

September 10, 1990

Docket Nos. 50-272/311

Mr. Steven E. Miltenberger  
Vice President and Chief Nuclear  
Officer  
Public Service Electric & Gas Company  
Post Office Box 236  
Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

SUBJECT: REPORTABILITY REQUIREMENTS FOR REACTOR TRIP BREAKER AND BYPASS  
BREAKERS, SALEM GENERATING STATION, UNIT NOS. 1 AND 2  
(TAC NOS. 75580 AND 75581)

The Commission has issued the enclosed Amendment Nos. 114 and 96 to Facility  
Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, Unit  
Nos. 1 and 2. These amendments consist of changes to the Technical  
Specifications (TSs) in response to your application dated May 21, 1990 and  
supplemented by letter dated July 18, 1990. The July 18, 1990 supplement  
corrects a technical specification page for Salem 1 and did not increase  
the scope of the original amendment request and did not affect the staff's  
original no significant hazards determination.

These amendments relax the reportability requirements for the reactor trip  
breaker and reactor trip bypass breaker surveillance testing. You are  
requested to notify the Commission, in writing, of the date the enclosed  
amendments are implemented at Salem Units 1 and 2.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be  
included in the Commission's biweekly Federal Register notice.

Sincerely,  
*/s/*

James C. Stone, Project Manager  
Project Directorate I-2  
Division of Nuclear Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 114 to License No. DPR-70
2. Amendment No. 96 to License No. DPR-75
3. Safety Evaluation

cc w/enclosures:  
See next page

DISTRIBUTION w/enclosures:

|                        |              |
|------------------------|--------------|
| <del>Docket File</del> | MO'Brien (2) |
| NRC PDR                | OGC          |
| Local PDR              | DHagan       |
| PDI-2 Reading          | EJordan      |
| GPA/PA                 | JStone       |

|                   |
|-------------------|
| RJaques, ARM/LFMB |
| Wanda Jones       |
| JCalvo            |
| ACRS (10)         |
| MThadani          |
| FRosa             |

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| JCaldwell       |
| RBlough OC/LFMB |
| PSwetland       |
| BBoger          |
| WButler         |
| GHill (8)       |

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| <i>[Signature]</i> PDI-2/PM  |
| <i>[Signature]</i> JStone:mj |
| 8/14/90                      |

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| <i>[Signature]</i> PDI-2/D |
| <i>[Signature]</i> WButler |
| 8/27/90 9/10/90            |

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| SELB <i>[Signature]</i> |
| FRosa                   |
| 8/14/90                 |

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

September 10, 1990

Docket Nos. 50-272/311

Mr. Steven E. Miltenberger  
Vice President and Chief Nuclear  
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Public Service Electric & Gas Company  
Post Office Box 236  
Hancocks Bridge, New Jersey 08038

Dear Mr. Miltenberger:

SUBJECT: REPORTABILITY REQUIREMENTS FOR REACTOR TRIP BREAKER AND BYPASS  
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The Commission has issued the enclosed Amendment Nos. 114 and 96 to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, Unit Nos. 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated May 21, 1990 and supplemented by letter dated July 18, 1990. The July 18, 1990 supplement corrects a technical specification page for Salem 1 and did not increase the scope of the original amendment request and did not affect the staff's original no significant hazards determination.

These amendments relax the reportability requirements for the reactor trip breaker and reactor trip bypass breaker surveillance testing. You are requested to notify the Commission, in writing, of the date the enclosed amendments are implemented at Salem Units 1 and 2.

A copy of our safety evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

James C. Stone, Project Manager  
Project Directorate I-2  
Division of Reactor Projects I/II  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 114 to License No. DPR-70
2. Amendment No. 96 to License No. DPR-75
3. Safety Evaluation

cc w/enclosures:  
See next page

Mr. Steven E. Miltenberger  
Public Service Electric & Gas Company

Salem Nuclear Generating Station

cc:

Mark J. Wetterhahn, Esquire  
Bishop, Cook, Purcell & Reynolds  
1400 L Street NW  
Washington, DC 20005-3502

Richard B. McGlynn, Commission  
Department of Public Utilities  
State of New Jersey  
101 Commerce Street  
Newark, NJ 07102

Richard Fryling, Jr., Esquire  
Law Department - Tower 5E  
80 Park Place  
Newark, NJ 07101

Regional Administrator, Region I  
U. S. Nuclear Regulatory Commission  
475 Allendale Road  
King of Prussia, PA 19406

Mr. L. K. Miller  
General Manager - Salem Operations  
Salem Generating Station  
P.O. Box 236  
Hancocks Bridge, NJ 08038

Lower Alloways Creek Township  
c/o Mary O. Henderson, Clerk  
Municipal Building, P.O. Box 157  
Hancocks Bridge, NJ 08038

Mr. S. LaBruna  
Vice President - Nuclear Operations  
Nuclear Department  
P.O. Box 236  
Hancocks Bridge, New Jersey 08038

Mr. Bruce A. Preston, Manager  
Licensing and Regulation  
Nuclear Department  
P.O. Box 236  
Hancocks Bridge, NJ 08038

Mr. Thomas P. Johnson, Senior Resident  
Inspector  
Salem Generating Station  
U.S. Nuclear Regulatory Commission  
Drawer I  
Hancocks Bridge, NJ 08038

Mr. David Wersan  
Assistant Consumer Advocate  
Office of Consumer Advocate  
1425 Strawberry Square  
Harrisburg, PA 17120

Dr. Jill Lipoti, Asst. Director  
Radiation Protection Programs  
NJ Department of Environmental  
Protection  
CN 415  
Trenton, NJ 08625-0415

Mr. Scott B. Ungerer  
MGR. - Joint Generation Projects  
Atlantic Electric Company  
P.O. Box 1500  
1199 Black Horse Pike  
Pleasantville, NJ 08232

Maryland People's Counsel  
American Building, 9th Floor  
231 East Baltimore Street  
Baltimore, Maryland 21202

Mr. Jack Urban  
General Manager, Fuels Department  
Delmarva Power & Light Company  
800 King Street  
Wilmington, DE 19899

Mr. J. T. Robb, Director  
Joint Owners Affairs  
Philadelphia Electric Company  
955 Chesterbrook Blvd., 51A-13  
Wayne, PA 19087

Public Service Commission of Maryland  
Engineering Division  
ATTN: Chief Engineer  
231 E. Baltimore Street  
Baltimore, MD 21202-3486



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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-272

SALEM GENERATING STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 114  
License No. DPR-70

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated May 21, 1990 and supplemented by letter dated July 18, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-70 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 114, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Walter R. Butler, Director  
Project Directorate I-2  
Division of Reactor Projects I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 10, 1990

PDI-2/LA  
Brien  
8/17/90

PDI-2/PM  
JStone:mj  
8/18/90

OGS  
Cachman  
8/19/90

PDI-2/D  
WButler  
9/10/90

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 114, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director  
Project Directorate I-2  
Division of Reactor Projects I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 10, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 114

FACILITY-OPERATING LICENSE NO. DPR-70

DOCKET NO. 50-272

Revise Appendix A as follows:

Remove-Page

3/4 3-5

Insert-Page

3/4 3-5

TABLE 3.3-1 (Continued)

TABLE NOTATION

- \* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.
- \*\* The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.
- # The provisions of Specification 3.0.4 are not applicable.
- ## High voltage to detector may be de-energized above P-6.
- ### If ACTION Statement 1 is entered as a result of Reactor Trip Breaker (RTB) or Reactor Trip Bypass Breakers (RTBB) maintenance testing results exceeding the following acceptance criteria, NRC reporting shall be made in accordance with Specification 6.9.1.9:
  1. A RTB or RTBB trip failure during any surveillance test with less than or equal to 300 grams of weight added to the breaker trip bar.
  2. A RTB or RTBB time response failure that results in the overall reactor trip system time response exceeding the Technical Specification limit.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1 provided the other channel is OPERABLE.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
  - a. The inoperable channel is placed in the tripped condition within 1 hour.
  - b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.
  - c. Either, THERMAL POWER is restricted to  $\leq 75\%$  of RATED THERMAL and the Power Range, Neutron Flux trip setpoint is reduced to  $\leq 85\%$  of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.
- ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:





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

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

DOCKET NO. 50-311

SALEM GENERATING STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 96  
License No. DPR-75

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
  - A. The application for amendment filed by the Public Service Electric & Gas Company, Philadelphia Electric Company, Delmarva Power and Light Company and Atlantic City Electric Company (the licensees) dated May 21, 1990 and supplemented by letter dated July 18, 1990, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-75 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 96, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Walter R. Butler, Director  
Project Directorate I-2  
Division of Reactor Projects I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 10, 1990

*[Handwritten signature]*  
PDI-2/PA  
M O'Brien  
8/9/90

PDI-2/PM  
JStone:mj  
8/9/90

*[Handwritten signature]*  
OGC  
R. Bushman  
8/29/90

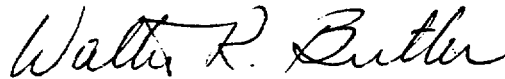
PDI-2/D  
WButler  
9/10/90 *[Handwritten signature]*

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 96, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 60 days of the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Walter R. Butler, Director  
Project Directorate I-2  
Division of Reactor Projects I/II

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 10, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 96

FACILITY OPERATING LICENSE NO. DPR-75

DOCKET NO. 50-311

Revise Appendix A as follows:

Remove Page

3/4 3-5

Insert Page

3/4 3-5

TABLE 3.3-1 (Continued)

TABLE NOTATION

- \* With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.
- \*\* The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.
- # The provisions of Specification 3.0.4 are not applicable.
- ## High voltage to detector may be de-energized above P-6.
- ### If ACTION Statement 1 is entered as a result of Reactor Trip Breaker (RTB) or Reactor Trip Bypass Breaker (RTBB) maintenance testing results exceeding the following acceptance criteria, NRC reporting shall be made in accordance with Specification 6.9.1.9:
  - 1. A RTB or RTBB trip failure during any surveillance test with less than or equal to 300 grams of weight added to the breaker trip bar.
  - 2. A RTB or RTBB time response failure that results in the overall reactor trip system time response exceeding the Technical Specification limit.

ACTION STATEMENTS

- ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1 provided the other channel is OPERABLE.
- ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
  - a. The inoperable channel is placed in the tripped condition within 1 hour.
  - b. The Minimum Channels OPERABLE requirement is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.
  - c. Either, THERMAL POWER is restricted to  $\leq 75\%$  of RATED THERMAL and the Power Range, Neutron Flux trip setpoint is reduced to  $\leq 85\%$  of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours.
  - d. The QUADRANT POWER TILT RATIO, as indicated by the remaining three detectors, is verified consistent with the normalized symmetric power distribution obtained by using the movable in-core detectors in the four pairs of symmetric thimble locations at least once per 12 hours when THERMAL POWER is greater than 75% of RATED THERMAL POWER.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NOS. 114 AND 96 TO FACILITY OPERATING

LICENSE NOS. DPR-70 AND DPR-75

PUBLIC SERVICE ELECTRIC & GAS COMPANY

PHILADELPHIA ELECTRIC COMPANY

DELMARVA POWER AND LIGHT COMPANY

ATLANTIC CITY ELECTRIC COMPANY

SALEM GENERATING STATION, UNIT NOS. 1 AND 2

DOCKET NOS. 50-272 AND 50-311

1.0 INTRODUCTION

By letter dated May 21, 1990 and supplemented by letter dated July 18, 1990, Public Service Electric & Gas Company (the licensee) requested an amendment to Facility Operating License Nos. DPR-70 and DPR-75 for the Salem Generating Station, Unit Nos. 1 and 2. The proposed amendments would relax the reportability requirements for the reactor trip breaker and reactor trip bypass breaker surveillance testing. The technical specifications require the NRC to be notified immediately if the action statement concerning the number of channels required to be operable is entered as a result of maintenance testing of the reactor trip breakers (RTB) or reactor trip bypass breakers (RTBB). The Action Statement is entered, when in Mode 1 or 2, or with the control rod system energized in Modes 3, 4, or 5, when any procedural acceptance criteria is exceeded or trip forces exceed the recommended upper limit. In addition, repairs cannot be made until the NRC is notified. The proposed change would eliminate the immediate NRC notification requirement; however, a written report to the NRC would be required within 30-days if the following acceptance criteria were exceeded:

1. A RTB or RTBB trip failure during any surveillance test with less than or equal to 300 grams of weight added to the breaker trip bar, or
2. A RTB or RTBB response failure that results in the overall reactor trip system time response exceeding the Technical Specification Limit.

The July 18, 1990 supplemental letter did not increase the scope of the original amendment request and did not affect the staff's original no significant hazards analysis.

2.0 EVALUATION

Following the Salem ATWS events of February 22 and 25, 1983, the licensee implemented extensive revisions to the maintenance and surveillance

procedures associated with the reactor trip breaker (RTB) and reactor trip bypass (RTBB) breakers. Since many of these procedural changes were prototypical in nature, they were broad in scope and contained very conservative test and acceptance criteria. Additionally, because of the safety significance of these events, the NRC staff imposed conservative reportability requirements to ensure timely notification of hardware related deficiencies. These additional reporting requirements were subsequently incorporated into the Salem Unit 1 and 2 Technical Specifications as required by the staff's SER dated April 28, 1983, that provided restart authorization for Salem, Units 1 and 2.

Subsequently, Generic Letter 83-28 (GL 83-28) established industry wide required actions based on the generic implications of the Salem ATWS events. These actions addressed issues related to reactor trip system reliability and general management capability. GL 83-28 did not impose additional reporting requirements beyond those already in existence.

10 CFR 50.72 was established to promulgate immediate notification requirements for any plant condition presenting a clear challenge to safe operation. Subsequent revisions have further defined those significant events where immediate NRC action to protect the public health and safety may be required or where the NRC needs accurate and timely information to respond to heightened public concern. Thus, the present version of 10 CFR 50.72 clearly addresses the immediate reporting requirements associated with any significant RTB or RTBB deficiency that is found during normal operation (i.e., not found during surveillance/maintenance testing). These are the same reporting requirements that currently exist for Salem 1 and 2, and no changes are being made to these requirements. For conditions found during surveillance/maintenance, the revisions to 10 CFR 50.72 generally do not require the reporting of those problem (NUREG - 1022, Supplement 1, Section II. 2.3, Page 4). The licensee has proposed to continue to report surveillance/maintenance test results that do not meet either of the following criteria:

1. A RTB or RTBB that fails to trip with less than or equal to 300 grams of weight added to the breaker trip bar, or
2. A RTB or RTBB response failure that results in the overall reactor trip system time response exceeding the technical specification limit.

Instead of immediate notification, the licensee has proposed to submit a Special Report (written report) within 30-days of the event.

The principal issue that led to the establishment of the Salem Unit 1 and 2 Technical Specification immediate notification requirements was questionable RTB reliability. Subsequent to the implementation of enhanced maintenance/surveillance procedures, Salem has conducted approximately 95 separate surveillances on the RTBs and RTBBs. There have been no instances of any breaker failing to meet its design safety function (tripping open) under normal operating conditions (no additional weight on the breaker trip bar).

The above changes represent a change in reporting requirements only. No changes in testing conducted, the frequency of testing, or acceptance criteria are being made. By reporting surveillance/maintenance test results that fail to meet the above stated criteria, the staff will continue to be informed if RTB and RTBB are degrading at Salem 1 and 2. Therefore, the staff finds these changes to the reporting requirements for RTB and RTBB surveillance/maintenance testing to be acceptable.

The July 18, 1990 supplement corrected an error in the Salem 1 technical specification page that was in the original submittal. This change brought the unchanged portion of the requested technical specification change into agreement with the currently approved technical specifications.

### 3.0 ENVIRONMENTAL CONSIDERATION

These amendments relate to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(10). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

### 4.0 CONCLUSION

The Commission made a proposed determination that the amendments involve no significant hazards consideration which was published in the Federal Register (55 FR 26293) on June 27, 1990 and consulted with the State of New Jersey. No public comments were received and the State of New Jersey did not have any comments.

The staff has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of the amendments will not be inimical to the common defense and security nor to the health and safety of the public.

Principal Contributor: James Stone

Dated: September 10, 1990