. These evaluations have been conducted taking no "credit for future activities" and no nonconformances were reportable under 10CFR50.55(e).

The engineering evaluation of Overinspection Program results reported in the February 1985 IP report entitled "Results of Quality Programs for Construction of Clinton Power Station" (Results Report) and the April 1985 IP Report entitled "Update to Results of Quality Programs for Construction of Clinton Power Station" (Updated Results Report) was not undertaken for the purpose of satisfying the requirements of 10CFR50.55(e). Those evaluations were performed assuming that the nonconformances had not been corrected as a result of the Overinspection Program. "Credit for future activities" was taken only for purposes of these evaluations. If there was a downstream program or

procedure in place as part of the normal quality assurance program (startup, testing or plant walkdowns, for example) which could reasonably be expected to identify and correct the nonconforming condition, IP concluded that the condition would not represent a safety significant condition at CPS even if the Overinspection Program did not exist.

It is not IP's intent that the Overinspection Program be the only mechanism used to identify and correct nonconforming conditions at CPS. As stated in the Overinspection Program Plan, the Overinspection Program supplements but does not replace the Quality Assurance Program for CPS. This is also reflected in the definition of safety significance provided in Reference 3, Chapter V, Paragraph C.2.a which is cited above. The IP Updated Results Report contains language revisions which should clarify this matter and eliminate any potential inconsistencies.

* *

ENCLOSURE 2 NRC COMMENT C.2: Reference 3, Chapter 5, pages. V-9 through V-10, states:

> For cases in which one NCR documented nonconformances on different items or in which one item contained nonconforming attributes of differing natures (e.g., loose bolt and arc strike), separate evaluations of the impact of the nonconforming attributes on each item were conducted to ensure that all possible adverse impacts were addressed.

This statement seems to imply that multiple nonconforming conditions identified on a single item were treated separately.

ENCLOSURE 2 NRC QUESTION C.2: If this is what was intended by the statement above, can IP justify the methodology used in light of the dependent nature of certain attributes (as discussed in A.1. and B.3. above)?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.2: As discussed in the response to Enclosure 2 NRC Question A.3 above, both singular and cumulative effects were considered, as appropriate, for the nature of the reported nonconforming attributes and the affected components.

* *

ENCLOSURE 2 NRC COMMENT C.3: Reference 3, Chapter 5, paragraph C.2.b.2)(c), Arc Strikes, does not differentiate between superficial and severe arc strikes. A severe arc

strike may reduce piping wall thickness substantially and/or include a localized crack, usually at the bottom of the pit created by the strike.

ENCLOSURE 2 NRC QUESTION C.3: Provide both qualitative and quantitative analytical results from the engineering evaluations performed on arc strikes identified on piping and mechanical supports.

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.3: No arc strikes have been reported by the Overinspection Program on cable tray, conduit, cable or cable terminations. Therefore, this question does not apply to these commodities.

* *

ENCLOSURE 2 NRC COMMENT C.4: Reference 3, Chapter 5, paragraph C.2.b.2)(d) provides the engineering evaluation of missing or incorrect identification markings. That evaluation does not appear to consider the potential impact of missing or incorrect identification on the correct performance of operating activities (operations, maintenance, and surveillance).

In addition, there is no indication as to the type of criteria applied by S&L in evaluation of missing or incorrect material markings. This is of particular importance in view of the substance of IP's 10CFR50.55(e) reports 55-84-02 and 55-84-18.

ENCLOSURE 2 NRC QUESTION C.4(1): Provide the following additional information related to engineering evaluations performed on missing or incorrect identification markings:

(1) The results of evaluations performed related to the impact of missing or incorrect component identification markings (related to piping and mechanical support components) on the correct performance of operating activities.

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.4(1): As is discussed in IP's February 1985 Report entitled "Results of Quality Programs for Construction of Clinton Power Station" (Results Report), Chapter V, paragraph C.2.b.2(d), "S&L evaluated all cases of missing, incorrect, or damaged identification markings to assure that the proper identity had subsequently been established. In all cases, the correct items were installed. Therefore, it was determined that there was no impact on plant performance or operating activities."

ENCLOSURE 2 NRC QUESTION C.4(2): The criteria used by S&L in dispositioning nonconformance reports dealing with missing or incorrect material identification markings on piping and mechanical supports.

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.4(2): Only one cable termination was identified as lacking traceability. This traceability concerned missing QA documents, such as crimp tool number, name of electrician, name of inspector, etc., for the installation of a small jumper wire. Although the existing jumper installation was within the design basis, the QA documentation was re-established by installing a new jumper, and properly recording the required information.

* *

ENCLOSURE 2 NRC COMMENT C.5.a: S&L form 350-A (seismic) states that the actual design attachment of equipment to a structure must be simulated in mounting the equipment for a test.

ENCLOSURE 2 NRC QUESTION C.5.b: Has IP considered the impact of OI findings on the results of seismic testing and analyses performed? What are your results?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.5.b: S&L form 350-A (Seismic) does require equipment to be seismically tested or analyzed to verify that the actual design attachment of the equipment to the structure is properly simulated. This requirement does not apply to electrical cable, conduit, cable trays or cable termination. For cable trays and conduits, a dynamic analysis is performed which includes the appropriate response spectra. This was addressed with the conduit supports and cable tray hangers in IP letter U-600197 of July 26, 1985.

* *

ENCLOSURE 2 NRC QUESTION C.5.c: Has IP quantified the impact of engineering analyses performed under the Over-inspection Program in terms of reduction in safety margin on piping and mechanical supports? What are your results?

IP RESPONSE TO ENCLOSURE 2 NRC QUESTION C.5.c: There has been no reduction in safety margin, in terms of IP's definition of safety significance, for the components that are the subject of this request as determined by the engineering evaluations. Quantified results for capacity and design margin for each commodity are provided in the response to Enclosure 2 NRC Question A.3 above.

* *

ENCLOSURE 2 NRC COMMENT E: Reference 3, Chapter V, Tables V-4 and V-6; there are several inconsistencies and typographical errors in these tables which have not been corrected by IP. For example, the type of Table V-4 is "NONCONFORMANCE RATES BY TYPE OF COMMODITY" whereas the data presented in terms of conformance rates, similar to table V-6 which has the correct title. Other examples are the lines beginning with "Cable Trays" and "Instrumentation" which contain typographical/clerical errors.

IP RESPONSE TO ENCLOSURE 2 NRC COMMENT E: IP acknowledges the inconsistencies and typographical errors cited in the NRC comment. Additionally, IP is in the process of conducting an extensive re-review of data used in reporting the results of the Overinspection Program. This re-review has been completed for cable tray, conduit, cable and cable terminations, and has been completed or is in progress for other components. Changes in the information provided in the "Updated Results Report" are being identified as a result of this re-review. These changes will be reported when the re-review is complete. Based on experience to date, IP believes that none of the changes will affect any of IP's conclusions regarding the results of the Overinspection Program.