NRC FORM 366 (7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1	LICENSEE CODE: M I D C C 2 (2)	LICENSE NUMBER: 0 0 0 0 0 0 0 0 0 0 0 (3)	LICENSE TYPE: 4 1 1 1 1 (4)	CAT (5)

CON'T

0 1	REPORT SOURCE: L (6)	DOCKET NUMBER: 0 5 0 0 0 3 1 6 (7)	EVENT DATE: 0 6 1 2 7 8 (8)	REPORT DATE: 0 7 1 1 7 8 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 DURING NORMAL OPERATION, FOLLOWING AN ADDITION OF BORIC ACID TO THE BORATED WATER
0 3 SYSTEMS. THE BORON INJECTION TANK BORON CONCENTRATION WAS FOUND TO BE 19,780 PPM.
0 4 THIS WAS BELOW THE 20,000 PPM LIMIT OF T. S. 3.5.4.1. THE ASSOCIATED BORIC ACID
0 5 STORAGE TANK SOLUTION WAS FOUND TO CONTAIN 18,705 PPM BORON, WHICH IS BELOW THE LIMIT
0 6 SPECIFIED BY T.S. 3.1.2.8. THE ACTION REQUIREMENTS OF BOTH T.S. WERE FULFILLED.
0 7
0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	S F (11)	A (12)	X (13)	Z Z Z Z Z Z (14)	Z (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	7 8	—	0 4 5	/	0 3	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
H (18)	Z (19)	Z (20)	Z (21)	0 0 0 0	N (23)	N (24)	Z (25)	Z 9 9 9 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 INVESTIGATION REVEALED THAT A CHEMICAL TECHNICIAN HAD THE BORIC ACID EVAPORATOR
1 1 BOTTOMS PUMPED TO THE SOUTH BORIC ACID STORAGE TANKS(S-BAST) WITH A LOWER THAN
1 2 DESIRED BORIC ACID CONCENTRATION. THE S-BAST IS RECIRCULATED THROUGH THE BORON
1 3 INJECTION TANK, CAUSING IT'S LOW BORIC ACID CONCENTRATION.
1 4

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	0 9 7 (29)	NA	B (31)	ROUTINE SAMPLES

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

7909190324 790921 0489

990104

NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

CONTROL BLOCK: | | | | | | | (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1	LICENSEE CODE	M I D C C 1 (2)
	LICENSE NUMBER	0 0 0 0 0 - 0 0 0 0 0 - 0 0 (3)
	LICENSE TYPE	4 1 1 1 1 (4)
	CAT	(5)
0 1	REPORT SOURCE	L (6)
	DOCKET NUMBER	0 5 0 0 0 3 1 5 (7)
	EVENT DATE	0 6 0 2 7 8 (8)
	REPORT DATE	0 9 1 8 7 8 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 ON 6-2-78 THE BORON INJECTION THROTTLE VALVE POSITIONS WERE CHECKED PURSUANT
0 3 TO T.S. 4.5.2e2. DUE TO INCORRECT TEST ACCEPTANCE CRITERIA, THE VALVE POSITIONS WERE
0 4 DETERMINED TO BE OUT OF ADJUSTMENT AND WERE REPOSITIONED, LEAVING THE VALVES
0 5 WITH AN UNKNOWN FLOW CAPACITY. THIS ERROR WAS NOT DISCOVERED AND CORRECTED UNTIL
0 6 8-18-78. THIS IS THE FIRST EVENT OF THIS TYPE.
0 7
0 8

SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9 S F (11)	A (12)	B (13)	V A L V E X (14)	Z (15)	G (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	7 8	—	0 5 0	/	0 3	L	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
E (18)	H (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	N (25)	W 1 2 0 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 THE ROOT CAUSE OF THE EVENT HAS BEEN ATTRIBUTED TO AN ENGINEERING ERROR WHICH
1 1 RESULTED IN THE UTILIZATION OF INCORRECT TEST ACCEPTANCE CRITERIA. UPON DISCOVERY OF
1 2 THE ERROR, THE ACTUAL POSITION OF EACH VALVE WAS DOCUMENTED, THEN RETURNED TO ITS
1 3 CORRECT POSITION. THE ACCEPTANCE CRITERIA CONTAINED IN THE TEST HAS BEEN
1 4 CORRECTED VIA TEMPORARY CHANGE SHEET. SEE SUPPLEMENT.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	1 0 0 (29)	NA	C (31)	INTERNAL INVESTIGATION

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

DUPE 7809280170

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

7809190324 990105

POOR ORIGINAL

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

ISSUED DESCRIPTION (45)

NRC USE ONLY

SUPPLEMENT TO LER #

SUPPLEMENT TO CAUSE DESCRIPTION

UPON DISCOVERY OF THE VALVE POSITION ERROR, THE ACTUAL POSITION OF EACH THROTTLE VALVE WAS DOCUMENTED AND FORWARDED TO SERVICE CORPORATION ENGINEERS FOR ANALYSIS. THROUGH CORRESPONDENCE IT HAS BEEN INDICATED BY SERVICE CORPORATION ENGINEERS THAT ALTHOUGH THE VALVE POSITIONS WERE LESS THAN THAT REQUIRED TO FULFILL THE TECHNICAL SPECIFICATION FLOW REQUIREMENTS, THEY WERE CONSISTENT WITH THE SAFETY ANALYSIS.

PREVENTATIVE ACTION

AS THE EVENT WAS CAUSED BY SUPPLYING INCORRECT DATA FOR THE TEST ACCEPTANCE [illegible] THE ERROR HAS BEEN DISCUSSED WITH ALL ENGINEERING PERSONNEL [illegible] THE NECESSITY FOR PERFORMING ACCURATE AND THOROUGH RESEARCH [illegible] NTRIBUTION FOR PROCEDURE USE.

[illegible] ATIONS DEPARTMENT PERSONNEL RESPONSIBLE FOR TEST REVIEW [illegible] VE BEEN REINSTRUCTED IN THE IMPORTANCE OF REPORTING [illegible] RESULTS FOR INVESTIGATION AND CORRECTION.

990106

Warnick (RII)
cc: Baker

INDIANA & MICHIGAN POWER COMPANY
DONALD C. COOK NUCLEAR PLANT
P.O. Box 458, Bridgman, Michigan 49106

September 18, 1978

Mr. J.G. Keppler, Regional Director
Office of Inspection and Enforcement
United States Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

Operating License DPR-58
Docket No. 50-315

Dear Mr. Keppler:

Pursuant to the requirements of the Appendix A Technical Specifications the following report is submitted:

RO 78-050/03L-0.

Sincerely,

D.V. Shaller
Plant Manager

/bab

cc: J.E. Dolan
R.W. Jurgensen
R.F. Krueger
R. Kilburn
R.J. Vollen BPI
K.R. Baker RO:III
R.C. Callen MPSC
P.W. Steketee, Esq.
R. Walsh, Esq.
G. Charnoff, Esq.
G. Olson
J.M. Hennigan
PNSRC
J.F. Stietzel
R.S. Keith
T.P. Beilman/J.L. Rischling
Dir., IE (30 copies)
Dir., MIPC (3 copies)

dupe # 7809280465

SEP 21 1978

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(7 77)

LICENSEE EVENT REPORT

CONTROL BLOCK (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | M I D C C 1 (2) | 0 0 0 0 0 0 0 0 0 0 0 (3) | 4 1 1 1 1 (4) | (5)

1 8 9 LICENSEE CODE 14 15 LICENSE NUMBER 25 26 LICENSE TYPE 30 57 CAT 58

CON'T 0 | REPORT SOURCE L (6) | 0 5 0 0 0 3 1 5 (7) | 0 2 2 3 7 9 (8) | 0 3 1 3 7 9 (9)

60 61 DOCKET NUMBER 68 69 EVENT DATE 74 75 REPORT DATE 80

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | WHILE IN MODE 1 BOTH EMERGENCY DIESEL GENERATORS WERE INOPERABLE ON TWO SEPARATE

0 3 | OCCASIONS CONTRARY TO TECH. SPEC. 3 8.1.1. ONE TIME FOR 1 HOUR AND THE OTHER

0 4 | TIME FOR 7 MINUTES. ACTION REQUIRED BY TECH. SPEC. WAS MET. NO PROBABLE

0 5 | CONSEQUENCES.

0 6 |

0 7 |

0 8 |

7 8 9 80

0 9 | SYSTEM CODE E E (11) | CAUSE CODE D (12) | CAUSE SUBCODE Z (13) | COMPONENT CODE Z Z Z Z Z Z (14) | COMP SUBCODE Z (15) | VALVE SUBCODE Z (16)

9 10 11 12 13 18 19 20

(17) LER RO REPORT NUMBER | EVENT YEAR 7 9 | — | SEQUENTIAL REPORT NO. 0 0 9 | / | OCCURRENCE CODE 0 3 | REPORT TYPE L | — | REVISION NO. 0

21 22 23 24 26 27 28 29 30 31 32

ACTION TAKEN G (18) | FUTURE ACTION H (19) | EFFECT ON PLANT Z (20) | SHUTDOWN METHOD Z (21) | HOURS (22) 0 0 0 0 | ATTACHMENT SUBMITTED Y (23) | NPRD 4 FORM SUB. N (24) | PRIME COMP. SUPPLIER Z (25) | COMPONENT MANUFACTURER Z 9 9 9

32 34 35 36 37 40 41 42 43 44

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 | DURING THE 1 HOUR INCIDENT THE "AB" DIESEL GENERATOR WAS RUNNING IN PARALLEL WHICH

1 1 | REQUIRES ELIMINATION OF THE UNDER VOLTAGE BUS STRIPPING CIRCUITS. WHILE IN THIS

1 2 | CONFIGURATION THE OTHER EMERGENCY DIESEL GENERATOR WAS MADE INOPERABLE FOR REQUIRED

1 3 | MAINTENANCE. TO PREVENT THIS FROM REOCCURING, THE PARALLEL OPERATION PROCEDURE

1 4 | HAS BEEN REVISED WITH A STATEMENT THAT THE OPPOSITE ENGINE (CONTINUED PAGE 2)

7 8 9 80

FACILITY STATUS E (28) | POWER 1 0 0 (29) | OTHER STATUS (30) NA | METHOD OF DISCOVERY A (31) | DISCOVERY DESCRIPTION (32) OPERATOR OBSERVATION

1 2 12 13 44 45 46

ACTIVITY CONTENT RELEASED OF RELEASE Z (33) | Z (34) | AMOUNT OF ACTIVITY (35) NA | LOCATION OF RELEASE (36) NA

1 6 11 44 45

PERSONNEL EXPOSURES NUMBER 0 0 0 | TYPE Z (38) | DESCRIPTION (39) NA

1 7 13

PERSONNEL INJURIES NUMBER 0 0 0 (40) | DESCRIPTION (41) NA

1 8 12

LOSS OF OR DAMAGE TO FACILITY (43) Z (42) | NA

1 9 10

PUBLICITY (45) N (44) | NA

2 0

NRC USE ONLY

68 69 80

DOPE 9003190316

POOR ORIGINAL

990108

R. S. LEASE (616) 465-5901 X-313

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (CONT.):

MUST BE OPERABLE AND REMAIN OPERABLE TO ALLOW PARALLEL OPERATION. THE REQUIREMENT TO BLOCK UNDER VOLTAGE BUS STRIPPING WILL BE ELIMINATED BY A REVISION THAT IS PLANNED TO BE INSTALLED DURING THE NEXT REFUELING OUTAGE THAT IS NOW PLANNED FOR APRIL AND MAY OF THIS YEAR.

DURING THE 7 MINUTE INCIDENT THE "CD" DIESEL GENERATOR WAS INOPERABLE FOR A MAINTENANCE ITEM. THE "AB" DIESEL GENERATOR WAS STARTED TO MEET TECH SPEC SURVEILLANCE 3.8.1.1 ACTION "a" AND THE GENERATOR FIELD FAILED TO EXCITE. WE HAVE EXPERIENCED THREE UNIT TRIPS WHEN STARTING AN EMERGENCY DIESEL GENERATOR AND ALLOWING AUTOMATIC FIELD FLASH. IT HAS BECOME OUR PRACTICE TO DEPOWER THE FIELD FLASH CIRCUIT WHEN TEST STARTING AN EMERGENCY DIESEL GENERATOR AND ALLOW THE RESIDUAL MEGNETISM WITHIN THE FIELD TO BUILD UP THE EXCITATION. THIS TIME RESIDUAL WAS SO LOW, THAT THE FIELD FAILED TO EXCITE. THE GENERATOR WAS SHUT DOWN AFTER THE 7 MINUTE RUN AND POWER ESTABLISHED TO THE FLASH CIRCUIT. AN INSTRUMENT TECHNICIAN WAS CALLED OUT AND THE GENERATOR FIELD WAS ENERGIZED PRIOR TO ENGINE START AND THEN DEPOWERED. THE ENGINE WAS TEST STARTED AND THE EXCITATION BUILT UP. SHIFT PERSONNEL HAVE BEEN TRAINED IN HOW TO EXCITE A GENERATOR FIELD PRIOR TO ENGINE START AND THE PROCEDURE HAS BEEN REVISED TO ALLOW THIS.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

Dear

The enclosed Nuclear Regulatory Commission Staff Paper, POLICY SESSION ITEM (SECY-78-554, dated October 25, 1978) with subject "Licensee Regulatory Performance Evaluation" describes three approaches tried by the NRC staff for evaluating the regulatory performance of operating nuclear power plants. These approaches were preliminary efforts toward developing a technique for evaluating the regulatory performance of NRC licensees on a nationwide basis. The staff has requested Commission approval of a two-year trial program to further develop and test an evaluation technique.

If successful, licensee regulatory performance evaluation should give NRC staff the ability, on a nationwide basis, to distinguish between levels of licensee regulatory performance. This could lead to more effective use of the agency's inspection and enforcement resources and to identification of plants that need further examination by the agency.

The NRC staff emphasizes that, while an evaluation program may be useful in focusing staff attention of the plants that depart from the performance of the majority of plants, the means of assuring adequacy of plant safety will not be changed. This assurance will continue to rest on detailed reviews of plant operations by the Office of Nuclear Reactor Regulation and plant-by-plant judgments made as a result of inspections by the Office of Inspection and Enforcement.

The three evaluation approaches which have been tried are:

1. The "statistical method," based on evaluating two measures of performance: the number of noncompliance findings and the number of events, considered directly controllable by the licensee of the total events required to be reported to the NRC. These

990110

Enclosure

factors then were weighed by taking into account such things as the severity of the items of noncompliance and the amount of staff inspection time required to identify individual items of noncompliance. Under the statistical method, reactors or sites were identified as being in one of three groups - A, B, C.

2. The "trend analysis method," based on a detailed review of events which licensees are required to report to the NRC. An effort then was made to identify trends, repetitive problems, or those linked to similar causes.

3. The "regional survey method," which collected expressions of opinion of facilities by NRC inspectors and regional management. For the trial effort, NRC field inspector personnel were asked to express themselves on a scale, from acceptable to exceptional, about factors concerning operating reactors.

The Staff Paper, SECY-78-554 and its enclosure including the reports describing the approaches tried by the NRC staff, are enclosed. These documents are being sent to each licensee whose facility is mentioned in the paper or reports and to other individuals expressing an interest in this matter. Copies, also, have been placed in the NRC's Public Document Room, 1717 H Street, N.W., Washington, D.C., and the Commission's Regional Offices--631 Park Avenue, King of Prussia, Pennsylvania; Suite 3100, 101 Marietta Street, Atlanta, Georgia; 799 Roosevelt Road, Glen Ellyn, Illinois; Suite 1000, 611 Ryan Plaza Drive, Arlington, Texas; and Suite 202, 1990 North California Boulevard, Walnut Creek, California.

Sincerely,

Enclosure:
USNRC Policy Session Item,
SECY-78-554, dtd 10/25/78,
w/encls.

October 25, 1978

SECY-78-554

UNITED STATES
NUCLEAR REGULATORY COMMISSION

POLICY SESSION ITEM

For: The Commissioners

From: John G. Davis, Acting Director
Office of Inspection and Enforcement

Thru: Executive Director for Operations for J.G.

Subject: LICENSEE REGULATORY PERFORMANCE EVALUATION

Purpose: The purpose of this paper is to inform the Commission regarding the status of efforts by the Office of Inspection and Enforcement in licensee regulatory performance evaluation and to obtain Commission approval of a two-year trial program.

Discussion: IE has been working to develop techniques for evaluating the regulatory performance of NRC licensees for several years, with intensified effort over the last two years. "Regulatory performance," is meant to convey the ability of the licensee to meet regulatory requirements and to avoid reportable events that appear to be directly under the control of the licensee. "Regulatory performance" does not involve reliability, availability, earnings, or other measures which may be used to measure performance.

Licensee Regulatory Performance Evaluation (LRPE) is the effort to evaluate the regulatory performance of licensees on a national basis. It has as its objectives:

- Identification of factors that lead to different levels of regulatory performance.
- Effective and efficient use of NRC inspection resources.

Information from the evaluation process also can be used to evaluate aspects of the NRC inspection program.

Contact:
H. D. Thornburg, RCI
49-28484

NUREG/CR-0110

LICENSEE PERFORMANCE EVALUATION

H.E. Chakoff D.M. Speaker
S.R. Thompson S.C. Cohen

TEKNEKRON, Inc.

Prepared for

U.S. Nuclear Regulatory Commission

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INDIVIDUAL SITE RATINGS

From The

IE EMPLOYEE SURVEY ON EVALUATION OF LICENSEES

April 1978

Stephen K. Conver

IE Study Group

Office of Inspection and Enforcement

U. S. Nuclear Regulatory Commission

dupe
7902260573

INDIVIDUAL SITE RATINGS

From The

IE EMPLOYEE SURVEY ON EVALUATION OF LICENSEES

Background

This report documents the "Individual Site Rating" portion of the "IE Employee Survey on Evaluation of Licensees" that was conducted in the fall of 1977. The purpose of this survey was to solicit the views of employees of the Office of Inspection and Enforcement (IE) on a variety of subjects related to Licensee Performance Evaluation (LPE). For several years, IE has been attempting to develop a method of identifying those licensees whose level of performance (as measured principally, but not solely, by compliance) requires improvement.

A persistent IE staff criticism of early in-house efforts to develop an LPE methodology was that proposed quantitative rating schemes did not capture the subjective judgments of those Regional employees familiar with the specific licensed activities. This questionnaire was developed as one way of responding to that valid criticism. In addition to asking a number of questions on the advisability and mechanics of conducting evaluations of licensees, the questionnaire also asked each Regional respondent to evaluat each of the sites he was familiar with in terms of its overall safety and a number of other factors. This report summarizes the results of those ratings.

A survey instrument was prepared and statistical calculations were performed by Hay Associates under NRC Purchase Orders DR-77-1322 and DR-77-2631. After the questionnaire was developed with significant input from the IE staff, it was distributed by IE to all appropriate staff members directly associated with the inspection of operating power reactors.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 1000
ARLINGTON, TEXAS 76011

September 26, 1977

MEMORANDUM FOR: Ernst Volgenau, Director
Office of Inspection and Enforcement, HQ

FROM: E. Morris Howard, Director, Region IV
Office of Inspection and Enforcement

SUBJECT: DRAFT REPORT - LICENSEE INSPECTION AND ENFORCEMENT INDICATORS

The final Draft Report of Licensee Inspection and Enforcement Indicators which is intended to fulfill the assignment to establish and validate techniques for Licensee Inspection and Enforcement Indicators is submitted for your consideration. The Draft Report is a detailed statistical analysis which has been examined by an independent contractor (ORNL) and found to be mathematically and statistically valid. Suggestions made by ORNL are encompassed in the revision of this detailed statistical analysis.

I consider the detailed statistical as both desirable and necessary supportive information to any analysis of performance indicators; however, it is felt that a simplified technique, using the identical data base, but requiring considerably less analysis was in order. In the development of the simplified technique, items of noncompliance were assigned a value, summed, and the Z score calculated. Figure No. 1 is the flow diagram for these calculations. The Z scores, which are the number of standard deviations that an observation differs from the mean of its group, are shown on Figures No. 2 and No. 3. The comparisons between the simplified and detailed analysis are shown on Tables No. 1 and No. 2.

An attempt was made to separate functional areas in the Draft Report with what I consider less than roaring success due to the lack of data. It appears that a clearer relationship between total noncompliance and the functional areas is more clearly discernable by recalculating a new total Z score after subtracting the contribution of a given functional area, and then comparing the two total Z scores. Figure 4 shows the contribution of Safeguards to the total score of the several pressurized water reactor sites.

This simplified concept uses the same basic techniques described in the Draft Report except for pre-weighting and it would be redundant to redescribe them here.

It is recommended that this simplified technique be used and that an annual detailed statistical analysis be performed to evaluate possible emerging and presently elusive relationships.

E. Morris Howard

E. Morris Howard
Director

Enclosures:
As stated

cc: J. G. Davis
H. D. Thornburg

990118

Draft Report

AN EVALUATION OF THE NUCLEAR SAFETY-RELATED MANAGEMENT PERFORMANCE OF NRC OPERATING REACTOR LICENSEES DURING 1976

(Licensee Management Performance Indicators)

February 1977

E. Morris Howard, Project Director
Stephen K. Conver
Robert G. Easterling
Walter S. Schwink

990 119

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

October 26, 1977

MEMORANDUM FOR: Ernst Volgenau, Director
Office of Inspection & Enforcement, HQ

FROM: E. Morris Howard, Director, Region IV, IE

SUBJECT: LICENSEE INSPECTION AND ENFORCEMENT INDICATORS UPDATE

Enclosed are four figures depicting inspection and enforcement indicators, based solely on noncompliance, covering the periods January 1, 1976 through June 30, 1977 and January 1, 1977 through June 30, 1977, for both BWR's and PWR's.

It is interesting to note that unusually low or high indicators in the long term (January 1, 1976 through June 30, 1977) are not off-set by drastically improved performance in the short term. Indian Point is an excellent example of short term improvement with the long term record continuing to reflect the unusually bad record in Calendar Year 1976. The long run trend is a valuable tool in determining the improvement or degradation of a site's record when compared with a short term evaluation. These trends might also be used to determine the effect of significant enforcement action, which is what occurred at Indian Point and Zion in the second-half of 1976, with Indian Point showing marked improvement in the first-half of 1977 and Zion showing a marked down trend in the same period. It will be interesting to determine the effect of the IE enforcement activities on Zion's record in subsequent evaluations.

There are unlimited possibilities which could be investigated with a strong possibility that reasonable, statistically supportable, conclusions could be reached concerning the licensee's activities, program effectiveness, and regional inspection performance.

There may also be a hint as to how the inspectors perceive the licensee management attitudes, particularly where there is a low subjective rating and only a single deficiency for over four hundred hours of inspection effort. The converse also occurred.

Enclosure 10