# SHAW, PITTMAN, POTTS & TROWBRIDGE

A PARTNERSHIP OF PROFESSIONAL CORPORATIONS

1800 M STREET, N. W.

WASHINGTON, D. C. 20036

(202) 822-1000

TELECOPIER

(202) 822-1099 & 822-1199

RAPIFAX 100

(202) 822-1072

TELEX

89-2693 (SHAWLAW WSH)

CABLE "SHAWLAW"

JOHN F. DEALY*

COUNSEL

RAMSAY D. POTTS, P.C.
STEUART L. PITTMAN, P.C.
GEORGE F. TROWBRIDGE, P.C.
STEPHEN D. POTTS, P.C.
GERALD CHARNOFF, P.C.
PHILLIP D. BOSTWICK, P.C.
R. TIMOTHY HANLON, P.C.
GEORGE M. ROGERS, JR., P.C.
FRED A. LITTLE, P.C.
JOHN B. RHINELANDER, P.C.
BRUCE W. CHURCHILL, P.C.
LESLIE A. NICHOLSON, JR., P.C.
MARTIN D. KRALL, P.C.
RICHARD J. KENDALL, P.C.
JAY E. SILBERG, P.C.
BARBARA M. ROSSOTTI, P.C.
GEORGE V. ALLEN, JR., P.C.
FRED DRASNER, P.C.
R. KENLY WEBSTER, P.C.
NATHANIEL P. BREED, JR., P.C.
MARK AUGENBLICK, P.C.
ERNEST L. BLAKE, JR., P.C.
CARLETON S. JONES, P.C.
THOMAS A. BAXTER, P.C.
JAMES M. BURGER, P.C.

SHELDON J. WEISEL, P.C.
JOHN A. McCULLOUGH, P.C.
J. PATRICK HICKEY, P.C.
J. THOMAS LENHART, P.C.
STEVEN L. MELTZER, P.C.
DEAN D. AULICK, P.C.
JOHN ENGEL, P.C.
CHARLES B. TEMKIN, P.C.
STEPHEN B. HUTTLER, P.C.
WINTHROP N. BROWN, P.C.
JAMES B. HAMLIN, P.C.
RANDAL B. KELL, P.C.
ROBERT E. ZAHLER, P.C.
ROBERT B. ROBBINS, P.C.
STEVEN M. LUCAS, P.C.
DAVID M. RUBENSTEIN, P.C.
RICHARD E. GALEN
LYNN WHITTLESEY WILSON
MATIAS F. TRAVIESO-DIAZ
VICTORIA J. PERKINS
JOHN H. O'NEILL, JR.
JAY A. EPSTIEN
RAND L. ALLEN
ELISABETH M. PENDLETON
HARRY H. GLASSPIEGEL

JEFFERY L. YABLON
JACK McKAY
THOMAS H. McCORMICK
JOHN L. CARR, JR.
PHILIP J. HARVEY
ROBERT M. GORDON
BARBARA J. MORGEN
BONNIE S. GOTTLIEB
HOWARD H. SHAFFERMAN
DEBORAH B. BAUSER
SCOTT A. ANENBERG
CAMPBELL KILLEFER
PAUL M. THOMAS
SETH H. HOOGASIAN
SHEILA McC. HARVEY
DELISSA A. RIDGWAY
KENNETH J. HAUTMAN
DAVID LAWRENCE MILLER
FREDERICK L. KLEIN
STEVEN P. PITLER*
RICHARD J. PARRINO
ELLEN A. FREDEL*
HANNAH E. M. LIEBERMAN
SANDRA E. FOLSOM
JUDITH A. SANDLER

EDWARD D. YOUNG, III
ANDREW D. ELLIS
RICHARD A. SAMP
THOMAS E. CROCKER, JR.
WENDELIN A. WHITE
STANLEY M. BARG
LESLIE K. SMITH
VIRGINIA S. RUTLEDGE
KATHERINE P. CHEEK
JANICE LEHRER-STEIN
TRAVIS T. BROWN, JR.
RICHARD H. KRONTHAL
STEPHEN B. HEIMANN
SANDRA E. BRUSCA*
EILEEN L. BROWNELL
PAMELA H. ANDERSON
ALEXANDER D. TOMASZCZUK
PHILIP D. PORTER
MICHAEL A. SWIGER
ELLEN SHERIFF
ANITA J. FINKELSTEIN
EILEEN M. GLEIMER
DAVID R. SAHR
C. BOWDOIN TRAIN

* NOT ADMITTED IN D.C.

WRITER'S DIRECT DIAL NUMBER

September 2, 1983 822-1090

Mr. Samuel J. Chilk
Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

In the Matter of
Metropolitan Edison Company
(Three Mile Island Nuclear Station, Unit No. 1)
Docket No. 50-289 (Restart)

Dear Mr. Chilk:

Please find enclosed copies of the following documents, which include information potentially relevant and material to matters under adjudication in the plant design and procedures phase of this proceeding, which is now before the Commission:

1. Letter 5211-83-230, August 25, 1983, H. D. Hukill, GPU Nuclear, to J. F. Stolz, NRC, Inadequate Core Cooling (NUREG 0737, II.F.2).

2. Letter 5211-83-231, August 25, 1983, H. D. Hukill, GPU Nuclear, to J. F. Stolz, NRC, EFW Flow Devices-D/P Transmitters.

Respectfully submitted,

Thomas A. Baxter

Thomas A. Baxter
Counsel for Licensee

TAB:sg

Enclosures

cc: Service List

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

| | | |
|---|---|---|
| In the Matter of | ) | |
| | ) | |
| METROPOLITAN EDISON COMPANY | ) | Docket No. 50-289 |
| | ) | (Restart) |
| (Three Mile Island Nuclear Station, Unit No. 1) | ) | |

## SERVICE LIST

Chairman Nunzio J. Palladino
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner Victor Gilinsky
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner James K. Asselstine
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner Frederick M. Bernthal
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Commissioner Thomas M. Roberts
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Docketing and Service Section
Office of the Secretary
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Gary J. Edles, Esquire
Chairman
Atomic Safety and Licensing Appeal Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. John H. Buck
Atomic Safety and Licensing Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Reginald L. Gotchy
Atomic Safety and Licensing Appeal Board Panel
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Ivan W. Smith, Esquire
Chairman
Atomic Safety and Licensing Board
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dr. Walter H. Jordan
Atomic Safety and Licensing Board Panel
881 West Outer Drive
Oak Ridge, Tennessee 37830

Dr. Linda W. Little
Atomic Safety and Licensing Board Panel
5000 Hermitage Drive
Raleigh, North Carolina 27612

James M. Cutchin, IV, Esquire
Office of the Executive Legal Director
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

John A. Levin, Esquire
Assistant Counsel
Pennsylvania Public Utilty Commission
P.O. Box 3265
Harrisburg, Pennsylvania 17120

Douglas R. Blazey, Esquire
Chief Counsel
Department of Environmental Resources
514 Executive House, P.O. Box 2357
Harrisburg, Pennsylvania 17120

Jordan D. Cunningham, Esquire
2320 North Second Street
Harrisburg, Pennsylvania 17110

Ms. Louise Bradford
TMI ALERT
1011 Green Street
Harrisburg, Pennsylvania 17102

Ellyn R. Weiss, Esquire
Harmon & Weiss
1725 Eye Street, N.W., Suite 506
Washington, D.C. 20006

Steven C. Sholly
Union of Concerned Scientists
1346 Connecticut Avenue, N.W., Suite 1101
Washington, D.C. 20036

ANGRY/TMI PIRC
1037 Maclay Street
Harrisburg, Pennsylvania 17103

William S. Jordan, III, Esquire
Harmon & Weiss
1725 Eye Street, N.W., Suite 506
Washington, D.C. 20006

Chauncey Kepford
Judith H. Johnsrud
Environmental Coalition on Nuclear Power
433 Orlando Avenue
State College, Pennsylvania 16801

Marjorie M. Aamodt
R. D. 5
Coatesville, Pennsylvania 19320

GPU Nuclear

GPU Nuclear Corporation
Post Office Box 480
Route 441 South
Middletown, Pennsylvania 17057-0191
717 944-7621
TELEX 84-2386
Writer's Direct Dial Number:

August 25, 1983
5211-83-230

Office of Nuclear Reactor Regulation
Attn: J. F. Stolz, Chief
Operating Reactor Branch No. 4
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
Inadequate Core Cooling (NUREG 0737, II.F.2)

Your letter of June 14, 1983 requested clarification on two items of minor concern dealing with the Subcooling Margin Monitor. The first item related to our letter of March 10, 1983 (83-071) and the surveillance requirements for the SMM. Amendment 78 dated October 20, 1982, p. 4.7a (attached) provides those requirements. Surveillance Procedure 1302.-6.6, available on site, discusses specific details of that surveillance. Additionally, pages 6 and 7 of attachment 1 to our letter of March, 1983 have been revised for the sake of readability and are enclosed.

The second item concerned our letter of February 18, 1983 (83-039) and the seismic qualification of the SMM indicator. GPUN has recently contacted Westinghouse and Combustion Engineering concerning a qualified digital indicator. We are advised that these two vendors do not provide an indicator qualified separately from the entire instrumentation package. These indicators are also not compatible with existing instrumentation at TMI-1. GPUN's SMM was designed and partially installed prior to the time that these NSSS vendors were developing a SMM instrumentation package. However, GPUN has contacted another vendor who is currently qualifying a digital indicator. Upon receipt of successful results, GPUN will place an order for this indicator which is compatible with our SMM system.

8309010561

Additional information requested in Attachment 1 of your June 14 letter will be provided as further detailed design information becomes available.

Sincerely,

H. D. Hukill
Director, TMI-1

HDH:LWH:vjf

Attachments

cc: R. Conte
J. Van Vliet

Attachment 1

DESIGN AND QUALIFICATION OF THE
SATURATION MARGIN MONITOR

1. Environmental/Seismic Qualification - The pressure measurement is obtained from 2 seismic and environmentally qualified sensors. The temperature measurement is control grade, and all signals are seismic Category I and separated for use as redundant signals. The qualification of the meter was recently discussed in our letter of February 14, 1983.

2. Single Failure - Redundant channels which are electrically independent are used.

3. Power Sources - The two saturation margin monitors use separate power supplies (115 Vac 60 Hz) powered from safety grade inverters.

4. Availability - The operability/surveillance requirements of the saturation margin monitor are provided in Amendment 78 dated October 20, 1982. |

5. QA Requirements - The quality level of all equipment covered for the saturation margin monitor is designated as Nuclear Safety Related, Class 1E and meets the requirements of the OQA plan Rev. 9. The temperature sensors, plant computer and announciation system are nonsafety related components.

6. Continuous Operation - The saturation margin monitor will continuously display the margin between actual primary coolant temperature and the saturation temperature.

7. Recording Instrumentation - Outputs of saturation margin are provided for trending and alarm announciation by the plant computer.

8. Display Instrumentation - Digital display of the margin between actual RCS temperature and saturation temperature for the existing RCS pressure is provided in the control room on the back panel (PCL).

9. Isolation - The Tsat computation equipment provides isolation to the pressure and temperature signals through the use of isolation devices at the signal inputs. The Tsat outputs to the announciation system and the computer utilize isolation devices to minimize potential hazardous effects from these system.

10. Testing - Test signals may be substituted for normal RC pressure and temperature signals to verify operation on the Tsat Margin Monitor equipment. Operating checks can be performed by reading RC pressure and temperature and with calculations obtain the Tsat margin.

11. Surveillance - See item 4.

12. Removal From Service - The Tsat Margin monitor is designed such that all necessary functional tests can be performed on line without affecting other reactor systems. Any testing that is required to be performed offline shall not be required to be performed at less than 18 month intervals.

13. Access for Adjustment - The Tsat Margin Monitors are rack mounted in signal processing channel A and B equipment cabinets. Accessibility for these cabinets is the same as for normal maintenance.

14. Anomalous Reading - Anomalous readings are reduced to a minimum by items 2, 3 and 9.

15. Ease of Repair - See item 13.

16. Directly Measured Variable Sensors - RCS temperature and pressure sensors provide direct inputs to the saturation margin calculation.

17. Normal/Accident Ranges - The Tsat Margin Monitor has a range of -100° to 400°F which is suitable for normal and accident conditions.

18. Periodic Testing - Testing is described in item 10 and surveillance will be provided as discussed in item 11.

TABLE 4.1-1 (continued)

| CHANNEL DESCRIPTION | CHECK | TEST | CALIBRATE | REMARKS |
|---|---|---|---|---|
| 49. Saturation Margin Monitor | S(1) | M(1) | R | (1) When $T_{ave}$ is greater than 525°F. |
| 50. Emergency Feedwater Flow Instrumentation | NA | M(1) | R | (1) When $T_{ave}$ is greater than 250°F. |
| 51. Emergency Feedwater Initiation | | | | |
| a. Loss of RCP's | NA | Q(1)(2) | R | (1) When $T_{ave}$ is greater than 250°F. |
| b. Loss of both Feedwater Pumps | NA | Q(1)(2) | R | (2) Includes logic test only |

S - Each Shift
D - Daily
W - Weekly
M - Monthly

T/W - Twice per week
B/M - Every 2 months
Q - Quarterly
P - Prior to each startup if not done previous week

R - Each Refueling Period
NA - Not applicable
B/W - Every two weeks

GPU Nuclear

GPU Nuclear Corporation
Post Office Box 480
Route 441 South
Middletown, Pennsylvania 17057-0191
717 944-7621
TELEX 84-2386
Writer's Direct Dial Number:

August 25, 1983
5211-83-231

Office of Nuclear Reactor Regulation
Attn: J. F. Stolz, Chief
Operating Reactors Branch No. 4
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, D.C. 20555

Dear Sir:

Three Mile Island Nuclear Station, Unit 1 (TMI-1)
Operating License No. DPR-50
Docket No. 50-289
EFW Flow Devices - D/P Transmitters

In our letter of May 24, 1983 (5211-83-156), GPUN indicated that two of the installed EFW sonic flow devices (controlotron) would be replaced with differential pressure (D/P) transmitters. Since that time, testing of the remaining sonic devices has shown them to be unsatisfactory. Based on this, by restart, all of the sonic flow devices will be replaced with D/P transmitters.

Information, as required by NUREG 0737 Item II.E.1.2, pt. 2, to document the change to the design description provided in the Restart Report, Section 2.1.1.7.3 is attached. A list of logic diagrams, electrical schematics and piping and instrument diagrams is also attached. These diagrams and schematics were provided to the NRC separately.

Sincerely,

H. D. Hukill
Director, TMI-1

HDH:LWH:vjf
Enclosure
cc: R. Conte
J. Van Vliet

8309130636

# Emergency Feedwater System Flow Indication
# D/P Transmitters

## I. Introduction

The purpose of this modification is to replace 2 existing ultrasonic (Controlotron) flow devices with a new system utilizing 2 differential pressure transmitters and 2 annubars. The equipment arrangement allows the modification to be made by replacement of the ultrasonic flow devices with annubars and D/P transmitters utilizing existing wiring and instrumentation.

## II. Equipment Description

### A. Flow Element

The Annubar Model ANK-76 is a passive stainless steel device which translates fluid pressures to a D/P transmitter (in this case). The D/P varies in a squared relationship with flow across the annubar. The D/P detects the pressure difference between the dynamic and static pressures in the pipe. In this respect, as well as their function of generating a D/P proportional to flow, the annubars are analyogous to flow orifices.

### B. Transmitter

The Foxboro type NE 13 DM transmitters utilized are force-balance type, fully qualified for the application. These transmitters are utilized elsewhere at TMI-1.

### C. Signal Conditioning

The Foxboro SPEC 200 signal conditioning equipment is the same equipment used for all recent IE instrumentation.

### D. Indications

Existing Westinghouse 252 style qualified indicators in the control room are utilized for the new flow measurement. The input signal remains 4-20 ma.

## III. Design Criteria

A. The tubing from the annubar is routed to separate transmitters.

B. The equipment was installed and inspected per established quality standards for Nuclear Safety Related/Important to Safety components.

C. The pressure transmitters are environmentally qualified (Intermediate Building) and seismically qualified and mounted.

D. The annubars are seismically qualified and meet appropriate piping code criteria

E. The pressure transmitters are located above the flood level for the Intermediate Building.

F. The flow instrumentation are reliable and accurate and are designed to monitor the full range of system flow requirements.

G. No single failure within the flow instrumentation will fail to provide flow indication for each train (principally prevented by redundancy).

H. Channels are separate and independent

I. The differential pressure transmitter are to be tested (monthly) and calibration is to be provided at regular intervals (refueling).

J. The EFW flow is indicated in the Control Room for each steam generator redundant to the ultrasonic flow devices.

K. The EFW flow instrument channels are powered from independent emergency buses.

IV. Installation

A. Conclusion

As a result of the replacement of the Controlotron with D/P system there is no change to the Technical Specification (see Amendment 78). Also, there are no changes to operating or emergency procedures or operator training required. No alarms require change or reprioritization.

Main console mounted indicators have scales of 0-800 GPM. Half inch stainless steel tubing connects the annubar device valves to each of the two permanent feedwater flow transmitters per steam generator. Each transmitter will be equipped with two shutoff valves, two blowdown valves, and one equalizer valve.

V. Conclusion

As a result of the replacement of the Controlotrons with the D/P system there is no change to the Technical Specification (see Amendment 78). Also, there are no changes to operating or emergency procedures or operator training required. No alarms require change or reprioritization.

| COMPANY | DOCUMENT NO. | SHEET | REV. | TITLE | OCL |
|---|---|---|---|---|---|
| GAI | 302-082 | | Rev. IA-0 | Flow Diagram | NSR/ITS |
| GAI | 308-609 | | Rev. LA-0 | Piping Diagram | NSR/ITS |
| GAI | 302-081 | | Rev. IE-0 | Flow Diagram | NSR/ITS |
| GAI | S-204-275 | | Rev. IB-0 | Conduit Support | NSR/ITS |
| GAI | S-204-276 | | Rev. IB-0 | Conduit Support | NSR/ITS |
| GAI | S-204-300 | | Rev. IB-0 | Conduit Support | NSR/ITS |
| GAI | 204-575 | | Rev. IB-0 | Conduit Support | NSR/ITS |
| GAI | S-204-673 | | Rev. IB-0 | Conduit Support | NSR/ITS |
| GAI | 205-356 | | Rev. LA-0 | Conduit Support | NSR/ITS |
| GAI | 205-357 | | Rev. IA-0 | Conduit Support | NSR/ITS |
| GAI | 205-358 | | Rev. LA-0 | Conduit Support | NSR/ITS |
| GAI | 205-359 | | Rev. LA-0 | Conduit Support | NSR/ITS |
| GAI | 205-360 | | Rev. LA-0 | Conduit Support | NSR/ITS |
| GAI | 205-361 | | Rev. LA-0 | Conduit Support | NSR/ITS |
| GAI | 421-250 | | Rev. LA-0 | Location of Core Drill | NSR/ITS |
| GAI | C-204-272 | | Rev. IF-0 | Conduit Support | NSR/ITS |
| GAI | C-204-511 | | Rev. IE-0 | Conduit Support | NSR/ITS |
| GAI | C-204-146 | | Rev. ID-0 | Conduit Support | NSR/ITS |
| GAI | C-204-271 | | Rev. IG-0 | Conduit Support | NSR/ITS |
| GAI | C-204-270 | | Rev. IG-0 | Conduit Support | NSR/ITS |
| GAI | C-204-510 | | Rev. IO-0 | Conduit Support | NSR/ITS |
| GAI | C-204-513 | | Rev. IF-0 | Conduit Support | NSR/ITS |
| GAI | C-204-651 | | Rev. IL-0 | Conduit Support | NSR/ITS |
| GAI | 212-008 | EA6795 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-008 | EA6796 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-008 | EA6805 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-008 | EA6806 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-008 | EA6846 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-008 | EA6847 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK835 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK836 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK847 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK848 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK849 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK850 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK851 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK852 | Rev. IB-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK882 | Rev. IA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK883 | Rev. IA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK884 | Rev. LA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK885 | Rev. IA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK886 | Rev. IA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK887 | Rev. IA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK888 | Rev. IA-0 | Circuit Schedule | NSR/ITS |

| COMPANY | DOCUMENT NO. | SHEET | REV. | TITLE | OCL |
|---|---|---|---|---|---|
| GAI | 212-009 | RK889 | Rev. LA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK890 | Rev. LA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK891 | Rev. LA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK892 | Rev. LA-0 | Circuit Schedule | NSR/ITS |
| GAI | 212-009 | RK893 | Rev. LA-0 | Circuit Schedule | NSR/ITS |
| GAI | S-211-001 | T1014 | Rev. IB-0 | Terminal Box | NSR/ITS |
| GAI | S-211-001 | T1015 | Rev. IB-0 | Terminal Box | NSR/ITS |
| GAI | 211-001 | T1078 | Rev. LA-0 | Terminal Box | NSR/ITS |
| GAI | 211-001 | T1079 | Rev. LA-0 | Terminal Box | NSR/ITS |
| GAI | 211-001 | T1080 | Rev. LA-0 | Terminal Box | NSR/ITS |
| GAI | 211-001 | T1081 | Rev. LA-0 | Terminal Box | NSR/ITS |
| GAI | SS-202-019 | RK-1 | Rev. IB-0 | Block Diagram | NSR/ITS |
| GAI | 202-077 | RK-2 | Rev. IA-0 | Block Diagram | NSR/ITS |
| GAI | 202-077 | RK-3 | Rev. LA-0 | Block Diagram | NSR/ITS |
| GAI | 210-616 | | Rev. LA-0 | Wiring Diagram | NSR/ITS |
| GAI | 210-617 | | Rev. LA-0 | Wiring Diagram | NSR/ITS |
| GAI | B-210-968 | | Rev. IB-0 | Detail Schematic | NSR/ITS |
| GAI | C-604-002 | | Rev. IB-0 | Rack Loading | NSR/ITS |
| GAI | B-600-517 | | Rev. IB-0 | Wiring Diagram | NSR/ITS |
| GAI | B-600-518 | | Rev. IB-0 | Wiring Diagram | NSR/ITS |
| GAI | C-224-501 | 4 | Rev. IX-0 | Box Location Schedules | NSR/ITS |
| GAI | C-224-503 | 2 | Rev. IJ-0 | Box Location Schedules | NSR/ITS |
| GAI | C-600-520 | | Rev. IF-0 | Wiring Diagram | NSR/ITS |
| GAI | D-215-044 | | Rev. IDDD-0 | Conduit Layout | NSR/ITS |
| GAI | D-215-045 | | Rev. ICCC-0 | Conduit Layout | NSR/ITS |
| GAI | D-215-086 | | Rev. IJ-0 | Conduit Layout | NSR/ITS |
| GAI | E-210-006 | | Rev. IK-0 | Wiring Diagram | NSR/ITS |
| GAI | E-210-009 | | Rev. IE-0 | Wiring Diagram | NSR/ITS |
| GAI | E-215-053 | | Rev. IG-0 | Conduit Layout | NSR/ITS |
| GAI | E-215-196 | | Rev. IEEE-0 | Conduit Layout | NSR/ITS |