



ARKANSAS POWER & LIGHT COMPANY

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April 20, 1984

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Director of Nuclear Reactor Regulation
ATTN: Mr. J. F. Stolz, Chief
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U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Director of Nuclear Reactor Regulation
ATTN: Mr. James R. Miller, Chief
Operating Reactors Branch #3
Division of Licensing
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

SUBJECT: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Resolution of Environmental
Qualification Safety Evaluation
Reports for ANO-1 and ANO-2

Gentlemen:

Safety Evaluation Reports (SER's) were submitted to AP&L covering the environmental qualification of safety-related electrical equipment at ANO-1 and ANO-2 by separate transmittals dated January 26, 1983 (1CNAØ183Ø4), and April 15, 1983 (2CNAØ483Ø2). Each SER contained a Technical Evaluation Report which detailed apparent qualification deficiencies for ANO-1 and ANO-2 equipment.

As discussed on numerous occasions with members of your staff, we would like to resolve those deficiencies and have agreed to meet at the NRC offices in Bethesda on April 26 beginning at 9:00 a.m. to discuss these matters. It is our intention to discuss each of the items not previously considered acceptable by the NRC's reviewers, and explain the method of resolution chosen by AP&L. Enclosures 1 and 2 are lists of each item previously evaluated, the alleged deficiencies, and the proposed resolution. These lists will be used as the basis for discussion during the meeting. It is our hope that mutual agreements

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Mr. J. F. Stolz/
Mr. James R. Miller

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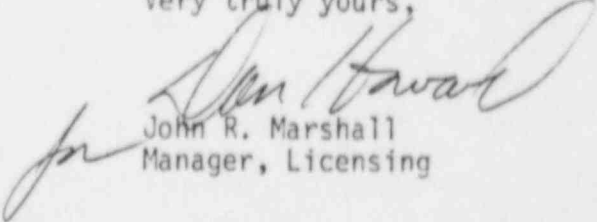
April 20, 1984

can be reached that are sufficient to close out all deficiencies. We understand that following the meeting, AP&L will document and issue detailed meeting minutes which reflect the resolutions reached. In addition, we will attempt to provide any other information as requested which could not be provided during the meeting.

In the period of time since AP&L's submittal in response to 10CFR50.49, additional developments have taken place which have altered the official EQ list of equipment. In many cases, items have been removed from the list because they have been relocated in a mild environment. In other cases, a more detailed evaluation of device function has confirmed that the item does not perform an essential safety function; therefore, it has been removed. In some cases, it has been determined that additional equipment should be added to the list. For these cases, an immediate evaluation was made to determine whether the device was qualified for its postulated environment. To date, all items added to the list are considered qualified with the following exception. The containment cooling unit bypass damper motors and limit switches were at one time included on the EQ list, but later removed. A recent re-evaluation of the basis for removal has determined it to be inadequate; therefore, these items have been re-added to the list. Though a justification for continued operation had been previously submitted, it has now been revised and is attached (enclosure 3).

Copies of the revised equipment lists are also attached (enclosures 4 and 5) for your information.

Very truly yours,


John R. Marshall
Manager, Licensing

JRM:CHT:sc

Attachments

INDEX - TER DEFICIENCIES - ANO-1

- I. Generic EQ Deficiencies
- II. Motor Operated Valves
- III. Solenoid Valves
- IV. Motors
- V. Pressure, DP, Flow, and Level Transmitters
- VI. Temperature Sensing Devices
- VII. Valve Position Indicating Devices
- VIII. Electrical Distribution Devices
- IX. Miscellaneous
- X. Items not Reviewed by Franklin

1. GENERIC EQ DEFICIENCIES

<u>Deficiency</u>	<u>Reference</u>	<u>Resolution</u>
A. Completeness of safety-related electrical equipment list: "A complete list of display instrumentation mentioned in the HELB and LOCA emergency procedures must be provided... Instrumentation which is not considered to be safety-related but which is mentioned in the emergency procedure should appear on the list."	TER Section 4.3.1	This item will be completely addressed as part of the current program addressing NUREG-0737 supplement 1. Specifically, the Control Room Design Review process, when completed, will demonstrate that the appropriate instrumentation used by operators to mitigate the consequences of a LOCA or HELB is of the proper quality level (i.e. environmentally qualified). This requires significant coordination between the CRDR, Reg. Guide 1.97, and Emergency Operating Procedures review teams.
B. Containment Spray System. "The staff requires the licensee to verify that the containment spray system is not subject to a disabling single component failure..."	TER Section 4.3.2	The verification was provided by our response dated April 28, 1983 (ICAN048315).
C. Environmental Service Condition. "The staff has reviewed this concern and concludes that the containment temperature/pressure profiles... of the FSAR, are acceptable for use in equipment qualification.	TER Section 4.3.3.1	This concern is considered closed since the FSAR profiles accepted by the Staff are the basis for the inside containment service conditions established by AP&L for equipment qualification.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NEC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
1.	CV-1270 CV-1271 CV-1272 CV-1273 CV-2215 CV-2221 CV-1053	Ila	Similarity, Aging	AP&L has on file sufficient documentation to establish similarity of these devices to those qualified by specific test reports, also on file. Similarity was further confirmed by walkdown of nameplate data. Once similarity is established Aging is considered satisfied by additional documentation (test reports/analysis) on file. AP&L records indicate that CV-2215 and CV-2221 are fully qualified as described above. However, we have been unable to confirm motor qualification (motor nameplates have been removed). Therefore, AP&L is obtaining fully qualified replacement motors which will be installed prior to the EQ deadline.
2.	CV-6205 CV-7453	Ila	Similarity, Aging	Same as item #1 above.
3.	CV-4803	Ila	Similarity, Aging	Same as item #1 above.
4.	CV-1216 CV-1214	Ila	Similarity, Aging, Temperature, Pressure, Chemical Spray, Submergence, Radiation	Same as item #1 above; the remaining deficiencies were due to mistaken identity of these devices. Walkdowns have confirmed proper identification as fully qualified "inside containment" actuators.
5.	CV-1054	Ila	Similarity, Aging, Temperature, Pressure, Chemical Spray, Submergence, Radiation	This device is being replaced with a fully qualified Limitorque actuator.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
6.	CV-1221	IIa	Similarity, Aging, Radiation	Same as item #1 above; also AP&L has determined that the previous "required" radiation level was in error and should have been 3.5 E4 rads; therefore, radiation is no longer an outstanding item.
7.	CV-1274 CV-7454	IIa	Similarity, Aging, Radiation	Same as item #6 above. Also, CV-7454 has been replaced by SV-7454 (see Section X, item 5A).
8.	CV-2667	IIa	Similarity, Aging, Temperature	Same as item #1 above. Also recent reanalyses have been performed which lower the postulated temperature to a qualified level.
9.	CV-2620	IIc	Aging	AP&L has established similarity as described by item #1 above; therefore, Aging is also considered satisfied as well (see item #1).
10.	CV-1616 CV-1617	IIc	Aging	Same as item #9 above.
11.	CV-2680 CV-2630	IIc	Aging	Same as item #9 above.
12.	CV-2670	IIa	Similarity, Aging	Same as item #1 above.
13.	CV-2617	IIa	Similarity, Aging, Temperature	Same as item #8 above.

II. MOTOR OPERATED VALVES

<u>FBC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
14.	CV-1000	IIa	Similarity, Aging	Same as item #1 above.
15.	CV-1300 CV-1301	IIa	Similarity, Aging, Radiation	Same as item #1 above; also additional radiation analyses have been performed which lower the "required" radiation dose below the qualified level; therefore, radiation is no longer an outstanding item.
16.	CV-3821	IIc	Aging	Same as item #9.
17.	CV-1405	IIa	Similarity, Aging	Same as item #1.
18.	CV-1406	IIa	Similarity, Aging, Radiation	Same as item #15.
19.	CV-1407 CV-1408	IIa	Similarity, Aging, Radiation	Same as item #15.
20.	CV-3822	IIc	Aging	Same as item #9.
21.	CV-3823	IIc	Aging	Same as item #9.
22.	CV-1227 CV-1228 CV-1206	IIa	Similarity, Aging	Same as item #1.
23.	CV-7443 CV-7447 CV-7451 CV-3812	IIc	Aging	Same as item #9.
24.	CV-1400 CV-1401	IIa	Similarity, Aging, Radiation	Same as item #15.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NEC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
25.	CV-7452 CV-7445 CV-7449 CV-2400 CV-2401 CV-1404 CV-1234 CV-1219 CV-1220 CV-3813	IIa	Similarity, Aging, Radiation	Except as noted below, resolution of these items is the same as item #15. CV-1404 is considered qualified but is needed for cold shutdown only and therefore considered category IIIa. CV-1234 is also considered qualified but has been determined to complete its function in a mild environment. Therefore, it is also considered category IIIa.
26.	CV-7450 CV-7448 CV-7446 CV-7444	IIa	Similarity, Aging	Same as item #1 above.
27.	CV-1814 CV-1816 CV-1820 CV-1826	IIa	Similarity, Aging	Same as item #1 above.
28.	CV-2627	IIb	Documentation Inadequate, Temperature, Test Failures	AP&L is replacing the torque switch with a qualified replacement. According to Rotork, this will result in a fully qualified actuator (the test failure involved torque switch failure at elevated temperature).
29.	CV-2626	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #28 above.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NEC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
30.	CV-4446	Ia	None	None required.
31.	CV-5612	Ia	None	None required.
32.	CV-2220	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #28 above; however, it has since been determined that this device performs its function in a mild environment; therefore, it is considered category IIIa.
33.	CV-2235	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #32 above.
34.	CV-3809	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #28 above.
35.	CV-3803	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #28 above.
36.	CV-3810 CV-3808	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #28 above.
37.	CV-1410	Ia	None	None required.
38.	CV-1050	Ia	None	None required.
39.	CV-1415 CV-1414	Ia	None	None required.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
40.	CV-3801 CV-3800 CV-3802	IIb	Documentation Inadequate, Temperature, Test Failures	Same as item #28 above.
149.	CV-5611	IIa	Similarity, Aging	This device has since been determined to perform its function in a mild environment; therefore, it is considered category IIIa.
152.	E/H-1428	IIa	Documentation Inadequate	This device has been modified; it is now an air operated valve with ASCO solenoids (see section X).
153.	E/H-1429	IIa	Documentation Inadequate	Same as item #152.
154.	CV-2133 CV-2123 CV-2136 CV-2126	IIa	Aging, Steam Exposure	Aging will be specifically addressed by AP&L maintenance/ surveillance program. These operators are not required to operate in any steam environment; therefore, the issue of "steam exposure" is not considered an outstanding item.

III. SOLENOID VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
41.	SV-2103	IIa	Documentation Inadequate	This device has been determined to perform its function in a mild environment; therefore, it is considered category IIIa.
42.	SV-1845	IIa	Documentation Inadequate	Same as item #41 above.
43.	SV-2102	IIa	Documentation Inadequate	Same as item #41 above.
44.	SV-3805	IIa	Documentation Inadequate	This device will be replaced with a qualified ASCO solenoid valve by the EQ deadline.
45.	SV-3804	IIa	Documentation Inadequate	Same as item #44 above.
46.	SV-3840 SV-3841	IIa	Documentation Inadequate	Same as item #44 above.
47.	SV-3814	IIa	Documentation Inadequate	Same as item #44 above.
48.	SV-3815	IIa	Documentation Inadequate	Same as item #44 above.
49.	SV-2105 SV-2104 SV-2100 SV-2101 SV-2106	IIa	Documentation Inadequate	Same as item #41 above.

III. SOLENOID VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
50.	SV-4804	IIa	Documentation Inadequate	Same as item #41 above.
51.	SV-4400	IIa	Documentation Inadequate	Same as item #41 above.
52.	SV-1052	IIa	Documentation Inadequate	Same as item #41 above.
53.	SV-6201 SV-6202 SV-6203	IIa	Documentation Inadequate	These devices are not exposed to harsh environment conditions from any accident for which they are required to function; therefore, they are considered category IIIa.
54.	SV-1668 SV-1667	IIa	Documentation Inadequate	Same as item #53 above.
55.	SV-2244 SV-2243 SV-2214 SV-2213 SV-2234 SV-2233	IIa	Documentation Inadequate	Same as item #53 above.
56.	SV-2692	IIa	Documentation Inadequate	This item will be replaced with a fully qualified ASCO solenoid valve.
57.	SV-2691	IIa	Documentation Inadequate	Same as item #56 above.
58.	SV-1818	IIa	Similarity	AP&L has on file the necessary documentation to establish similarity between the installed device and the tested device.

III. SOLENOID VALVES

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
59.	SV-7503 SV-7502 SV-7501 SV-7500	IIa	Similarity, Aging	Same as item #58 above; also, AP&L has included these items in the maintenance/surveillance program to address Aging degradation.

IV. MOTORS

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
114.	SV-7410 (RB Coolers Bypass Damper Motors) SV-7411 SV-7412 SV-7413	IIa	Documentation Inadequate	These devices were previously determined to perform a non-essential safety function and were considered category IIIa. However, a recent re-evaluation has determined that the devices should be re-added to the list of equipment to be qualified. AP&L has recently confirmed these devices to be Reliance class B motors. Though they have operating times of less than one minute, we are committing to replace the motors by the EQ deadline.
115.	VUCM-1B (room coolers) VUCM-1A	IIa	Documentation Inadequate	Radiation is the only harsh parameter for these motors, and at a maximum the postulated dose is 1.3 E7 rads. Material analyses have been performed to qualify the motors to this level.
116.	VUCM-1C (room coolers) VUCM-1D	IIa	Documentation Inadequate	Same as item #115 above.
117.	VUCM-7B (room cooler)	IIa	Documentation Inadequate	Type testing, similarity analyses, and material analyses have been performed demonstrating qualification of these motors for their intended use. The motors are located outside containment, exposed to maximum radiation dose of less than 2 E6 rads, and not exposed to saturated steam conditions.

IV. MOTORS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
118.	VUCM-7A (room cooler) VUCM-7B	IIa	Documentation Inadequate	Same as item #117 above.
119.	VEFM-37B (Hydrogen purge blower motors) VSFM-30B	IIa	Documentation Inadequate	Radiation is the only harsh parameter for these motors, and the maximum postulated dose is only 5 E6 rads. Materials analyses have been performed to qualify the motors to these levels.
120.	VEFM-37A (Hydrogen purge blower motors) VSFM-30A	IIa	Documentation Inadequate	Same as item #119 above.
121.	CM-19A (Hydrogen Sampler Motor)	IIa	Documentation	This device is being relocated to a mild environment; therefore, it will be considered category IIIa after the relocation is completed.
122.	CM-19B (Hydrogen Sampler motor)	IIa	Documentation Inadequate	Same as item #121 above.
123.	VSFM-1A (containment cooling motor) VSFM-1B (containment cooling motor) VSFM-1C (containment cooling motor) VSFM-1D (containment cooling motor)	IV	Documentation Not Available	Test documentation is available in the EQ files which qualifies these motors.
124.	VEFM-38A (penetration room filter system motor) VEFM-38B (penetration room filter system motor)	IIa	Documentation Inadequate	Same as item #119 above, except that the maximum dose is only 3 E5 rads.

IV. MOTORS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
125.	PM-36B (HPI motor)	IIa	Documentation Inadequate	Same as item #117 above.
126.	PM-35A (Cont. spray motor)	IIa	Documentation Inadequate	Same as item #119 above, except that the maximum dose is 1.4 E7 rads.
127.	PM-34A (LPI motor)	IIa	Documentation Inadequate	Same as item #115 above, except that the maximum dose is 1.8 E6 rads.
128.	PM-36A (HPI motors) PM-36C	IIa	Documentation Inadequate	Same as item #117 above.
129.	PM-34B (LPI motor) PM-35B (Cont. spray motor)	IIa	Documentation Inadequate	Same as item #115 above, except that the maximum dose for PM-34B is 1.3 E7 rads and PM-35B is 2.6 E6 rads.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
58.	LE-5645 LE-5646	Ib	Documentation Inadequate	Testing is complete; the device is considered fully qualified by the test documentation.
59.	LE-1405B	Ib	Documentation Inadequate	Same as item #58 above.
92.	PDT-2670A PDT-2670B	IIa	Aging, Radiation	These devices were recently replaced with qualified Rosemount 1153 D series transmitters. Aging will be addressed (including periodic replacement of limited life components) by maintenance/surveillance programs which will be fully implemented by the EQ deadline.
93.	PDT-2620A PDT-2620B	IIc	Aging	Same as item #92 above.
94.	PDT-7441 PDT-7451	IIa	Similarity, Aging Accuracy, Operating Time	These devices will be replaced with qualified Rosemount transmitters by the EQ deadline.
95.	PDT-7442 PDT-7452	IIa	Similarity, Aging Accuracy, Operating Time	These devices are being replaced with qualified Rosemount transmitters.
96.	PDT-2120	IIa	Similarity, Aging Accuracy, Operating Time	This device has been relocated to a mild environment; therefore, it is considered category IIIa.
97.	PDT-2121 PDT-2130 PDT-2131	IIa	Similarity, Aging Accuracy, Operating Time	Same as item #96 above.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
98.	PDT-2400	IIa	Similarity, Aging Accuracy, Operating Time	These devices are being replaced with qualified Rosemount transmitters.
99.	PDT-1028 PDT-1029 PDT-1030 PDT-1031 PDT-1034 PDT-1035 PDT-1036 PDT-1037	IIa	Similarity, Aging Profile not enveloped, Chemical Spray, Accuracy	These devices are being replaced with qualified Rosemount transmitters.
100.	PDT-1401	IIa	Similarity, Aging Accuracy, Operating Time	These devices are being replaced with qualified Rosemount transmitters.
101.	PDT-1402 PDT-1228 PDT-1230 PDT-1209 PDT-1210	IIa	Similarity, Aging Accuracy, Operating Time	These devices are being replaced with qualified Rosemount transmitters.
102.	LT-1001	IIa	Similarity, Aging Profile not enveloped, Chemical Spray, Accuracy	These devices are being replaced with qualified Rosemount transmitters.
103.	LT-1002	IIa	Similarity, Aging Profile not enveloped, Chemical Spray, Accuracy	These devices are being replaced with qualified Rosemount transmitters.
104.	LT-1000	IIa	Similarity, Aging Profile not enveloped, Chemical Spray, Accuracy	These devices are being replaced with qualified Rosemount transmitters.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
105.	LT-2664 LT-2659	IIa	Similarity, Aging Profile not enveloped, Chemical Spray, Accuracy	This item will become non-essential upon completion of the EFW upgrade which will occur by the EQ deadline.
106.	LT-2609 LT-2614	IIa	Similarity, Aging Profile not enveloped, Chemical Spray, Accuracy	Same as item #105 above.
107.	PT-1041	IIa	Documentation Inadequate	This item was erroneously identified on earlier submittals; it has since been determined to perform a non-essential function therefore, it is considered category IIIa.
108.	PT-1022 PT-1040	IIa	Similarity, Aging Accuracy	These devices are being replaced with qualified Rosemount transmitters.
109.	PT-2406	IIb	Steam Exposure, Radiation, Test Failures	These devices are being replaced with qualified Rosemount transmitters.
110.	PT-2405 PT-2407	IIb	Steam Exposure, Radiation, Text Failures	These devices are being replaced with qualified Rosemount transmitters.
111.	PT-1023	IIc	Aging	These devices are being replaced with qualified Rosemount transmitters.
112.	PT-1020	IIa	Similarity, Aging Accuracy	These devices are being replaced with qualified Rosemount transmitters.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
113.	PT-1039 PT-1038 PT-1021	IIC	Aging	These devices are being replaced with qualified Rosemount transmitters.

VI. TEMPERATURE SENSING DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
60.	TE-2615 TE-2614 TE-2664 TE-2665	IIa	Aging, Functional Testing, Accuracy	These devices have been determined to fulfill a non-essential safety function; therefore, they are considered category IIIa.
61.	TE-1001 TE-1000	IIa	Aging, Functional Testing, Accuracy	Same as item #60 above.
62.	TE-1047 TE-1045 TE-1016	IIa	Aging, Functional Testing, Accuracy	Documentation will be available by the EQ deadline which fully qualifies these devices (type tests plus similarity analyses).
63.	TE-1040	IIa	Aging, Functional Testing, Accuracy	Same as item #62 above.
64.	TE-1041 TE-1017 TE-1013 TE-1012	IIa	Aging, Functional Testing, Accuracy	Same as item #62 above.
89.	TS-7442B TS-7442A	IIa	Documentation Inadequate	These devices are being replaced with qualified ASCO temperature switches.
90.	TS-7441B	IIa	Documentation Inadequate	These devices are being replaced with qualified ASCO temperature switches.
91.	TS-7441A	IIa	Documentation Inadequate	These devices are being replaced with qualified ASCO temperature switches.

VII. VALVE POSITION INDICATING DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
65.	ZS-2692 ZS-2691	IIa	Documentation Inadequate	These devices are being replaced with fully qualified Namco limit switches.
66.	ZS-3814	IIa	Documentation Inadequate	Same as item #65 above.
67.	ZS-2136 ZS-2133	IIa	Documentation Inadequate	Same as item #65 above.
68.	ZS-2123	IIa	Documentation Inadequate	Same as item #65 above.
69.	ZS-2126	IIa	Documentation Inadequate	Same as item #65 above.
70.	ZS-2100 ZS-2101 ZS-2102 ZS-2104 ZS-2105 ZS-2106 ZS-3815	IIa	Documentation Inadequate	The disposition of ZS-3815 is the same as item #65 above. The remainder of the devices perform their functions prior to any harsh environmental conditions, therefore, they are considered category IIIa.
71.	ZS-4400	IIa	Documentation Inadequate	Same as item #70 above.
72.	ZS-1065 ZS-6202 ZS-6203	IIa	Documentation Inadequate	These devices perform their functions in a mild environment, therefore, they are considered category IIIa.

VII. VALVE POSITION INDICATING DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
73.	ZS-7406 thru 7413 ZS-7420 thru 7427	IIa	Documentation Inadequate	The disposition of these items is basically the same as item #114 (section IV). Certain of these items have been determined to perform non-essential functions; however, all will be replaced with qualified Namco switches by EQ deadline.
74.	ZS-3841	IIa	Documentation Inadequate	This device is being replaced with a qualified Namco limit switch.
75.	ZS-1845	IIa	Documentation Inadequate	Same as item #70 above.
76.	ZS-3840	IIa	Documentation Inadequate	This device is being replaced with a qualified Namco limit switch.
77.	ZS-3804	IIa	Documentation Inadequate	This device is being replaced with a qualified Namco limit switch.
78.	ZS-3805	IIa	Documentation Inadequate	This device is being replaced with a qualified Namco limit switch.
79.	ZS-1052	IIa	Documentation Inadequate	Same as item #70 above.
80.	ZS-4804	IIa	Documentation Inadequate	Same as item #70 above.
81.	ZS-1667	IIa	Documentation Inadequate	This device performs its function in a mild environment; therefore, it is considered category IIIa.
82.	ZS-2234 ZS-2214 ZS-2233	IIa	Documentation Inadequate	These devices perform their function in a mild environment; therefore, they are considered category IIIa.

VII. VALVE POSITION INDICATING DEVICES

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NEC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
130.	VBE-1000A VBE-1000B VBE-1001A VBE-1001B VBE-1002A VBE-1002B	IIa	Documentation Inadequate	Testing is complete, this item is considered fully qualified by the type test documentation.
135.	VBY-1000A VBY-1000B VBY-1001A VBY-1001B VBY-1002A VBY-1002B	IIa	Documentation Inadequate	These items have been replaced with fully qualified TEC amplifiers.

VIII. ELECTRICAL DISTRIBUTION DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
138.	GEN-1008- Electrical connector for acoustic monitors.	IIa	Documentation Inadequate	This device was qualified in the acoustic monitor testing program, see item 130, section VII.
139.	Electrical connector for acoustic monitors.	IIa	Documentation Inadequate	This is a duplication of item #138 above.
140.	GEN-1010 - power & control cable (Okonite)	IIa	Similarity	AP&L has provided additional documentation in the EQ files which supports applicability of the referenced type test information to the cable purchased and utilized at ANO-1. We consider the documentation to be sufficient evidence of similarity.
141.	Electrical cable for acoustic monitors	IIa	Documentation Inadequate	This item is a duplication of item #148 below.
142.	GEN-1003 - electrical connectors (Conax)	IIa	Similarity	These connectors were erroneously identified in previous SCEW sheets as penetrations. These devices were supplied with Bailey transmitters. Since the transmitters are being replaced, new (qualified) connectors will also be installed.
143.	GEN-1004 - electrical penetrations (Conax)	IIa	Similarity	This deficiency was due to an erroneous identification of model numbers made by AP&L on the original SCEW sheets. The proper numbers have been determined to establish similarity.

VIII. ELECTRICAL DISTRIBUTION DEVICES

<u>FEC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
144.	GEN-1005 - electrical penetrations (Conax)	IIa	Similarity	Similarity has been established as described in item #143 above.
145.	GEN-1006 - electrical penetrations (Conax)	IIa	Similarity	Similarity has been established as described in item #143 above.
146.	GEN-1002 - instrumentation cable (Boston Insulated Wire)	IIa	Similarity	Same as item #140 above.
147.	GEN-1001 - triaxial cable (Boston Insulated Wire)	IIa	Aging	AP&L has confirmed that this cable is utilized only for neutron detectors which are exempt from qualification; therefore, this item is considered category IIIa.
148.	GEN-1007 - cable for acoustic monitors	IIa	Documentation	This cable was qualified with the acoustic monitors; see item #130 section VII.
155.	GEN-1009 - junction box	IIa	Similarity	This is a box with connector supplied by Foxboro with certain of their transmitters and was qualified with the transmitters. Since the transmitters are being replaced, new (qualified) connectors will be installed as well.

IX. MISCELLANEOUS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
83.	PS-7503 PS-7501	Ib	None pending modification	These devices were originally slated for replacement due to radiation deficiencies; however, the radiation doses have been reduced by analysis and a materials analysis has been performed which demonstrates these devices ability to withstand the postulated dose. Since radiation is the only harsh environmental parameter, these items are now considered qualified.
84.	PS-7502 PS-7500	Ib	None pending modification	Same as item #83 above.
85.	PS-2403	Ib	None pending modification	This device is being replaced with a qualified Static-O-King pressure switch.
86.	PS-2401	Ib	None pending modification	This device is being replaced with a qualified Static-O-King pressure switch.
87.	PS-2400	Ib	None pending modification	This device will be replaced with a qualified Static-O-King pressure switch.
88.	PS-2402	Ib	None pending modification	This device will be replaced with a qualified Static-O-King pressure switch.

IX. MISCELLANEOUS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
131.	VEH-6A	IIa	Documentation Inadequate	A materials analysis is now available which qualifies this device for the postulated radiation dose. Since this is the only harsh environmental parameter, this device is considered qualified.
132.	VEH-6B	IIa	Documentation Inadequate	Same as item #131 above.
133.	C-178 (Hydrogen Analyzer Panel)	IIa	Documentation Inadequate, Aging	This item is being relocated to a mild environment; therefore, upon completion of the relocation it will be considered category IIIa.
134.	C-179	IIa	Documentation Inadequate	Same as item #133 above.
136.	RE-7442 RE-7441	IIa	Documentation Inadequate	The function of these devices is now considered non-essential. The information is now available from the Super Particulate Iodine and Noble Gas monitor (SPING) installed as a result of NUREG 0737. The SPING which satisfies this function is located in a mild environment. Therefore this item is considered category IIIa.
137.	RE-8060 RE-8061	IIa	Documentation Inadequate	These devices were fully qualified by type tests. The documentation was previously not available for transmittal to Franklin.

X. ITEMS NOT REVIEWED BY FRANKLIN

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
1A.	SV-7454 SV-7456 SV-7457 SV-7459 SV-7467 SV-7469 SV-7510 SV-7512	NA	NA	These are isolation valves added as part of recently installed systems (e.g., Post Accident Sampling System). They are qualified Target Rock solenoid valves.
2A.	SV-1428 SV-1429	NA	NA	CV-1428 and -1429 were previously operated by electro-hydraulic actuators (see section II, item #152). They are now air operated valves with fully qualified ASCO solenoid valves.
3A.	GEN-XXXX (terminal blocks)	NA	NA	All terminal blocks used inside containment for safety-related devices (i.e., EQ list) are being replaced with qualified splices (Raychem).
4A.	GEN-XXXX (terminal blocks)	NA	NA	All terminal blocks used outside containment will be shown qualified by test reports and analyses or will be replaced with qualified Raychem splices or qualified terminal blocks.

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- III. Solenoid Valves
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I. GENERIC EQ DEFICIENCIES

<u>Deficiency</u>	<u>Reference</u>	<u>Resolution</u>
A. Completeness of safety-related electrical equipment list: "A complete list of display instrumentation mentioned in the HELB and LOCA emergency procedures must be provided... Instrumentation which is not considered to be safety-related but which is mentioned in the emergency procedure should appear on the list."	TER Section 4.3.1	This item will be completely addressed as part of the current program addressing NUREG-0737 supplement 1. Specifically, the Control Room Design Review process, when completed, will demonstrate that the appropriate instrumentation used by operators to mitigate the consequences of a LOCA or HELB is of the proper quality level (i.e. environmentally qualified). This requires significant coordination between the CRDR, Reg. Guide 1.97, and Emergency Operating Procedures review teams.
B. Submergence: "It is not clear... that submergence of safety-related electrical equipment outside of containment was addressed."	TER Section 4.3.5	This item is considered satisfactorily addressed by sections 3.6.4.3 through 3.6.4.5 and section 9.5.1 of the ANO-2 FSAR. Our position was previously documented by letters dated September 14, 1981 (2CAN098105) and June 20, 1983 (2CAN068310).

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NEC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
1.	2CV-2401-1 2CV-3850-2 2CV-4820-2 2CV-4846-1 2CV-5254-2 2CV-4821-1	IIa	Similarity, Aging	Documentation establishing similarity is available; aging report is also available.
2.	2CV-5017-1 2CV-5037-1 2CV-5057-2 2CV-5077-2	IIa	Similarity, Aging	Same as item #1 above.
3.	2CV-5124-1	IIa	Similarity, Aging	Same as item #1 above.
4.	2CV-5123-1	IIa	Similarity, Aging	Same as item #1 above.
5.	2CV-0716-1 2CV-0789-1	IIa	Similarity, Aging	Same as item #1 above, also these have been determined to be category IIIa (located in a mild environment).
6.	2CV-0711-2 2CV-0795-2	IIa	Similarity, Aging	Same as item #5 above.
7.	2CV-1076-2	IIa	Similarity, Aging	Same as item #1 above.
8.	2CV-1023-2 2CV-1073-2	IIa	Similarity, Aging	Same as item #1 above. Also these devices are located in a mild environment; therefore, they are considered category IIIa.
9.	2CV-1024-1 2CV-1074-1	IIa	Similarity, Aging	Same as item #1 above.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
10.	2CV-1050-2	IIa	Similarity, Aging Temperature	Same as item #1 above and actuator has been thermally protected to ensure peak temperature (qualified level) is not exceeded.
11.	2CV-1000-1	IIa	Similarity, Aging Temperature	Same as item 10 above.
12.	2CV-0340-1	IIa	Similarity, Aging	The DC motor has been replaced with a fully qualified Porter-Peerless motor.
13.	2CV-4840-2	IIa	Similarity, Aging	Same as item #1 above, the item has since been determined to be category IIIa from a systems review (considered non-essential).
14.	2CV-1026-2	IIa	Similarity, Aging	Same as item #1 above.
15.	2CV-4824-2 2CV-4827-2 2CV-4831-2	IIa	Similarity, Aging	Same as item #1 above.
16.	2CV-4690-2	IIa	Similarity, Aging	Same as item #1 above, also the item has since been determined to be category IIIa (mild environment).
17.	2CV-4740-2	IIa	Similarity, Aging Radiation	Same as item #1 above, plus materials analyses have been performed demonstrating the capability of the actuator to withstand the postulated accident doses.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
18.	2CV-4698-1	IIa	Similarity, Aging Radiation	Same as item #17 above.
19.	2CV-1529-2 2CV-1532-1	IIa	Similarity, Aging	Same as item #1 above, also these valves have since been determined to be in a mild environment; therefore, they are considered category IIIa.
20.	2CV-5015-1 2CV-5016-2 2CV-5035-1 2CV-5036-2 2CV-5055-1 2CV-5056-2 2CV-5075-1 2CV-5076-2 2CV-5612-1 2CV-5613-2 2CV-5852-2 2CV-5859-2	IIa	Similarity, Aging	Same as item #1 above.
21.	2CV-1500-1 2CV-1501-5 2CV-1502-2	IIa	Similarity, Aging	Same as item #1 above, also this item has been determined to be category IIIa by a systems review (non-essential).
22.	2CV-5103-1 2CV-5104-2	IIa	Similarity, Aging	Same as item #1 above.
23.	2CV-5628-2	IIa	Similarity, Aging	Same as item #1 above.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
24.	2CV-1401-2 2CV-1402-1 2CV-1404-1 2CV-1405-2 2CV-1407-1 2CV-1408-2 2CV-1409-2 2CV-1446-2 2CV-1448-2 2CV-1451-5 2CV-5127-1 2CV-5128-1 2CV-5672-1	IIa	Similarity, Aging	Same as item #1 above.
25.	2CV-1403-1 2CV-1445-1 2CV-1447-1 2CV-1450-1 2CV-5126-1 2CV-5673-1	IIa	Similarity, Aging	Same as item #1 above.
26.	2CV-5084-1 2CV-5086-2	IIa	Similarity, Aging	Same as item #1, also these have been determined to be category IIIa (cold shutdown only).
27.	2CV-5003-1 2CV-5023-1 2CV-5043-2	IIIa	Similarity, Aging	Same as item #1 above; Franklin has concurred with our position that these valve operators are exempt from qualification.
28.	2CV-5063-2	IIIa	Similarity, Aging	Same as item #27 above.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NEC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
29.	2CV-5630-1 2CV-5631-2	IIIb	None	These items are not exposed to harsh conditions from the accidents for which they are required to function; therefore, they are considered category IIIa.
30.	2CV-5657-1 2CV-5667-2	IIIb	None	Same as item #29 above.
31.	2CV-5038-1	IIb	Temperature	Same as item #29 above; also the valve is needed for cold shutdown only.
32.	2CV-5649-1 2CV-5650-2	IIb	Temperature	The discrepancy is from the temperature due to an HELB. These devices are not required following an HELB.
33.	2CV-2060-1 2CV-2202-1	Ia	None	None required.
34.	2CV-5647-1 2CV-5648-2	Ia	None	None required.
35.	2CV-1400-1	IIa	Similarity, Aging	This item has since been replaced with a qualified Limitorque actuator.
36.	2CV-1453-1 2CV-1456-2	IIa	Similarity, Aging	Documentation establishing similarity is available in AP&L's EQ files; Aging analyses have been performed supporting 40+ year life.
37.	2CV-1406-2	IIa	Similarity, Aging	This item has been replaced with a qualified Limitorque operator.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
38.	2CV-1530-1 2CV-1531-2	IIa	Similarity, Aging	These devices have been replaced with qualified Limitorque operators.
39.	2CV-1511-1 2CV-1519-1	IIa	Similarity, Aging	These devices have been replaced with qualified Limitorque operators.
40.	2CV-1504-2	IIa	Similarity, Aging	Same as item #36 above.
41.	2CV-1503-1	IIa	Similarity, Aging	Same as item #36 above.
42.	2CV-1480-2 2CV-1481-1	IIa	Similarity, Aging	These devices have been replaced with qualified Limitorque operators.
43.	2CV-1541-1 2CV-1542-2 2CV-1543-1 2CV-1560-2	IIa	Similarity, Aging	These devices have been replaced with qualified Limitorque operators.
44.	2CV-1510-2 2CV-1513-2 2CV-5236-1	IIa	Similarity, Aging	2CV-1510-2 and 2CV-1513-2 have been replaced with qualified Limitorque operators. 2CV-5236-1 is resolved in the same manner as item #36 above.
67.	2CV-1075-1	IIa	Documentation Inadequate	This item has been replaced with a qualified Limitorque operator.
68.	2CV-1025-1	IIa	Documentation Inadequate	This item has been replaced with a qualified Limitorque operator.
69.	2CV-1036-1	IIa	Documentation Inadequate	This item has been replaced with a qualified Limitorque operator.
70.	2CV-1037-2 2CV-1038-1 2CV-1039-2	IIa	Documentation Inadequate	This item has been replaced with a qualified Limitorque operator.

II. MOTOR OPERATED VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
135.	2CV-1506-2 2CV-1509-1	IIa	Aging, Steam Exposure	These items are not exposed to harsh conditions; therefore, they are considered category IIIa.
136.	2E/H-8830-2 2E/H-8831-1 2E/H-8832-2 2E/H-8829-1	IIa	Aging, Steam Exposure	Special provisions to address aging have been included in the AP&L maintenance/surveillance program. These devices are not exposed to steam for the accidents for which they are required to function (LOCA). They are not required following HELB's outside containment.

III. SOLENOID VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
45.	2SV-2061-2	IIa	Documentation Inadequate	This device has been determined to perform its function in a mild environment; therefore, the item is considered category IIIa.
46.	2SV-2201-2	IIa	Documentation Inadequate	Same as item #45 above.
47.	2SV-4823-2	IIa	Documentation Inadequate	Same as item #45 above.
48.	2SV-3851-1 2SV-3852-1	IIa	Documentation Inadequate	Same as item #45 above.
49.	2SV-1010-1A 2SV-1010-2A	IIa	Documentation Inadequate	These devices have been replaced with qualified ASCO solenoid valves.
50.	2SV-1060-1A 2SV-1060-2A	IIa	Documentation Inadequate	These devices have been replaced with qualified ASCO solenoid valves.
51.	2SV-1016-1	IIa	Documentation Inadequate	Same as item #45 above.
52.	2SV-1016-2 2SV-1066-1	IIa	Documentation Inadequate	Same as item #45 above.
53.	2SV-1066-2	IIa	Documentation Inadequate	Same as item #45 above.
54.	2SV-8863-1 2SV-8866-2	IIa	Documentation Inadequate	These devices are qualified ASCO NP8316 solenoid valves; however, they are now located in a mild environment and are considered category IIIa.

III. SOLENOID VALVES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
55.	2SV-5001-1 2SV-5021-1 2SV-5041-2 2SV-5061-2	IIc	Qualified Life	The deficiency was due to Franklin's concern that the Aging test may be inadequate if the valves are normally energized. These valves are normally de-energized and very infrequently opened. Therefore, aging is considered satisfied by the existing test report.
56.	2SV-0317-2	IIa	Similarity, Aging	This device has since been determined to be located in a mild environment; therefore, it is considered category IIIa.
57.	2SV-8261-2	IIa	Similarity, Aging	AP&L has documentation on file establishing similarity of the tested device to those installed at ANO. Also, limited Aging tests were performed on this device. AP&L has included this device in the EQ maintenance/surveillance program as well with periodic replacement of parts susceptible to Aging degradation as identified by the vendors.
58.	2SV-8263-2	IIa	Similarity, Aging	Same as item #57 above.
59.	2SV-5871-2 2SV-5876-2	IIa	Similarity, Aging	Same as item #57 above; also these devices perform their function in a mild environment; therefore, they can be considered category IIIa.
60.	2SV-5843-2	IIa	Similarity, Aging	Same as item #59 above.

III. SOLENOID VALVES

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
61.	2SV-8231-2	IIa	Similarity, Aging	Same as item #57 above.
62.	2SV-8271-2	IIa	Similarity, Aging	Same as item #57 above.
63.	2SV-5833-1	IIa	Similarity, Aging	Same as item #57 above.
64.	2SV-5878-1	IIa	Similarity, Aging	Same as item #57 above.
65.	2SV-8265-1	IIa	Similarity, Aging	Same as item #57 above.
66.	2SV-8273-1	IIa	Similarity, Aging	Same as item #57 above.

IV. MOTORS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
71.	2UCD-8203-1 2UCD-8209-1 2UCD-8216-2 2UCD-8222-2	IIa	Aging, Operating Time, Radiation	These devices are being replaced with qualified Reliance motors (by March 31, 1985 - extension granted by NRC).
72.	2PM-60A (LPSI pump motor)	IIa	Documentation Inadequate	These motors are not exposed to harsh parameters until recirculation phase begins. The motors are not required for recirculation; they are required for cold shutdown. Therefore, since these motors perform their function in a mild environment, they are considered category IIIa.
73.	2PM-60B (LPSI pump motor)	IIa	Documentation Inadequate	Same as item #72 above.
74.	2PM-7B (EFW pump motor)	IIa	Documentation Inadequate	Qualification by additional analysis; also, this motor has been determined to be located in a mild environment. Therefore, it is considered category IIIa.
75.	2PM-136A (NaOH pump motors) 2PM-136B	IIa	Documentation Inadequate	Radiation is the only harsh parameter for these motors, and the maximum postulated dose is only 2.2 E6 rads. Materials analyses have been performed to qualify the motors to this level. Type test data is also available on similar motors.

IV. MOTORS

<u>FRC Item #</u>	<u>Description</u>	<u>NEC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
76.	2VSFM-1A (Containment cooling) 2VSFM-1B (Containment cooling) 2VSFM-1C (Containment cooling) 2VSFM-1D (Containment cooling) 2VSFM-31A (Containment recirc.) 2VSFM-31B (Containment recirc.) 2VSFM-31C (Containment recirc.) 2VSFM-31D (Containment recirc.)	IV	None specified by Franklin, documentation considered insufficient	Test documentation is available which qualifies these fan motors. Similarity between the tested unit and those installed at ANO has also been established.
77.	2VUCM-1C (Room coolers) 2VUCM-1D 2VUCM-1E 2VUCM-1F	IV	None specified by Franklin	Analyses have been performed demonstrating qualification of these motors for their intended use based on material analyses and type testing of motorettes considered applicable by similarity analyses. These motors are located outside containment, exposed to a maximum postulated radiation dose of 3.2 E7 rads, and not exposed to saturated steam conditions.
78.	2VUCM-1A 2VUCM-1B	IV	None specified by Franklin	Same as item #77 above.

IV. MOTORS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
79.	2VUCM-6A 2VUCM-6B	IV	None specified by Franklin	Same as item #77 above, also these devices have been determined to be located in a mild environment; therefore, they are considered category IIIa.
80.	2VUCM-7A	IV	None specified by Franklin	Same as item #77 above, also this item has been determined to perform a non-essential safety function; therefore, it is considered category IIIa.
81.	2VUCM-7B	IV	None specified by Franklin	Same as item #80 above.
82.	2VUCM-7C	IV	None specified by Franklin	Same as item #80 above.
83.	2VUCM-11A 2VUCM-11B	IV	None specified by Franklin	Same as item #77 above, except that the maximum dose is 2.2 E6 rads.
84.	2VEFM-38A-1 2VEFM-38B-2	IIa	Documentation Inadequate	This device is exposed to radiation as the only harsh parameter; materials analyses have been performed to qualify these motors. (Maximum dose is 6.5 E5 rads).
85.	2VEM-1A 2VEM-1B	IIa	Documentation Inadequate	Same as item #77 above, also these devices have been determined to be located in a mild environment; therefore, they are considered category IIIa.

IV. MOTORS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
86.	2VSFM-9 (Control room ventilation)	IIa	Documentation Inadequate	This item is actually located in Unit 1; therefore, it is not exposed to a harsh environment due to ANO-2 accidents. In addition, it performs no emergency functions and is not considered essential; therefore, it is considered category IIIa.
87.	2PM-35A (Containment spray pump motor)	IIa	Documentation Inadequate	Same as item #84 above, except that the maximum dose is 2.8 E7 rads.
88.	2PM-89A (HPSI pump motor)	IIa	Documentation Inadequate	Same as item #77 above.
89.	2PM-35B (Cont. spray pump motor)	IIa	Documentation Inadequate	Same as item #84 above, except that the maximum dose is 2.6 E7 rads.
90.	2PM-89B 2PM-89C	IIa	Documentation Inadequate	Same as item #77 above.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
91.	2FT-0713-2 2FT-0717-1	IIa	Similarity, Aging, Test Failures, Accuracy, Function Time	The test program was established by AP&L through Bechtel and Wyle laboratories with ANO type equipment; therefore, similarity is not an issue. The accuracy evaluation (acceptance criteria) demonstrated acceptable performance (evaluations on file). The test anomalies were fully explained in the report which also addresses the function time discrepancy. Aging is being addressed by AP&L's maintenance/surveillance program.
92.	2FT-0710-1 2FT-0718-2	IIa	Similarity, Aging Test Failures, Accuracy, Function Time	Same as item #91 above.
93.	2FT-8833-1 2FT-8834-2	IIa	Similarity, Aging Test Failures, Accuracy, Function Time	Same as item #91 above, also these are exposed only to radiation as a harsh parameter.
94.	2FT-5014-1 2FT-5034-1 2FT-5054-2 2FT-5074-2	IIa	Similarity, Aging Test Failures, Accuracy, Function Time	These devices have been replaced with qualified Rosemount 1153D's.
95.	2FT-8827-1 2FT-8828-2	IIa	Similarity, Aging Test Failures, Accuracy, Function Time	Same as item #91 above, also these items have been determined to perform their function in a mild environment; therefore, they can be considered category IIIa.
96.	2FT-5101-1 2FT-5102-2	IIa	Similarity, Aging Test Failures, Accuracy, Function Time	Same as item #91 above.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
97.	2PT-1031-1 2PT-1031-2 2PT-1031-3 2PT-1031-4 2PT-1131-1 2PT-1131-2 2PT-1131-3 2PT-1131-4	IIb	Similarity, Aging Test Failures, Accuracy	Resolved in ten day response. Reference AP&L letters dated April 29, 1983 (2CAN048311) and May 26, 1983 (2CAN058308). The NRC submitted an SER dated June 22, 1983 (2CNA068303).
98.	2PT-4627-2 2PT-4627-1	IIb	Similarity, Aging Test Failures, Accuracy	Same as item #97 above.
99.	2PT-4601-1 2PT-4601-2 2PT-4601-3 2PT-4601-4	IIa	Similarity, Aging Test Failures, Accuracy, Functional Time	Same as item #91 above.
100.	2PT-1417-1 2PT-1423-2	IIa	Similarity, Aging Test Failures, Accuracy, Functional Time	Same as item #91 above.
101.	2PT-1041-1 2PT-1041-2 2PT-1041-3 2PT-1041-4 2PT-1141-1 2PT-1141-2 2PT-1141-3 2PT-1141-4	IIb	Similarity, Aging Test Failures, Accuracy	Same as item #97 above.
102.	2PT-4624-1 2PT-4624-2 2PT-4624-3 2PT-4624-4	IIb	Similarity, Aging Test Failures, Accuracy	Same as item #97 above.

V. PRESSURE, DP, FLOW, AND LEVEL TRANSMITTERS

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
103.	2PT-1506-2 2PT-1509-1	IV	Documentation not Provided	These items have since been determined to be located in a mild environment; therefore, they are considered category IIIa.
104.	2PT-5601-1 2PT-5602-2 2PT-5603-3 2PT-5604-4	IIB	Similarity, Aging Test Failures, Accuracy	Same as item #97 above.
105.	2PT-5605-1 2PT-5606-2	IIB	Similarity, Aging Test Failures, Accuracy	Same as item #97 above.
122.	2LE-5641-2	Ib	Documentation Inadequate	Testing is complete; the device is considered qualified by the test documentation.
139.	2LE-5645-1 2LE-5646-2	Ib	Documentation Inadequate	Same as item #122 above.

VI. TEMPERATURE SENSING DEVICES

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
106.	2TE-4610-1 (Hot leg RTD's)	IIa	Aging, Functional Test,	These devices are being replaced with qualified Weed RTD's. One channel has been replaced; extensions have been granted for replacement of the remaining three channels.
	2TE-4610-2			
	2TE-4610-3			
	2TE-4610-4			
	2TE-4611-1			
	2TE-4611-2			
	2TE-4611-3			
	2TE-4611-4			
	2TE-4710-1 (Cold leg RTD's)			
	2TE-4710-2			
	2TE-4710-3			
	2TE-4710-4			
	2TE-4711-1			
	2TE-4711-2			
	2TE-4711-3			
	2TE-4711-4			

VII. VALVE POSITION INDICATING DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
107.	22S-8203-1 22S-8204-1 22S-8209-1 22S-8210-1 22S-8216-2 22S-8217-2 22S-8222-2 22S-8223-2	IIa	Documentation Inadequate	These devices are being replaced with qualified Namco position switches. Extension to the qualification deadline has ben granted.
108.	22S-2400	IIa	Documentation Inadequate	This device has since been determined to perform its function in a mild environment; therefore, it is considered category IIIa.
109.	22S-2061-2	IIa	Documentation Inadequate	Same as item #108 above.
110.	22S-4823-2	IIa	Documentation Inadequate	Same as item #108 above.
111.	22S-3851	IIa	Documentation Inadequate	This device is not exposed to harsh environmental conditions from any accident for which it is required to function; therefore, it is considered category IIIa.
112.	22S-3852	IIa	Documentation Inadequate	Same as item #111 above.
113.	22S-1010-1 22S-1060-2	IIa	Aging, Steam Exposure	These items have been included in AP&L's maintenance/surveillance program with parts replacement intervals as recommended by the test report. The devices are located inside a large metal shroud

VII. VALVE POSITION INDICATING DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
				which protects them from steam impingement. Also the switches are directly connected by a threaded piece of conduit to a sealed junction box.
114.	2ZS-1076-2	IIa	Documentation Inadequate	This item was erroneously identified. The valve position indication in the control room is by internal limit switch in the actuator (Limitorque) and is therefore, considered qualified with 2CV-1076-2.
115.	2ZS-1016-1 2ZS-1066-1	IIa	Documentation Inadequate	Same as item #111 above.
116.	2ZS-8863-1 2ZS-8866-2	IIa	Aging, Steam Exposure	These devices have recently been determined to be located in a mild environment; therefore, these items are considered category IIIa.
117.	2ZS-5859A-2	IIa	Documentation Inadequate	This external limit switch is indicated on a local panel in Elev. 354 in the auxiliary building. The control room indication is provided by 2ZS-5859A-1 which is the internal Limitorque position indication which is qualified. Therefore, this item is considered category IIIa.
118.	2ZS-1403-1	IIa	Documentation Inadequate	Same as item #114 above.

VII. VALVE POSITION INDICATING DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
119.	2ZS-5003B-1 2ZS-5023B-1	IIa	Aging, Steam Exposure	These devices are considered category IIIa for the same reasons as given for item #27. Position indication is assured because the valves are locked open and verified open once per shift (power removed from valves).
120.	2ZS-5003A-1 2ZS-5023A-1 2ZS-5043B-2 2ZS-5063A-2 2ZS-5063B-2 2ZS-5043A-2	IIa	Aging, Steam Exposure	Same as item #119 above.
138.	2VBE-4633-2 2VBE-4634-1 2VBE-4634-2	Ib	Documentation Inadequate	Testing is complete; devices are considered qualified as supported by test documentation.
140.	2VBY-4633-1 2VBY-4633-2 2VBY-4634-1 2VBY-4634-2	Ib	Documentation Inadequate	These devices were replaced with qualified TEC amplifiers.

VIII. ELECTRICAL DISTRIBUTION DEVICES

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
124.	2GEN-1002 (Anacanda cable)	Ia	None	None required.
125.	2GEN-1006 (Raychem cable)	IIa	Similarity	AP&L did not originally identify the specific cable types in earlier submittals; however, adequate documentation is available on file to demonstrate similarity between tested and installed cable.
126.	2GEN-1007 (Raychem splices)	IIa	Aging, Submergence	These splice kits are fully qualified by existing documentation. (Reference the applicable justification for Continued Operation from our June 20, 1983 submittal 2CAN068310).
129.	2GEN-1003 (Conax connectors)	Ia	None	None required.
131.	2GEN-1001A (Amphenol penetration)	IIa	Aging, Temperature, Chemical Spray	Aging concerns are considered satisfied by a combination of existing material analysis and plant maintenance surveillance. Type test data applicable to the ANO penetrations has been previously reviewed and approved by the NRC. We believe the existing test data is sufficient to qualify the penetrations for all applicable harsh parameters.
132.	2GEN-1001B	IIa	Aging, Temperature Chemical Spray	Same as item #131 above.

VIII. ELECTRICAL DISTRIBUTION DEVICES

<u>FRC</u> <u>Item #</u>	<u>Description</u>	<u>NRC</u> <u>Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
133.	2GEN-1001C	IIa	Aging, Temperature Chemical Spray	Same as item #131 above.
134.	2GEN-1001D	IIa	Aging, Temperature Chemical Spray	Same as item #131 above.

IX. MISCELLANEOUS

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>	<u>Deficiencies</u>	<u>Resolution</u>
121.	2PIS-0789-1 2PIS-0795-2	IIa	Documentation Inadequate	These devices have since been determined to be located in a mild environment; therefore, they are considered category IIIa.
123.	2RE-1513-2 2RE-1519-1	IIa	Documentation Inadequate	Same as item #121 above.
127.	2C-143	Ib	Documentation Inadequate	Same as item #121 above.
128.	2SE-0336B-2	Ib	Documentation Inadequate	Same as item #121 above.
130.	2M-55A (Hydrogen recombiner) 2M-55B	IV	Documentation Inadequate	The devices are qualified by existing type test reports.
137.	2VE-1A 2VE-1B	IIa	Documentation Inadequate	Same as item #121 above.
141.	2RE-8925-1	Ib	Documentation Inadequate	Testing is complete; the item is considered fully qualified.
142.	2RE-8925-2	Ib	Documentation Inadequate	Same as item #141 above.

X. ITEMS NOT REVIEWED BY FRANKLIN

<u>FRC Item #</u>	<u>Description</u>	<u>NRC Category</u>		<u>Deficiencies</u>	<u>Resolution</u>
1A.	2CV-5255-1	NA	NA		Same as item #36 in Section II.
2A.	2GEN-1004 2GEN-1005	NA	NA		Same as item #138 in Section VII.
3A.	2SV-1001C-2 2SV-1001D-1 2SV-1051C-2 2SV-1051D-1	NA	NA		Same as item #57 in Section III.
4A.	2SV-8847-2	NA	NA		Same as item #45 in Section III.
5A.	2TE-4635-1 2TE-4635-2 2TE-4635-3 2TE-4635-4 2TE-4735-1 2TE-4735-2 2TE-4735-3 2TE-4735-4	NA	NA		Same as item #106 in Section VI. The JCO previously submitted for item #106 is also applicable to these devices.
6A.	2ZS-2201-2 2ZS-4847	NA	NA		Same as item #108 in Section VII.
7A.	2B52 (MCC) 2B62 (MCC)	NA	NA		Type test documentation is available on file which demonstrates the capability of these motor control centers to withstand the postulated environment.
8A.	2GEN-XXXX (Terminal blocks)	NA	NA		Test reports and analyses are available which demonstrate qualification for terminal blocks used outside containment. Terminal blocks are not used for EQ equipment inside containment.

EQUIPMENT ENVIRONMENTAL QUALIFICATION
JUSTIFICATION FOR INTERIM OPERATION
ANO-1

COMPONENT: Reactor Building Cooling Unit Bypass Damper Motors

TAG NO(S): SV-7410, SV-7411, SV-7412, SV-7413

SER RESPONSE PAGE NO(S): A077, A079, A081, A083

FRC EQUIPMENT ITEM: 114

MANUFACTURER AND MODEL NO: Reliance Model # 707681-KX

SYSTEM - P&ID NO: HVAC Reactor Building - M-261

LOCATION: Reactor Building

SAFETY FUNCTION: The safety function of these motors is to open the cooling unit dampers upon receipt of an Engineered Safeguards Actuation Signal. This bypasses the chilled water coils (and associated pressure drop) allowing the units to achieve rated cooling capacity.

QUALIFICATION DISCREPANCY: According to Franklin, inadequate documentation was provided to support qualification of these motors.

JUSTIFICATION FOR INTERIM OPERATION: Upon receipt of an ESAS signal, the motors rotate a camshaft which trips open the dampers after only one-quarter of a revolution. The dampers open by gravity and can be reset only by jacking them shut and resetting the latches. The ESAS signal occurs at a containment pressure of 4 psig.

Because the required operating time is very short for these motors (less than one minute), the environmental conditions are not of a duration expected to prevent the motors from completing their function. The accident radiation exposure could not accumulate to a significant level (if any at all), and the temperature spike would not adversely affect the motor due to thermal inertia. The containment spray does not actuate until 30 psig; therefore, considering the time lag for spray initiation, this could not prevent the completion of the function.

In addition, the design basis for the reactor building cooling system provides that the required cooling functions can be accomplished by both loops of the containment spray system.

Therefore, justification for continued operation has been demonstrated.

ANO-1 ITEMS FOR 5/20/83 SUBMITTAL

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
1.	1	A048	CV1270	Limitorque	Qualified
2.	1	A049	CV1271	Limitorque	Qualified
3.	1	A050	CV1272	Limitorque	Qualified
4.	1	A051	CV1273	Limitorque	Qualified
5.	1	A056	CV2215	Limitorque	Qualified by 1R6
6.	1	A057	CV2221	Limitorque	Qualified by 1R6
7.	1	A044	CV1053	Limitorque	Qualified
8.	2	A012	CV6205	Limitorque	Qualified
9.	2	A097	CV7453	Limitorque	Qualified
10.	3	A010	CV4803	Limitorque	Qualified
11.	4	A047	CV1216	Limitorque	Qualified
12.	4	A046	CV1214	Limitorque	Qualified
13.	5	A045	CV1054	Limitorque	Qualified by 1R6
14.	6	B071	CV1221	Limitorque	Qualified
15.	7	B077	CV1274	Limitorque	Qualified
16.	8	B011	CV2667	Limitorque	Qualified by 1R6
17.	9	B001	CV2620	Limitorque	Qualified
18.	10	B093	CV1616	Limitorque	Qualified
19.	10	B094	CV1617	Limitorque	Qualified
20.	11	B012	CV2680	Limitorque	Qualified
21.	11	B010	CV2630	Limitorque	Qualified
22.	12	B006	CV2670	Limitorque	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Sew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
23.	13	B009	CV2617	Limitorque	Qualified by IR6
24.	14	A013	CV1000	Limitorque	Qualified
25.	15	B079	CV1301	Limitorque	Qualified
26.	15	B078	CV1300	Limitorque	Qualified
27.	16	B041	CV3821	Limitorque	Qualified
28.	17	B087	CV1405	Limitorque	Qualified
29.	18	B088	CV1406	Limitorque	Qualified
30.	19	B090	CV1407	Limitorque	Qualified
31.	19	B089	CV1408	Limitorque	Qualified
32.	20	B042	CV3822	Limitorque	Qualified
33.	21	B043	CV3823	Limitorque	Qualified
34.	22	B072	CV1227	Limitorque	Qualified
35.	22	B073	CV1228	Limitorque	Qualified
36.	22	B066	CV1206	Limitorque	Qualified
37.	23	B134	CV7443	Limitorque	Qualified
38.	23	B136	CV7447	Limitorque	Qualified
39.	23	B138	CV7451	Limitorque	Qualified
40.	23	B035	CV3812	Limitorque	Qualified
41.	24	B083	CV1401	Limitorque	Qualified
42.	24	B082	CV1400	Limitorque	Qualified
43.	25	B140	CV7452	Limitorque	Qualified
44.	25	B135	CV7445	Limitorque	Qualified
45.	25	B137	CV7449	Limitorque	Qualified
46.	25	B113	CV2401	Limitorque	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
47.	25	B111	CV2400	Limitorque	Qualified
48.	25	B069	CV1219	Limitorque	Qualified
49.	25	B070	CV1220	Limitorque	Qualified
50.	25	B036	CV3813	Limitorque	Qualified
51.	26	A096	CV7450	Limitorque	Qualified
52.	26	A095	CV7448	Limitorque	Qualified
53.	26	A094	CV7446	Limitorque	Qualified
54.	26	A093	CV7444	Limitorque	Qualified
55.	27	A065	CV1814	Limitorque	Qualified
56.	27	A066	CV1816	Limitorque	Qualified
57.	27	A067	CV1820	Limitorque	Qualified
58.	27	A068	CV1826	Limitorque	Qualified
59.	28	B005	CV2627	Rotork	Qualified by IR6
60.	29	B004	CV2626	Rotork	Qualified by IR6
61.	30	A009	CV4446	Rotork	Qualified
62.	31	A011	CV5612	Rotork	Qualified
63.	34	B033	CV3809	Rotork	Qualified by IR6
64.	35	B027	CV3803	Rotork	Qualified by IR6
65.	36	B034	CV3810	Rotork	Qualified by IR6
66.	36	B032	CV3808	Rotork	Qualified by IR6
67.	37	D001	CV1410	Rotork	Qualified
68.	38	A043	CV1050	Rotork	Qualified
69.	39	A054	CV1414	Rotork	Qualified
70.	39	A055	CV1415	Rotork	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
71.	40	B024	CV3801	Rotork	Qualified by IR6
72.	40	B025	CV3800	Rotork	Qualified by IR6
73.	40	B026	CV3802	Rotork	Qualified by IR6
74.	44	B030	SV3805	Asco	Qualified by IR6
75.	45	B028	SV3804	Asco	Qualified by IR6
76.	46	B046	SV3840	Asco	Qualified by IR6
77.	46	B044	SV3841	Asco	Qualified by IR6
78.	47	B037	SV3814	Asco	Qualified by IR6
79.	48	B039	SV3815	Asco	Qualified by IR6
80.	56	B015	SV2692	Peter Paul Elec.	Qualified by IR6
81.	57	B013	SV2691	Norgren	Qualified by IR6
82.	58	C014	LE5646	Gems	Qualified
83.	58	C013	LE5645	Gems	Qualified
84.	59	A052	LE1405B	Gems	Qualified
85.	62	A042	TE1047	Rosemount	Qualified by IR6
86.	62	A041	TE1045	Rosemount	Qualified by IR6
87.	62	A021	TE1016	Rosemount	Qualified by IR6
88.	63	A038	TE1040	Rosemount	Qualified by IR6
89.	64	A040	TE1041	Rosemount	Qualified by IR6
90.	64	A022	TE1017	Rosemount	Qualified by IR6
91.	64	A020	TE1013	Rosemount	Qualified by IR6
92.	64	A019	TE1012	Rosemount	Qualified by IR6
93.	65	B016	ZS2692	Namco	Qualified by IR6
94.	65	B014	ZS2691	Namco	Qualified by IR6

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
95.	66	B038	ZS3814	Namco	Qualified by 1R6
96.	67	B178	ZS2136	Namco	Qualified by 1R6
97.	67	B176	ZS2133	Namco	Qualified by 1R6
98.	68	B170	ZS2123	Namco	Qualified by 1R6
99.	69	E172	ZS2126	Namco	Qualified by 1R6
100.	70	B040	ZS3815	Namco	Qualified by 1R6
101.	74	B047	ZS3841	Microswitch	Qualified by 1R6
102.	76	B045	ZS3840	Microswitch	Qualified by 1R6
103.	77	B029	ZS3804	Microswitch	Qualified by 1R6
104.	78	B031	ZS3805	Microswitch	Qualified by 1R6
105.	83	B149	PS7503	Barksdale	Qualified
106.	83	B145	PS7501	Barkadale	Qualified
107.	84	B147	PS7502	Barksdale	Qualified
108.	84	B143	PS7500	Barksdale	Qualified
109.	85	A061	PS2403	ITT Barton	Qualified by 1R6
110.	86	A059	PS2401	ITT Barton	Qualified by 1R6
111.	87	A058	PS2400	ITT Barton	Qualified by 1R6
112.	88	A060	PS2402	ITT Barton	Qualified by 1R6
113.	89	B133	TS7442B	Fenwal	Qualified by 1R6
114.	89	B132	TS7442A	Fenwal	Qualified by 1R6
115.	90	B129	TS7441B	Fenwal	Qualified by 1R6
116.	91	B128	TS7441A	Fenwal	Qualified by 1R6
117.	92	B008	PDT2670B	Rosemount	Qualified ⁽²⁾

<u>No.</u>	<u>FRC Item</u>	<u>ScREW</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
95.	66	B038	ZS3814	Namco	Qualified by 1R6
96.	67	B178	ZS2136	Namco	Qualified by 1R6
97.	67	B176	ZS2133	Namco	Qualified by 1R6
98.	68	B170	ZS2123	Namco	Qualified by 1R6
99.	69	B172	ZS2126	Namco	Qualified by 1R6
100.	70	B040	ZS3815	Namco	Qualified by 1R6
101.	74	B047	ZS3841	Microswitch	Qualified by 1R6
102.	76	B045	ZS3840	Microswitch	Qualified by 1R6
103.	77	B029	ZS3804	Microswitch	Qualified by 1R6
104.	78	B031	ZS3805	Microswitch	Qualified by 1R6
105.	83	B149	PS7503	Barksdale	Qualified
106.	83	B145	PS7501	Barksdale	Qualified
107.	84	B147	PS7502	Barksdale	Qualified
108.	84	B143	PS7500	Barksdale	Qualified
109.	85	A061	PS2403	ITT Barton	Qualified by 1R6
110.	86	A059	PS2401	ITT Barton	Qualified by 1R6
111.	87	A058	PS2400	ITT Barton	Qualified by 1R6
112.	88	A060	PS2402	ITT Barton	Qualified by 1R6
113.	89	B133	TS7442B	Fenwal	Qualified by 1R6
114.	89	B132	TS7442A	Fenwal	Qualified by 1R6
115.	90	B129	TS7441B	Fenwal	Qualified by 1R6
116.	91	B128	TS7441A	Fenwal	Qualified by 1R6
117.	92	B008	PDT2670B	Rosemount	Qualified ⁽²⁾

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
118.	92	B007	PDT2670A	Rosemount	Qualified ⁽²⁾
119.	93	B003	PDT2620B	Rosemount	Qualified ⁽²⁾
120.	93	B002	PDT2620A	Rosemount	Qualified ⁽²⁾
121.	94	B127	PDT7441	Fisher & Porter	Qualified by 1R6
122.	94	B139	PDT7451	Fisher & Porter	Qualified by 1R6
123.	95	E130	PDT7442	Fisher & Porter	Qualified by 1R6
124.	95	B141	PDT7452	Fisher & Porter	Qualified by 1R6
125.	98	B112	PDT2400	Bailey	Qualified by 1R6
126.	99	A027	PDT1028	Bailey	Qualified by 1R6
127.	99	A028	PDT1029	Bailey	Qualified by 1R6
128.	99	A029	PDT1030	Bailey	Qualified by 1R6
129.	99	A030	PDT1031	Bailey	Qualified by 1R6
130.	99	A031	PDT1034	Bailey	Qualified by 1R6
131.	99	A032	PDT1035	Bailey	Qualified by 1R6
132.	99	A033	PDT1036	Bailey	Qualified by 1R6
133.	99	A034	PDT1037	Bailey	Qualified by 1R6
134.	100	B084	PDT1401	Bailey	Qualified by 1R6
135.	101	B085	PDT1402	Bailey	Qualified by 1R6
136.	101	B074	PDT1228	Bailey	Qualified by 1R6
137.	101	B075	PDT1230	Bailey	Qualified by 1R6
138.	101	B067	PDT1209	Bailey	Qualified by 1R6
139.	101	B068	PDT1210	Bailey	Qualified by 1R6
140.	102	A016	LT1001	Bailey	Qualified by 1R6

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
141.	103	A013	LT1002	Bailey	Qualified by 1R6
142.	104	A014	LT1000	Bailey	Qualified by 1R6
143.	105	A006	LT2664	Bailey	Qualified by 1R6
144.	105	A005	LT2659	Bailey	Qualified by 1R6
145.	106	A001	LT2609	Bailey	Qualified by 1R6
146.	106	A002	LT2614	Bailey	Qualified by 1R6
147.	108	A025	PT1022	Foxboro	Qualified by 1R6
148.	108	A037	PT1040	Foxboro	Qualified by 1R6
149.	109	A063	PT2406	Fisher & Porter	Qualified by 1R6
150.	110	A064	PT2407	Fisher & Porter	Qualified by 1R6
151.	110	A062	PT2405	Fisher & Porter	Qualified by 1R6
152.	111	A026	PT1023	Rosemount	Qualified by 1R6
153.	112	A023	PT1020	Foxboro	Qualified by 1R6
154.	113	A036	PT1039	Rosemount	Qualified by 1R6
155.	113	A035	PT1038	Rosemount	Qualified by 1R6
156.	113	A024	PT1021	Rosemount	Qualified by 1R6
157.	115	B018	VUCM1B	Allis Chalmers	Qualified
158.	115	B017	VUCM1A	Allis Chalmers	Qualified
159.	116	B020	VUCM1D	Allis Chalmers	Qualified
160.	116	B019	VUCM1C	Allis Chalmers	Qualified
161.	117	B022	VUCM7B	Louis Allis	Qualified
162.	118	B021	VUCM7A	Louis Allis	Qualified
163.	118	B023	VUCM7C	Louis Allis	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>ScREW</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
164.	119	B124	VEFM37B	G.E.	Qualified
165.	119	B122	VSEFM30B	G.E.	Qualified
166.	120	B123	VEFM37A	G.E.	Qualified
167.	120	B121	VSEFM30A	G.E.	Qualified
168.	121	B119	CM19A	Reliance	Qualified by IR6
169.	122	B120	CM19B	Reliance	Qualified by IR6
170.	123	A069	VSEFM1A	Reliance	Qualified
171.	123	A070	VSEFM1B	Reliance	Qualified
172.	123	A071	VSEFM1C	Reliance	Qualified
173.	123	A072	VSEFM1D	Reliance	Qualified
174.	124	B151	VEFM38A	Westinghouse	Qualified
175.	124	B152	VEFM38B	Westinghouse	Qualified
176.	125	B064	PM36B	Westinghouse	Qualified
177.	126	B109	PM35A	Westinghouse	Qualified
178.	127	B080	PM34A	Westinghouse	Qualified
179.	128	B065	PM36C	Westinghouse	Qualified
180.	128	B063	PM36A	Westinghouse	Qualified
181.	129	B081	PM34B	Westinghouse	Qualified
182.	129	B110	PM35B	Westinghouse	Qualified
183.	130	C001	VBE1000A	Endevco	Qualified
184.	130	C002	VBE1000B	Endevco	Qualified
185.	130	C005	VBE1001A	Endevco	Qualified
186.	130	C006	VBE1001B	Endevco	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scrw</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
187.	130	C009	VBE1002A	Endevco	Qualified
188.	130	C010	VBE1002B	Endevco	Qualified
189.	131	B117	VEH6A	Penwalt	Qualified
190.	132	B118	VEH6B	Penwalt	Qualified
191.	133	B125	C178	Comsip Delphi	Qualified by IR6
192.	134	B126	C179	Comsip Delphi	Qualified by IR6
193.	135	C003	VBY1000A	TEC	Qualified (2)
194.	135	C004	VBY1000B	TEC	Qualified (2)
195.	135	C007	VBY1001A	TEC	Qualified (2)
196.	135	C008	VBY1001B	TEC	Qualified (2)
197.	135	C011	VBY1001A	TEC	Qualified (2)
198.	135	C012	VBY1002B	TEC	Qualified (2)
199.	137	C017	RES060	General Atomic	Qualified
200.	137	C018	RES061	General Atomic	Qualified
201.	138	C016	GEN1008	Endevco	Qualified
202.	140	A105	GEN1010	Okonite	Qualified
203.	142	A100	GEN1003	Conax	Qualified
204.	143	A101	GEN1004	Conax	Qualified
205.	144	A102	GEN1005	Conax	Qualified
206.	145	A103	GEN1006	Conax	Qualified
207.	146	AG99	GEN1002	Fosron Insul. Wire	Qualified
208.	148	C015	GEN1007	Endevco	Qualified
209.	150	B114	SV1818	Target Rock	Qualified (2)

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
210.	151	B150	SV7503	Target Rock	Qualified (2)
211.	151	B148	SV7502	Target Rock	Qualified (2)
212.	151	B146	SV7501	Target Rock	Qualified (2)
213.	151	B144	SV7500	Target Rock	Qualified (2)
214.	152	B091	SV1428	ASCO	Qualified (2)
215.	153	B092	SV1429	ASCO	Qualified (2)
216.	154	B175	CV2133	ITT General	Qualified (2)
217.	154	B169	CV2123	ITT General	Qualified (2)
218.	154	B177	CV2136	ITT General	Qualified (2)
219.	154	B171	CV2126	ITT General	Qualified (2)
220.	Not Stated	None	GENXXXX	G.E.	Qualified by 1R6
			(Terminal Blks)		
221.	Not Stated	None	GENXXXX	Buchannon	Qualified by 1R6
			(Terminal Blks)		
222.	114	A077	SV-7410	Reliance	Qualified by 1R6
223.	114	A079	SV-7411	Reliance	Qualified by 1R6
224.	114	A081	SV-7412	Reliance	Qualified by 1R6
225.	114	A083	SV-7413	Reliance	Qualified by 1R6
226.	73	A074	ZS-7407	G.E.	Qualified by 1R6
227.	73	A076	ZS-7409	G.E.	Qualified by 1R6
228.	73	A078	ZS-7410	G.E.	Qualified by 1R6
229.	73	A080	ZS-7411	G.E.	Qualified by 1R6

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
230.	73	A082	ZS-7412	G.E.	Qualified by 1R6
231.	73	A084	ZS-7413	G.E.	Qualified by 1R6
232.	73	A085	ZS-7420-2	G.E.	Qualified by 1R6
233.	73	A086	ZS-7421-2	G.E.	Qualified by 1R6
234.	73	A087	ZS-7422-2	G.E.	Qualified by 1R6
235.	73	A088	ZS-7423-2	G.E.	Qualified by 1R6
236.	73	A090	ZS-7425	G.E.	Qualified by 1R6
237.	73	A092	ZS-7427	G.E.	Qualified by 1R6
238.	NA	NA	SV-7454	Target Rock	Qualified ⁽²⁾
239.	NA	NA	SV-7456	Target Rock	Qualified ⁽²⁾
240.	NA	NA	SV-7457	Target Rock	Qualified ⁽²⁾
241.	NA	NA	SV-7459	Target Rock	Qualified ⁽²⁾
242.	NA	NA	SV-7467	Target Rock	Qualified ⁽²⁾
243.	NA	NA	SV-7469	Target Rock	Qualified ⁽²⁾
244.	NA	NA	SV-7510	Target Rock	Qualified ⁽²⁾
245.	NA	NA	SV-7512	Target Rock	Qualified ⁽²⁾
246.	NA	NA	PT-2618A	Rosemount	Qualified ⁽²⁾ add at 11
247.	NA	NA	PT-2618B	Rosemount	Qualified ⁽²⁾ add at 11
248.	NA	NA	PT-2668A	Rosemount	Qualified ⁽²⁾ add at 11
249.	NA	NA	PT-2617A	Rosemount	Qualified ⁽²⁾ add at 11
250.	NA	NA	PT-2617B	Rosemount	Qualified ⁽²⁾ add at 11
251.	NA	NA	PT-2667A	Rosemount	Qualified ⁽²⁾ add at 11
252.	NA	NA	PT-2667B	Rosemount	Qualified ⁽²⁾ add at 11

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
253.	NA	NA	LT-2620	Rosemount	Qualified ⁽²⁾ add at 1R
254.	NA	NA	LT-2624	Rosemount	Qualified ⁽²⁾ add at 1R
255.	NA	NA	LT-2670	Rosemount	Qualified ⁽²⁾ add at 1R
256.	NA	NA	LT-2674	Rosemount	Qualified ⁽²⁾ add at 1R
257.	NA	NA	LT-2669	Rosemount	Qualified ⁽²⁾ add at 1R
258.	NA	NA	LT-2673	Rosemount	Qualified ⁽²⁾ add at 1R
259.	NA	NA	LT-2619	Rosemount	Qualified ⁽²⁾ add at 1R
260.	NA	NA	LT-2623	Rosemount	Qualified ⁽²⁾ add at 1R
261.	NA	NA	LT-2618	Rosemount	Qualified ⁽²⁾ add at 1R
262.	NA	NA	LT-2622	Rosemount	Qualified ⁽²⁾ add at 1R
263.	NA	NA	LT-2668	Rosemount	Qualified ⁽²⁾ add at 1R
264.	NA	NA	LT-2672	Rosemount	Qualified ⁽²⁾ add at 1R
265.	NA	NA	LT-2667	Rosemount	Qualified ⁽²⁾ add at 1
266.	NA	NA	LT-2671	Rosemount	Qualified ⁽²⁾ add at 1
267.	NA	NA	LT-2617	Rosemount	Qualified ⁽²⁾ add at 1
268.	NA	NA	LT-2621	Rosemount	Qualified ⁽²⁾ add at 1

NOTES:

- (1) AP&L has requested an extension to the qualification deadline for this item.
- (2) These items are considered qualified in conjunction with specific actions under AP&L's maintenance and surveillance program.

ANO-2 ITEMS FOR 5/20/83 SUBMITTAL

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
1.	12	B003	2CV0340-2	Limitorque	Qualified
2.	11	B025	2CV1000-1	Limitorque	Qualified
3.	9	B033	2CV1024-1	Limitorque	Qualified
4.	68	B015	2CV1025-1	Limitorque	Qualified
5.	14	B016	2CV1026-2	Limitorque	Qualified
6.	69	B017	2CV1036-1	Limitorque	Qualified
7.	70	B018	2CV1037-2	Limitorque	Qualified
8.	70	B019	2CV1038-1	Limitorque	Qualified
9.	70	B020	2CV1039-2	Limitorque	Qualified
10.	10	B034	2CV1050-2	Limitorque	Qualified
11.	9	B042	2CV1074-1	Limitorque	Qualified
12.	67	B021	2CV1075-1	Limitorque	Qualified
13.	7	B022	2CV1076-2	Limitorque	Qualified
14.	35	B043	2CV1400-1	Limitorque	Qualified
15.	24	B044	2CV1401-2	Limitorque	Qualified
16.	24	B045	2CV1402-1	Limitorque	Qualified
17.	25	B046	2CV1403-1	Limitorque	Qualified
18.	24	B048	2CV1404-1	Limitorque	Qualified
19.	24	B049	2CV1405-2	Limitorque	Qualified
20.	37	B050	2CV1406-2	Limitorque	Qualified
21.	24	B051	2CV1407-1	Limitorque	Qualified
22.	24	B052	2CV1408-2	Limitorque	Qualified
23.	24	B053	2CV1409-2	Limitorque	Qualified
24.	25	B056	2CV1445-1	Limitorque	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
25.	24	B057	2CV1446-2	Limitorque	Qualified
26.	25	B058	2CV1447-1	Limitorque	Qualified
27.	24	B059	2CV1448-2	Limitorque	Qualified
28.	25	B060	2CV1450-1	Limitorque	Qualified
29.	24	B061	2CV1451-5	Limitorque	Qualified
30.	24	B062	2CV1452-2	Limitorque	Qualified
31.	36	B063	2CV1453-1	Electrodyne	Qualified
32.	36	B064	2CV1456-2	Electrodyne	Qualified
33.	42	B065	2CV1480-2	Limitorque	Qualified
34.	42	B066	2CV1481-1	Limitorque	Qualified
35.	41	B074	2CV1503-1	Electrodyne	Qualified
36.	40	B075	2CV1504-2	Electrodyne	Qualified
37.	44	B080	2CV1510-2	Limitorque	Qualified
38.	39	B081	2CV1511-1	Limitorque	Qualified
39.	44	B082	2CV1513-2	Limitorque	Qualified
40.	39	B084	2CV1519-1	Limitorque	Qualified
41.	38	B087	2CV1530-1	Limitorque	Qualified
42.	38	B088	2CV1531-2	Limitorque	Qualified
43.	43	B090	2CV1541-1	Limitorque	Qualified
44.	43	B091	2CV1542-2	Limitorque	Qualified
45.	43	B092	2CV1543-1	Limitorque	Qualified
46.	43	B093	2CV1560-2	Limitorque	Qualified
47.	33	A017	2CV2060-1	Rotork	Qualified
48.	33	A018	2CV2202-1	Rotork	Qualified
49.	1	A019	2CV2401-1	Limitorque	Qualified
50.	1	A020	2CV3850-2	Limitorque	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
51.	18	A039	2CV4698-1	Limitorque	Qualified
52.	17	A048	2CV4740-2	Limitorque	Qualified
53.	1	A049	2CV4820-2	Limitorque	Qualified
54.	1	A050	2CV4821-1	Limitorque	Qualified
55.	15	A051	2CV4824-2	Limitorque	Qualified
56.	15	A052	2CV4827-2	Limitorque	Qualified
57.	15	A053	2CV4831-2	Limitorque	Qualified
58.	1	A054	2CV4846-1	Limitorque	Qualified
59.	20	B126	2CV5015-1	Limitorque	Qualified
60.	20	B127	2CV5016-2	Limitorque	Qualified
61.	2	B128	2CV5017-1	Limitorque	Qualified
62.	20	B130	2CV5035-1	Limitorque	Qualified
63.	20	B131	2CV5036-2	Limitorque	Qualified
64.	2	B132	2CV5037-1	Limitorque	Qualified
65.	20	B135	2CV5055-1	Limitorque	Qualified
66.	20	B136	2CV5056-2	Limitorque	Qualified
67.	2	B137	2CV5057-2	Limitorque	Qualified
68.	20	B139	2CV5075-1	Limitorque	Qualified
69.	20	B140	2CV5076-2	Limitorque	Qualified
70.	2	B141	2CV5077-2	Limitorque	Qualified
71.	22	B144	2CV5103-1	Limitorque	Qualified
72.	22	B145	2CV5104-2	Limitorque	Qualified
73.	4	B146	2CV5123-1	Limitorque	Qualified
74.	3	B147	2CV5124-1	Limitorque	Qualified
75.	25	B148	2CV5126-1	Limitorque	Qualified
76.	24	B149	2CV5127-1	Limitorque	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
77.	24	B150	2CV5128-1	Limitorque	Qualified
78.	44	B156	2CV5236-1	Electrodyne	Qualified
79.	4	A073	2CV5254-2	Limitorque	Qualified
80.	Not Stated	B157	2CV5255-1	Electrodyne	Qualified
81.	20	B162	2CV5612-1	Limitorque	Qualified
82.	20	B163	2CV5613-2	Limitorque	Qualified
83.	23	B164	2CV5628-2	Limitorque	Qualified
84.	34	A081	2CV5647-1	Rotork	Qualified
85.	34	A082	2CV5648-2	Rotork	Qualified
86.	32	B167	2CV5649-1	Rotork	Qualified
87.	32	B168	2CV5650-2	Rotork	Qualified
88.	24	B171	2CV5672-1	Limitorque	Qualified
89.	25	B172	2CV5673-1	Limitorque	Qualified
90.	20	B174	2CV5852-2	Limitorque	Qualified
91.	20	B175	2CV5859-2	Limitorque	Qualified
92.	136	B188	2CV8829-1	ITT General	Qualified ⁽²⁾
93.	136	B189	2CV8830-2	ITT General	Qualified ⁽²⁾
94.	136	B190	2CV8831-1	ITT General	Qualified ⁽²⁾
95.	136	B191	2CV8832-2	ITT General	Qualified ⁽²⁾
96.	92	B005	2FT0710-1	Foxboro	Qualified ⁽²⁾
97.	91	B007	2FT0713-2	Foxboro	Qualified ⁽²⁾
98.	91	B009	2FT0717-1	Foxboro	Qualified ⁽²⁾
99.	92	B010	2FT0718-2	Foxboro	Qualified ⁽²⁾
100.	94	B125	2FT5014-1	Rosemount	Qualified ⁽²⁾
101.	94	B129	2FT5034-1	Rosemount	Qualified ⁽²⁾
102.	94	B134	2FT5054-2	Rosemount	Qualified ⁽²⁾

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
103.	94	B138	2FT5074-2	Rosemount	Qualified ⁽²⁾
104.	96	B142	2FT5101-1	Foxboro	Qualified ⁽²⁾
105.	96	B143	2FT5102-2	Foxboro	Qualified ⁽²⁾
106.	93	B192	2FT8833-1	Foxboro	Qualified ⁽²⁾
107.	93	B193	2FT8834-2	Foxboro	Qualified ⁽²⁾
108.	131	A109	2GEN1001A	Amph. Sams	Qualified ⁽²⁾
109.	132	A110	2GEN1001B	Amph. Sams	Qualified ⁽²⁾
110.	133	A111	2GEN1001C	Amph. Sams	Qualified ⁽²⁾
111.	134	A112	2GEN1001D	Amph. Sams	Qualified ⁽²⁾
112.	124	A113	2GEN1002	Anaconda	Qualified
113.	129	A114	2GEN1003	Conax	Qualified
114.	Not Stated	C001	2GEN1004	Endevco	Qualified
115.	Not Stated	C002	2GEN1005	Endevco	Qualified
116.	125	A115	2GEN1006	Raychem	Qualified
117.	126	A116	2GEN1007	Raychem	Qualified
118.	122	A080	2LE5641-2	Gems	Qualified
119.	139	C011	2LE5645-1	Gems	Qualified
120.	139	C012	2LE5646-2	Gems	Qualified
121.	97	A001	2LT1031-1	Rosemount	Qualified ⁽²⁾
122.	97	A002	2LT1031-2	Rosemount	Qualified ⁽²⁾
123.	97	A003	2LT1031-3	Rosemount	Qualified ⁽²⁾
124.	97	A004	2LT1031-4	Rosemount	Qualified ⁽²⁾
125.	97	A009	2LT1131-1	Rosemount	Qualified ⁽²⁾
125.	97	A010	2LT1131-2	Rosemount	Qualified ⁽²⁾
127.	97	A011	2LT1131-3	Rosemount	Qualified ⁽²⁾
128.	97	A012	2LT1131-4	Rosemount	Qualified ⁽²⁾

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
129.	98	A037	2LT4627-1	Rosemount	Qualified ⁽²⁾
130.	98	A038	2LT4627-2	Rosemount	Qualified ⁽²⁾
131.	130	A107	2M55A	Westinghouse	Qualified
132.	130	A108	2M55B	Westinghouse	Qualified
133.	75	B160	2PM136A	Westinghouse	Qualified
134.	75	B161	2PM136B	Westinghouse	Qualified
135.	87	B158	2PM35A	Allis Chalmers	Qualified
136.	89	B159	2PM35B	Allis Chalmers	Qualified
137.	88	B153	2PM89A	Allis Chalmers	Qualified
138.	90	B154	2PM89B	Allis Chalmers	Qualified
139.	90	B155	2PM89C	Allis Chalmers	Qualified
140.	101	A005	2PT1041-1	Rosemount	Qualified ⁽²⁾
141.	101	A006	2PT1041-2	Rosemount	Qualified ⁽²⁾
142.	101	A007	2PT1041-3	Rosemount	Qualified ⁽²⁾
143.	101	A008	2PT1041-4	Rosemount	Qualified ⁽²⁾
144.	101	A013	2PT1141-1	Rosemount	Qualified ⁽²⁾
145.	101	A014	2PT1141-2	Rosemount	Qualified ⁽²⁾
146.	101	A015	2PT1141-3	Rosemount	Qualified ⁽²⁾
147.	101	A016	2PT1141-4	Rosemount	Qualified ⁽²⁾
148.	100	B054	2PT1417-1	Foxboro	Qualified ⁽²⁾
149.	100	B055	2PT1423-2	Foxboro	Qualified ⁽²⁾
150.	99	A021	2PT4601-1	Foxboro	Qualified ⁽²⁾
151.	99	A022	2PT4601-2	Foxboro	Qualified ⁽²⁾
152.	99	A023	2PT4601-3	Foxboro	Qualified ⁽²⁾
153.	99	A024	2PT4601-4	Foxboro	Qualified ⁽²⁾
154.	102	A033	2PT4624-1	Rosemount	Qualified ⁽²⁾

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
155.	102	A034	2PT4624-2	Rosemount	Qualified ⁽²⁾
156.	102	A035	2PT4624-3	Rosemount	Qualified ⁽²⁾
157.	102	A036	2PT4624-4	Rosemount	Qualified ⁽²⁾
158.	104	A074	2PT5601-1	Rosemount	Qualified ⁽²⁾
159.	104	A075	2PT5602-2	Rosemount	Qualified ⁽²⁾
160.	104	A076	2PT5603-3	Rosemount	Qualified ⁽²⁾
161.	104	A077	2PT5604-4	Rosemount	Qualified ⁽²⁾
162.	105	A078	2PT5605-1	Rosemount	Qualified ⁽²⁾
163.	105	A079	2PT5606-2	Rosemount	Qualified ⁽²⁾
164.	141	C013	2RE8925-1	General Atomic	Qualified
165.	142	C014	2RE8925-2	General Atomic	Qualified
166.	Not Stated	D001	2SV1001C-2	Target Rock	Qualified
167.	Not Stated	D002	2SV1001D-1	Target Rock	Qualified
168.	49	B027	2SV1010-1A	Asco	Qualified
169.	49	B028	2SV1010-2A	Asco	Qualified
170.	Not Stated	D003	2SV1051C-2	Target Rock	Qualified
171.	Not Stated	D004	2SV1051D-1	Target Rock	Qualified
172.	50	B036	2SV1060-1A	Asco	Qualified
173.	50	B037	2SV1060-2A	Asco	Qualified
174.	55	A055	2SV5001-1	Target Rock	Qualified
175.	55	A059	2SV5021-1	Target Rock	Qualified
176.	55	A063	2SV5041-2	Target Rock	Qualified
177.	55	A067	2SV5061-2	Target Rock	Qualified
178.	63	A083	2SV5833-1	Target Rock	Qualified
179.	60	B173	2SV5843-2	Target Rock	Qualified
180.	59	B177	2SV5871-2	Target Rock	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
181.	59	B178	2SV5876-2	Target Rock	Qualified
182.	64	A084	2SV5878-1	Target Rock	Qualified
183.	64	B179	2SV8231-2	Target Rock	Qualified
184.	57	B180	2SV8261-2	Target Rock	Qualified
185.	58	B181	2SV8263-2	Target Rock	Qualified
186.	65	A097	2SV8265-1	Target Rock	Qualified
187.	62	B182	2SV8271-2	Target Rock	Qualified
188.	66	A106	2 V8273-1	Target Rock	Qualified
189.	106	A025	2TE4610-1	Rosemount	Qualified by 2R4 ⁽¹⁾
190.	106	A026	2TE4610-2	Rosemount	Qualified by 2R4 ⁽¹⁾
191.	106	A027	2TE4610-3	Rosemount	Qualified by 2R4 ⁽¹⁾
192.	106	A028	2TE4610-4	Weed	Qualified
193.	106	A029	2TE4611-1	Rosemount	Qualified by 2R4 ⁽¹⁾
194.	106	A030	2TE4611-2	Rosemount	Qualified by 2R4 ⁽¹⁾
195.	106	A031	2TE4611-3	Rosemount	Qualified by 2R4 ⁽¹⁾
196.	106	A032	2TE4611-4	Weed	Qualified
197.	NA	NONE	2TE4635-1	Rosemount	Qualified by 2R4 ⁽¹⁾
198.	NA	NONE	2TE4635-2	Rosemount	Qualified by 2R4 ⁽¹⁾
199.	NA	NONE	2TE4635-3	Rosemount	Qualified by 2R4 ⁽¹⁾
200.	NA	NONE	2TE4635-4	Weed	Qualified
201.	106	A040	2TE4710-1	Rosemount	Qualified by 2R4 ⁽¹⁾
202.	106	A041	2TE4710-2	Rosemount	Qualified by 2R4 ⁽¹⁾
203.	106	A042	2TE4710-3	Rosemount	Qualified by 2R4 ⁽¹⁾
204.	106	A043	2TE4710-4	Weed	Qualified
205.	106	A044	2TE4711-1	Rosemount	Qualified by 2R4 ⁽¹⁾
206.	106	A045	2TE4711-2	Rosemount	Qualified by 2R4 ⁽¹⁾

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
207.	106	A046	2TE4711-3	Rosemount	Qualified by 2R4 ⁽¹⁾
208.	106	A047	2TE4711-4	Weed	Qualified
209.	NA	NONE	2TE4735-1	Rosemount	Qualified by 2R4 ⁽¹⁾
210.	NA	NONE	2TE4735-2	Rosemount	Qualified by 2R4 ⁽¹⁾
211.	NA	NONE	2TE4735-3	Rosemount	Qualified by 2R4 ⁽¹⁾
212.	NA	NONE	2TE4735-4	Weed	Qualified
213.	71	A093	2UCD8203-1	Baldor	Qualified by 2R4 ⁽¹⁾
214.	71	A094	2UCD8209-1	Baldor	Qualified by 2R4 ⁽¹⁾
215.	71	A095	2UCD8216-2	Baldor	Qualified by 2R4 ⁽¹⁾
216.	71	A096	2UCD8222-2	Baldor	Qualified by 2R4 ⁽¹⁾
217.	Not Stated	C003	2VBE4633-1	Endevco	Qualified
218.	138	C004	2VBE4633-2	Endevco	Qualified
219.	138	C005	2VBE4634-1	Endevco	Qualified
220.	138	C006	2VBE4634-2	Endevco	Qualified
221.	140	C007	2VBY4633-1	TEC	Qualified
222.	140	C008	2VBY4633-2	TEC	Qualified
223.	140	C009	2VBY4634-1	TEC	Qualified
224.	140	C010	2VBY4634-2	TEC	Qualified
225.	84	B184	2VEFM38A-1	Westinghouse	Qualified
226.	84	B185	2VEFM38B-2	Westinghouse	Qualified
207.	76	A085	2VSFM1A	Reliance	Qualified
208.	76	A086	2VSFM1B	Reliance	Qualified
209.	76	A087	2VSFM1C	Reliance	Qualified
210.	76	A088	2VSFM1D	Reliance	Qualified
211.	76	A089	2VSFM31A	Reliance	Qualified
212.	76	A090	2VSFM31B	Reliance	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
213.	76	A091	2VSFM31C	Reliance	Qualified
214.	76	A092	2VSFM31D	Reliance	Qualified
215.	83	B105	2VUCM11A	Reliance	Qualified
216.	83	B106	2VUCM11B	Reliance	Qualified
217.	78	B094	2VUCM1A	Reliance	Qualified
218.	78	B095	2VUCM1B	Reliance	Qualified
219.	77	B096	2VUCM1C	Reliance	Qualified
220.	77	B097	2VUCM1D	Reliance	Qualified
221.	77	B098	2VUCM1E	Reliance	Qualified
222.	77	B099	2VUCM1F	Reliance	Qualified
223.	113	B026	2ZS1010-1	Namco	Qualified ⁽²⁾
224.	113	B035	2ZS1060-2	Namco	Qualified ⁽²⁾
225.	107	A098	2ZS8203-1	Allen Bradley	Qualified by 2R4 ⁽¹⁾
226.	107	A099	2ZS8204-1	Allen Bradley	Qualified by 2R4 ⁽¹⁾
227.	107	A100	2ZS8209-1	Allen Bradley	Qualified by 2R4 ⁽¹⁾
228.	107	A101	2ZS8210-1	Allen Bradley	Qualified by 2R4 ⁽¹⁾
229.	107	A102	2ZS8216-2	Allen Bradley	Qualified by 2R4 ⁽¹⁾
230.	107	A103	2ZS8217-2	Allen Bradley	Qualified by 2R4 ⁽¹⁾
231.	107	A104	2ZS8222-2	Allen Bradley	Qualified by 2R4 ⁽¹⁾
232.	107	A105	2ZS8223-2	Allen Bradley	Qualified by 2R4 ⁽¹⁾
233.	Not Stated	None	2B52 (MCC)	ITE	Qualified
234.	Not Stated	None	2B62 (MCC)	ITE	Qualified

<u>No.</u>	<u>FRC Item</u>	<u>Scew</u>	<u>Tag No.</u>	<u>Manufacturer</u>	<u>Remarks</u>
235.	Not Stated	None	2GENXXXX (Terminal Blks)	G.E.	Qualified
236.	Not Stated	None	2GENXXXX (Terminal Blks)	Buchannon	Qualified

NOTES:

- (1) An extension of the qualification deadline to March 31, 1985 (or the first outage of sufficient duration) has been granted by the NRC for this item. Reference 2CNA118305.
- (2) These items are considered qualified in conjunction with specific actions under AP&L's maintenance and surveillance programs.