

RS-07-139

October 10, 2007

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-0001

Braidwood Station, Units 1 and 2
Facility Operating License Nos. NPF-72 and NPF-77
NRC Docket Nos. STN 50-456 and STN 50-457

Byron Station, Units 1 and 2
Facility Operating License Nos. NPF-37 and NPF-66
NRC Docket Nos. STN 50-454 and STN 50-455

Subject: Response to Request for Additional Information Regarding Request for
Amendment to Technical Specification 5.5.16, "Containment Leakage Rate
Testing Program"

- References:
1. Letter from D. M. Benyak (Exelon Generation Company, LLC) to U. S. NRC, "Request for Amendment to Technical Specification 5.5.16, 'Containment Leakage Rate Testing Program,'" dated April 4, 2007
 2. Letter from R. F. Kuntz (U. S. NRC) to C. M. Crane (Exelon Generation Company, LLC), "Byron Station, Unit Nos. 1 and 2, and Braidwood Station, Units 1 and 2 – Request for Additional Information Related to Integrated Leak Rate Test (TAC Nos. MD5149, MD5150, MD5151, and MD5152)," dated September 10, 2007

In Reference 1, Exelon Generation Company, LLC (EGC) requested an amendment to Appendix A, Technical Specifications (TS), of Facility Operating License Nos. NPF-72, NPF-77, NPF-37, and NPF-66 for Braidwood Station, Units 1 and 2, and Byron Station, Units 1 and 2, respectively. Specifically, the proposed change revised TS 5.5.16, "Containment Leakage Rate Testing Program," to reflect a one-time five-year deferral of the containment Type A integrated leak rate test from once in 10 years to once in 15 years.

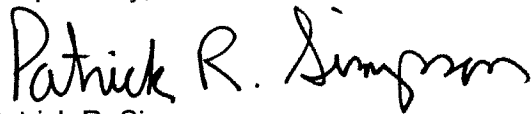
The NRC requested additional information to complete review of the proposed change in Reference 2. In response to this request, EGC is providing the attached information.

October 10, 2007
U. S. Nuclear Regulatory Commission
Page 2

There are no regulatory commitments contained in this letter. If you have any questions concerning this letter, please contact Mr. Kenneth M. Nicely at (630) 657-2803.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 10th day of October 2007.

Respectfully,

A handwritten signature in black ink that reads "Patrick R. Simpson". The signature is written in a cursive, flowing style.

Patrick R. Simpson
Manager – Licensing

Attachment: Response to Request for Additional Information

ATTACHMENT
Response to Request for Additional Information

NRC Request 1

With reference to Section 4.1.2 of Attachment 1 of the April 4, 2007, submittal, what are the current test intervals for the Type B and Type C LLRTs? Please provide a schedule for the Type B and Type C tests on containment pressure-retaining boundaries that are or will be scheduled to be performed prior to and during the requested 5-year extension period of the ILRT interval.

Response

The following tables provide the requested information. The due date column provides the date of the next scheduled local leak rate test (LLRT) for the penetration.

For Braidwood LLRTs, the due date is established based on the last completed date plus the frequency. The LLRTs must be performed prior to the late date, which is not shown on the following tables. The late dates are established at the appropriate LLRT frequency (i.e., 30 months, 60 months, or 120 months) or earlier.

The current Type B and C penetration test frequencies are established based on performance using the requirements of 10 CFR 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," Option B. The test frequencies are re-evaluated after each refueling outage for potential changes.

Byron Unit 1 Penetration	Last Completed	Due Date	Frequency
LLRT FOR ELECTRICAL PENETRATION ZONE 1	09/07/06	09/04/15	O6
LLRT FOR ELECTRICAL PENETRATION ZONE 2	09/16/03	09/10/12	O6
LLRT FOR ELECTRICAL PENETRATION ZONE 3	03/23/99	03/24/08	O6
LLRT FOR ELECTRICAL PENETRATION ZONE 4	09/17/03	09/10/12	O6
LLRT FOR P-98 - FUEL TRANSFER TUBE BLIND FLANGE	09/23/06	03/24/08	O1
LLRT FOR P-98 - FUEL TRANSFER TUBE BELLOWS	09/23/00	09/21/09	O6
LLRT FOR EQUIPMENT HATCH DOUBLE GASKET	09/25/06	09/04/15	O6
LLRT FOR I-3 - 1VQ017 AND 1VQ019	09/25/06	03/24/08	O1
LLRT FOR I-3 - 1VQ016 AND 1VQ018	09/25/06	03/24/08	O1
LLRT FOR P-70 - 1PS9356A AND 1PS9356B	09/18/06	03/24/08	O1
LLRT FOR P-70 - 1PS9357A AND 1PS9357B	09/13/06	03/07/11	O3
LLRT FOR P-45 AND P-12 - 1PS228A, 1PS229A, 1PS230A AND 1PS231A	09/13/06	09/21/09	O2
LLRT FOR P-36 AND P-31 - 1PS228B, 1PS229B, 1PS230B AND 1PS231B	09/17/06	09/21/09	O2
LLRT FOR P-70 - 1PS9355A AND 1PS9355B	09/18/06	03/24/08	O1
LLRT FOR P-70 - 1PS9354A AND 1PS9354B	09/13/06	03/07/11	O3
LLRT FOR P-28 - 1CV8100, 1CV8112, AND 1CV8113	09/14/06	09/21/09	O2
LLRT FOR P-41 - 1CV8152 AND 1CV8160	09/17/06	03/07/11	O3
LLRT FOR P-65 - 1RE9160A, 1RE9160B AND 1RE9157	09/15/06	03/07/11	O3
LLRT FOR P-11 - 1RE1003, 1RE022 AND 1RE9170	09/14/06	09/21/09	O2
LLRT FOR P-65 - 1RE9159A AND 1RE9159B	09/15/06	03/07/11	O3
LLRT FOR P-44 - 1RY8028 AND 1RY8046	09/13/06	03/24/08	O1
LLRT FOR I-5 - 1RY075	09/16/06	03/07/11	O3

ATTACHMENT
Response to Request for Additional Information

Byron Unit 1 Penetration	Last Completed	Due Date	Frequency
LLRT FOR P-27 - 1RY8025 AND 1RY8026	03/03/05	09/21/09	O3
LLRT FOR P-27 - 1RY8033 AND 1RY8047	09/15/06	03/24/08	O1
LLRT FOR P-24 - 1CC9518, 1CC9438 AND 1CC685	09/16/06	03/24/08	O1
LLRT FOR P-25 - 1CC9486 AND 1CC9413A	09/16/06	09/21/09	O2
LLRT FOR P-21 - 1CC9534, 1CC9416 AND 1CC9414	09/19/06	09/21/09	O2
LLRT FOR P-57 - 1FC009 AND 1FC010	09/23/06	03/07/11	O3
LLRT FOR P-32 - 1FC011 AND 1FC012	09/23/06	03/07/11	O3
LLRT FOR P-1 - 1CS007A AND 1CS008A	09/12/06	03/07/11	O3
LLRT FOR P-16 - 1CS007B AND 1CS008B	09/23/03	03/24/08	O3
LLRT FOR P-39 - 1IA066, 1IA065 AND 1IA091	03/09/05	03/24/08	O2
LLRT FOR P-56 - 1SA032 AND 1SA033	09/17/03	03/24/08	O3
LLRT FOR P-30 - 1WM190 AND 1WM191	09/25/06	09/21/09	O2
LLRT FOR P-47 - 1RF026 AND 1RF027	03/10/05	09/21/09	O3
LLRT FOR P-13 - 1OG080 AND 1OG084	03/02/05	09/21/09	O3
LLRT FOR P-69 - 1OG057A AND 1OG083	03/02/05	09/21/09	O3
LLRT FOR P-23 - 1OG081 AND 1OG085	03/02/05	09/21/09	O3
LLRT FOR P-13 - 1OG079 AND 1OG082	03/02/05	09/21/09	O3
LLRT FOR P-52 - 1PR001A AND 1PR001B	03/05/05	09/21/09	O3
LLRT FOR P-52 - 1PR066 AND 1PR032	09/16/06	09/21/09	O2
LLRT FOR P-6 AND P-10 - 1WO006A/B AND 1WO007A/B	09/20/06	03/24/08	O1
LLRT FOR P-5 AND P-8 - 1WO056A/B AND 1WO020A/B	09/20/06	03/07/11	O3
LLRT FOR P-55 - 1SI8871, 1SI8964 AND 1SI8888	09/16/06	03/07/11	O3
LLRT FOR P-55 - 1SI8880 AND 1SI8968	09/12/06	09/21/09	O2
LLRT FOR P-4 - 1VQ010, 1VQ02M AND 1VQ03M	09/27/03	03/24/08	O3
LLRT FOR P-74 - SPARE	03/21/05	03/24/08	O1
LLRT FOR P-63 - SPARE	09/25/06	03/24/08	O1
LLRT FOR P-64 - SPARE	09/27/06	03/24/08	O1
LLRT FOR P-97 - 1VQ001A AND 1VQ001B	04/13/07	10/14/07	184D
LLRT FOR P-95 - 1VQ002A AND 1VQ002B	09/08/07	03/10/08	184D
LLRT FOR P-96 AND P-94 - 1VQ004A/B, 1VQ005A/B/C AND 1VQ003	08/19/07	11/19/07	92D
LLRT FOR EQUIPMENT HATCH	09/17/06	03/24/08	O1
LLRT FOR EMERGENCY PERSONNEL HATCH	09/26/06	03/24/08	O1

Byron Unit 2 Penetration	Last Completed	Due Date	Frequency
LLRT FOR ELECTRICAL PENETRATION ZONE 1	03/15/04	04/12/10	O4
LLRT FOR ELECTRICAL PENETRATION ZONE 2	09/23/05	09/26/11	O4
LLRT FOR ELECTRICAL PENETRATION ZONE 3	03/28/07	04/08/13	O4
LLRT FOR ELECTRICAL PENETRATION ZONE 4	03/26/07	04/08/13	O4
LLRT FOR P-98 - FUEL TRANSFER TUBE BLIND FLANGE	04/30/07	10/05/08	O1
LLRT FOR P-98 - FUEL TRANSFER TUBE BELLOW	09/17/02	09/26/11	O6
LLRT FOR I-3 - 2VQ016 AND 2VQ018	04/30/07	10/05/08	O1
LLRT FOR I-3 - 2VQ017 AND 2VQ019	04/30/07	10/05/08	O1
LLRT FOR P-70 - 2PS9356A AND 2PS9356B	04/08/07	09/26/11	O3
LLRT FOR P-70 - 2PS9357A AND 2PS9357B	04/09/07	09/26/11	O3

ATTACHMENT
Response to Request for Additional Information

Byron Unit 2 Penetration	Last Completed	Due Date	Frequency
LLRT FOR P-36 AND P-31 - 2PS228B, 2PS229B, 2PS230B, AND 2PS231B	04/06/07	04/12/10	O2
LLRT FOR P-45 AND P-12 - 2PS228A, 2PS229A, 2PS230A AND 2PS231A	04/04/07	10/05/08	O1
LLRT FOR P-70 - 2PS9354A AND 2PS9354B	09/29/05	04/12/10	O3
LLRT FOR P-28 - 2CV8100, 2CV8112, AND 2CV8113	04/05/07	10/05/08	O1
LLRT FOR P-41 - 2CV8152 AND 2CV8160	04/10/07	09/26/11	O3
LLRT FOR P-65 - 2RE9160A, 2RE9160B, AND 2RE9157	04/06/07	09/26/11	O3
LLRT FOR P-11 - 2RE1003, 2RE022 AND 2RE9170	10/07/05	04/12/10	O3
LLRT FOR P-65 - 2RE9159A AND 2RE9159B	09/28/05	04/12/10	O3
LLRT FOR I-5 - 2RY075	03/25/04	10/05/08	O3
LLRT FOR P-44 - 2RY8028 AND 2RY8046	04/07/07	04/12/10	O2
LLRT FOR P-27 - 2RY8025 AND 2RY8026	09/29/05	04/12/10	O3
LLRT FOR P-27 - 2RY8033 AND 2RY8047	04/06/07	10/05/08	O1
LLRT FOR P-24 - 2CC9518, 2CC9438, AND 2CC685	04/05/07	10/05/08	O1
LLRT FOR P-25 - 2CC9486 AND 2CC9413A	04/06/07	04/12/10	O2
LLRT FOR P-21 - 2CC9534, 2CC9416, AND 2CC9414	04/05/07	10/05/08	O1
LLRT FOR P-32 - 2FC011 AND 2FC012	04/04/04	10/05/08	O3
LLRT FOR P-57 - 2FC009 AND 2FC010	04/03/04	10/05/08	O3
LLRT FOR P-16 - 2CS007B AND 2CS008B	03/24/04	10/05/08	O3
LLRT FOR P-1 - 2CS007A AND 2CS008A	04/13/07	10/05/08	O1
LLRT FOR P-39 - 2IA066, 2IA065 AND 2IA091	04/10/07	04/12/10	O2
LLRT FOR P-56 - 2SA032 AND 2SA033	04/28/07	10/05/08	O1
LLRT FOR P-30 - 2WM190 AND 2WM191	04/30/07	04/12/10	O2
LLRT FOR P-47 - 2RF026 AND 2RF027	10/07/05	10/05/08	O2
LLRT FOR P-69 - 2OG057A AND 2OG083	09/30/05	04/12/10	O3
LLRT FOR P-23 - 2OG081 AND 2OG085	09/30/05	04/12/10	O3
LLRT FOR P-13 - 2OG079 AND 2OG082	09/30/05	04/12/10	O3
LLRT FOR P-13 - 2OG080 AND 2OG084	09/30/05	04/12/10	O3
LLRT FOR P-52 - 2PR001A AND 2PR001B	04/04/07	09/26/11	O3
LLRT FOR P-52 - 2PR066 AND 2PR032	04/04/07	04/12/10	O2
LLRT FOR P-6 AND P-10 - 2WO006A/B, 2WO007A/B	04/18/07	10/05/08	O1
LLRT FOR P-5 AND P-8 - 2WO020A/B, 2WO056A/B	04/18/07	09/26/11	O3
LLRT FOR P-55 - 2SI8871, 2SI8964 AND 2SI8888	03/18/04	10/05/08	O3
LLRT FOR P-55 - 2SI8880 AND 2SI8968	03/27/07	04/12/10	O2
LLRT FOR P-4 - 2VQ010, 2VQ02M AND 2VQ03M	04/12/07	09/26/11	O3
LLRT FOR P-63 - SPARE	03/19/07	10/05/08	O1
LLRT FOR P-64 - SPARE	03/28/07	10/05/08	O1
LLRT FOR P-74 - SPARE	03/28/07	10/05/08	O1
LLRT FOR P-97 - 2VQ001A AND 2VQ001B	05/04/07	11/04/07	184D
LLRT FOR P-95 - 2VQ002A AND 2VQ002B	05/04/07	11/04/07	184D
LLRT FOR P-96 AND P-94 - 2VQ004A/B, 2VQ005A/B/C AND 2VQ003	08/26/07	11/26/07	92D
LLRT FOR EQUIPMENT HATCH DOUBLE GASKET	04/26/07	02/10/16	O6
LLRT FOR EQUIPMENT HATCH	04/12/07	10/05/08	O1
LLRT FOR EMERGENCY PERSONNEL HATCH	04/25/07	10/05/08	O1

ATTACHMENT
Response to Request for Additional Information

Braidwood Unit 1 Penetration	Last Completed	Due Date	Frequency
LLRT FOR ELECTRICAL PENETRATION ZONE 1	09/28/04	09/28/12	8Y
LLRT FOR ELECTRICAL PENETRATION ZONE 2	04/08/03	04/08/11	8Y
LLRT FOR ELECTRICAL PENETRATION ZONE 3	04/09/03	04/09/11	8Y
LLRT FOR ELECTRICAL PENETRATION ZONE 4	04/14/02	04/14/10	8Y
LLRT FOR P-98 - FUEL TRANSFER TUBE BLIND FLANGE	04/29/06	04/29/08	2Y
LLRT FOR P-98 - FUEL TRANSFER TUBE BELLOWS	04/29/06	04/29/14	8Y
LLRT FOR EQUIPMENT HATCH DOUBLE GASKET	04/17/06	04/17/14	8Y
LLRT FOR I-3 - 1VQ016, 1VQ017, 1VQ018 AND 1VQ019	04/17/06	04/17/10	4Y
LLRT FOR P-70 - 1PS9354A AND 1PS9354B	04/19/06	04/19/08	2Y
LLRT FOR P-70 - 1PS9355A AND 1PS9355B	04/19/06	04/19/10	4Y
LLRT FOR P-70 - 1PS9356A AND 1PS9356B	04/19/06	04/19/10	4Y
LLRT FOR P-70 - 1PS9357A AND 1PS9357B	04/19/06	04/19/10	4Y
LLRT FOR P-45 - 1PS228A AND 1PS229A	04/05/06	10/05/07	18M
LLRT FOR P-45 - 1PS230A AND 1PS231A	04/05/06	10/05/07	18M
LLRT FOR P-36 - 1PS228B AND 1PS229B	04/05/06	10/05/07	18M
LLRT FOR P-36 - 1PS230B AND 1PS231B	04/05/06	10/05/07	18M
LLRT FOR P-41 - 1CV8152 AND 1CV8160	04/26/03	04/26/07	4Y
LLRT FOR P-28 - 1CV8100, 1CV8112, AND 1CV8113	04/18/06	10/18/08	30M
LLRT FOR P-11 - 1RE1003, 1RE022 AND 1RE9170	04/19/06	04/19/08	2Y
LLRT FOR P-65 - 1RE9160A, 1RE9160B AND 1RE9157	10/15/04	10/15/08	4Y
LLRT FOR P-65 - 1RE9159A AND 1RE9159B	10/16/04	10/16/08	4Y
LLRT FOR P-27 - 1RY8025 AND 1RY8026	04/20/06	04/20/10	4Y
LLRT FOR P-27 - 1RY8033 AND 1RY8047	04/20/06	10/20/08	30M
LLRT FOR P-44 - 1RY8028 AND 1RY8046	04/19/06	10/19/08	30M
LLRT FOR I-5 - 1RY075	04/16/03	04/16/07	4Y
LLRT FOR P-24 - 1CC9518, 1CC9438 AND 1CC685	10/06/04	04/06/07	30M
LLRT FOR P-25 - 1CC9486 AND 1CC9413A	10/06/04	04/06/07	30M
LLRT FOR P-21 - 1CC9534, 1CC9416 AND 1CC9414	10/06/04	04/06/07	30M
LLRT FOR P-32 - 1FC011 AND 1FC012	05/01/06	05/01/10	4Y
LLRT FOR P-57 - 1FC009 AND 1FC010	04/28/03	04/28/07	4Y
LLRT FOR P-1 - 1CS007A AND 1CS008A	04/18/06	10/18/08	30M
LLRT FOR P-16 - 1CS007B AND 1CS008B	04/21/06	04/21/08	2Y
LLRT FOR P-39 - 1IA091	10/13/04	10/13/08	4Y
LLRT FOR P-39 - 1IA065 AND 1IA066	10/08/04	10/08/08	4Y
LLRT FOR P-56 - 1SA032 AND 1SA033	09/25/06	09/25/08	2Y
LLRT FOR P-30 - 1WM190 AND 1WM191	10/05/04	04/05/07	30M
LLRT FOR P-47 - 1RF026, 1RF027 AND 1RF060	04/27/06	04/27/08	2Y
LLRT FOR P-13 - 1OG079 AND 1OG082	07/13/05	07/13/09	4Y
LLRT FOR P-69 - 1OG057A AND 1OG083	03/12/07	03/12/11	4Y
LLRT FOR P-13 - 1OG080 AND 1OG084	07/13/05	07/13/09	4Y
LLRT FOR P-23 - 1OG081 AND 1OG085	04/11/03	04/11/07	4Y

ATTACHMENT
Response to Request for Additional Information

Braidwood Unit 1 Penetration	Last Completed	Due Date	Frequency
LLRT FOR P-52 - 1PR066 AND 1PR032	04/27/06	10/27/08	30M
LLRT FOR 1PR033A, 1PR033B, 1PR002E AND 1PR002G	10/05/04	10/05/08	4Y
LLRT FOR 1PR002H	11/01/05	01/11/09	4Y
LLRT FOR P-52 - 1PR001A AND 1PR001B	10/20/04	10/20/08	4Y
LLRT FOR 1PR033C, 1PR033D AND 1PR002F	01/11/05	01/11/09	4Y
LLRT FOR P-5 - 1WO056A	04/22/06	04/22/10	4Y
LLRT FOR P-10 - 1WO006B	01/10/05	01/10/09	4Y
LLRT FOR P-5 - 1WO020A AND 1WO091A	02/18/07	02/18/09	2Y
LLRT FOR P-8 - 1WO020B AND 1WO091B	02/27/07	02/27/09	2Y
LLRT FOR P-6 - 1WO007A	02/26/07	02/26/11	4Y
LLRT FOR P-10 - 1WO007B	01/07/05	01/07/09	4Y
LLRT FOR P-6 - 1WO006A	01/06/05	01/06/09	4Y
LLRT FOR P-8 - 1WO056B	01/12/05	01/12/09	4Y
LLRT FOR P-55 - 1SI8880 AND 1SI8968	09/05/07	03/05/10	30M
LLRT FOR P-55 - 1SI8871, 1SI8964 AND 1SI8888	10/12/04	10/12/08	4Y
LLRT FOR P-4 - 1VQ010, 1VQ02M AND 1VQ03M	11/07/98	11/07/06	8Y
LLRT FOR P-63 - SPARE	09/17/01	09/17/09	8Y
LLRT FOR P-64 - SPARE	05/01/06	05/01/08	2Y
LLRT FOR P-74 - SPARE	05/01/06	05/01/08	2Y
LLRT FOR P-97 - 1VQ001A AND 1VQ001B	05/10/07	11/10/07	184D
LLRT FOR P-95 - 1VQ002A AND 1VQ002B	05/10/07	11/10/07	184D
LLRT FOR P-96 AND P-94 - 1VQ004A/B, 1VQ005A/B/C AND 1VQ003	08/28/07	11/28/07	92D
LLRT FOR EQUIPMENT HATCH	04/07/06	04/07/08	2Y
LLRT FOR EMERGENCY PERSONNEL HATCH	03/25/06	03/25/08	2Y

Braidwood Unit 2 Penetration	Last Completed	Due Date	Frequency
LLRT FOR ELECTRICAL PENETRATION ZONE 1	04/14/02	04/14/10	8Y
LLRT FOR ELECTRICAL PENETRATION ZONE 2	12/31/04	12/31/12	8Y
LLRT FOR ELECTRICAL PENETRATION ZONE 3	10/07/06	10/07/14	8Y
LLRT FOR ELECTRICAL PENETRATION ZONE 4	10/27/03	10/27/11	8Y
LLRT FOR P-98 - FUEL TRANSFER TUBE BLIND FLANGE	10/27/06	10/27/08	2Y
LLRT FOR P-98 - FUEL TRANSFER TUBE BELLOWS	10/21/02	10/21/08	8Y
LLRT FOR EQUIPMENT HATCH DOUBLE GASKET	10/22/06	10/22/14	8Y
LLRT FOR I-3 - 2VQ016, 2VQ017, 2VQ018 AND 2VQ019	10/16/06	10/16/10	4Y
LLRT FOR P-70 - 2PS9354A AND 2PS9354B	11/13/03	11/13/07	4Y
LLRT FOR P-70 - 2PS9355A AND 2PS9355B	11/13/03	11/13/07	4Y
LLRT FOR P-70 - 2PS9356A AND 2PS9356B	10/28/06	10/28/10	4Y
LLRT FOR P-70 - 2PS9357A AND 2PS9357B	10/20/06	10/20/10	4Y

ATTACHMENT
Response to Request for Additional Information

Braidwood Unit 2 Penetration	Last Completed	Due Date	Frequency
LLRT FOR P-45 - 2PS228A AND 2PS229A	10/09/06	04/09/08	18M
LLRT FOR P-45 - 2PS230A AND 2PS231A	10/09/06	04/09/08	18M
LLRT FOR P-36 - 2PS228B AND 2PS229B	10/04/06	04/04/08	18M
LLRT FOR P-36 - 2PS230B AND 2PS231B	10/06/06	04/06/08	18M
LLRT FOR P-41 - 2CV8152 AND 2CV8160	10/20/06	10/20/10	4Y
LLRT FOR P-28 - 2CV8100, 2CV8112, AND 2CV8113	04/24/05	04/24/09	4Y
LLRT FOR P-11 - 2RE1003, 2RE022 AND 2RE9170	10/18/06	10/18/08	2Y
LLRT FOR P-65 - 2RE9159A AND 2RE9159B	04/21/05	04/21/09	4Y
LLRT FOR P-65 - 2RE9160A, 2RE9160B, AND 2RE9157	04/24/05	04/24/09	4Y
LLRT FOR P-27 - 2RY8025 AND 2RY8026	04/22/05	04/22/09	4Y
LLRT FOR P-27 - 2RY8033 AND 2RY8047	10/18/06	10/18/08	2Y
LLRT FOR P-44 - 2RY8028 AND 2RY8046	04/23/05	10/23/07	30M
LLRT FOR I-5 - 2RY075	09/28/06	09/28/10	4Y
LLRT FOR P-24 - 2CC9518, 2CC9438 AND 2CC685	04/19/05	10/19/07	30M
LLRT FOR P-25 - 2CC9486 AND 2CC9413A	04/17/05	04/17/09	30M
LLRT FOR P-21 - 2CC9534, 2CC9416 AND 2CC9414	10/17/06	10/17/08	2Y
LLRT FOR P-32 - 2FC011 AND 2FC012	10/26/06	10/26/10	4Y
LLRT FOR P-57 - 2FC009 AND 2FC010	10/26/06	10/26/10	4Y
LLRT FOR P-1 - 2CS007A AND 2CS008A	10/18/06	10/18/08	2Y
LLRT FOR P-16 - 2CS007B AND 2CS008B	10/21/06	04/21/09	30M
LLRT FOR P-39 - 2IA091	04/26/05	04/26/09	4Y
LLRT FOR P-39 - 2IA065 AND 2IA066	04/26/05	04/26/09	4Y
LLRT FOR P-56 - 2SA032 AND 2SA033	10/11/06	10/11/08	2Y
LLRT FOR P-30 - 2WM190 AND 2WM191	11/04/03	11/04/07	4Y
LLRT FOR P-47 - 2RF026, 2RF027 AND 2RF060	10/25/06	10/25/08	2Y
LLRT FOR P-13 - 2OG079 AND 2OG082	10/20/06	10/20/10	4Y
LLRT FOR P-69 - 2OG057A AND 2OG083	06/21/06	06/21/10	4Y
LLRT FOR P-13 - 2OG080 AND 2OG084	10/04/03	10/04/07	4Y
LLRT FOR P-23 - 2OG081 AND 2OG085	04/22/05	04/22/09	4Y
LLRT FOR P-52 - 2PR001A AND 2PR001B	10/17/06	10/17/10	4Y
LLRT FOR P-52 - 2PR066 AND 2PR032	10/17/06	04/17/09	30M
LLRT FOR 2PR033A, 2PR033B, 2PR002E AND 2PR002G	04/22/05	04/22/09	4Y
LLRT FOR 2PR033C, 2PR033D, 2PR002F AND 2PR002H	04/19/05	04/19/09	4Y
LLRT FOR P-8 - 2WO056B	02/21/06	02/21/10	4Y
LLRT FOR P-6 - 2WO006A	02/06/04	02/06/08	4Y
LLRT FOR P-5 - 2WO020A AND 2WO091A	02/23/06	02/23/08	2Y
LLRT FOR P-8 - 2WO020B AND 2WO091B	02/21/06	02/21/08	2Y
LLRT FOR P-6 - 2WO007A	02/28/04	02/28/08	4Y
LLRT FOR P-10 - 2WO007B	02/23/06	02/23/10	4Y
LLRT FOR P-10 - 2WO006B	02/23/06	02/23/10	4Y
LLRT FOR P-5 - 2WO056A	04/29/05	04/29/09	4Y

ATTACHMENT
Response to Request for Additional Information

Braidwood Unit 2 Penetration	Last Completed	Due Date	Frequency
LLRT FOR P-55 - 2SI8880 AND 2SI8968	04/27/05	04/27/09	4Y
LLRT FOR P-55 - 2SI8871, 2SI8964 AND 2SI8888	04/25/05	04/25/09	4Y
LLRT FOR P-4 - 2VQ010, 2VQ02M AND 2VQ03M	11/10/99	11/10/07	8Y
LLRT FOR P-63 - SPARE	10/28/03	10/28/11	8Y
LLRT FOR P-64 - SPARE	10/20/06	10/20/08	2Y
LLRT FOR P-74 - SPARE	10/29/06	10/29/08	2Y
LLRT FOR P-97 - 2VQ001A AND 2VQ001B	09/06/07	03/08/08	184D
LLRT FOR P-95 - 2VQ002A AND 2VQ002B	09/04/07	03/06/08	184D
LLRT FOR P-96 AND P-94 - 2VQ004A/B, 2VQ005A/B/C AND 2VQ003	08/16/07	11/16/07	92D
LLRT FOR EQUIPMENT HATCH	09/28/06	09/28/08	2Y
LLRT FOR EMERGENCY PERSONNEL HATCH	10/29/06	10/29/08	2Y

Frequency Codes

O1 = Every outage	O4 = Every fourth outage	D = Days
O2 = Every other outage	O5 = Every fifth outage	M = Month
O3 = Every third outage	O6 = Every sixth outage	Y = Year

NRC Request 2

The last sentence in Section 4.1.3.1 of Attachment 1 of the April 4, 2007, submittal states that the Appendix J visual inspection frequency, in accordance with Regulatory Guide (RG) 1.163 requirements, will not be changed as a result of the proposed change. Regulatory Position C.3 of RG 1.163 requires that visual examinations should be conducted prior to initiating a Type A test, and during two other refueling outages before the next Type A test based on a 10-year ILRT interval. Please describe, with a schedule, how you would supplement this 10-year interval-based visual inspections requirement for the requested 15-year ILRT interval to ensure a continuing means of early uncovering of evidence of containment structural deterioration.

Response

The visual inspections performed in accordance with 10 CFR 50, Appendix J, Regulatory Guide 1.163, and NEI 94-01 are currently performed prior to the Type A test and during two refueling outages prior to the Type A test based on a 10-year frequency. This frequency will be revised such that the tests are performed prior to the Type A test and during three refueling outages prior to the Type A test based on a 15-year frequency.

ATTACHMENT
Response to Request for Additional Information

NRC Request 3

In the first paragraph of Section 4.1.3.1 of Attachment 1 of the April 4, 2007, submittal, it is stated that additional visual inspections are conducted in accordance with the requirements of American Society of Mechanical Engineers Boilers and Pressure Vessel Code (ASME Code), Section XI, Subsections IWE and IWL. Please provide the schedule of these visual inspections relative to the Appendix J visual inspections discussed earlier in the referenced paragraph of the LAR and also in the request for additional information question 2 above. Please indicate, with a schedule, the Section IWE/IWL general visual inspections of the pressure-retaining structures, systems and components (SSCs) of the containment system that are or will be scheduled to be performed prior to and during the requested 5-year extension period.

Response

Regulatory Position C.3 of RG 1.163, "Performance-Based Containment Leak-Test Program," dated September 1995, states:

"Section 9.2.1, 'Pretest Inspection and Test Methodology,' of NEI 94-01 provides guidance for the visual examination of accessible interior and exterior surfaces of the containment system for structural problems. These examinations should be conducted prior to initiating a Type A test, and during two other refueling outages before the next Type A test if the interval for the Type A test has been extended to 10 years, in order to allow for early uncovering of evidence of structural deterioration."

Section 9.2.1 of Nuclear Energy Institute (NEI) 94-01, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50, Appendix J," dated July 26, 1995," states:

"Prior to initiating a Type A test, a visual examination shall be conducted of accessible interior and exterior surfaces of the containment system for structural problems which may affect either the containment structure leakage integrity or the performance of the Type A test. This inspection should be a general visual inspection of accessible interior and exterior surfaces of the primary containment and components."

Neither RG 1.163 nor NEI 94-01 gives additional details as to the definition of a general visual inspection. There is no methodology description given for a general visual inspection, and no requirements listed that identify, for example, the acceptance criteria, inspector certification, evaluation, repair, replacement, or reporting criteria. Therefore, EGC has chosen to utilize the required examinations of the ASME Section XI CISI program, as modified by 10 CFR 50.55a, as the visual inspection program at Byron and Braidwood, when possible. The ASME Section XI requirements can be considered equal to or superior to the requirements of Regulatory Position C.3 of RG 1.163 and Section 9.2.1 of NEI 94-01, on the basis that ASME Section XI defines requirements for performing containment visual inspections. For example, ASME Section XI defines the acceptance criteria, inspector certification, evaluation, repair, replacement, and reporting criteria.

Visual examinations and post tensioning system tests and inspections are conducted in accordance with ASME Section XI, Subsections IWE and IWL. The required frequency for the IWE examinations (i.e., interior containment structures) is three times during a 10-year interval.

ATTACHMENT
Response to Request for Additional Information

Since the previous CISI interval also contained the same frequency requirement, this examination will be performed more than three times in the proposed 15-year Type A test interval.

The required frequency for the IWL examinations (i.e., exterior containment structures and the post tensioning systems) is every five years. The IWL examinations and tests are not performed in conjunction with a refueling outage since the concrete surfaces and post tensioning components are accessible during power operation. The examination of containment concrete structures would be performed twice during the current 10-year CISI interval, and since the previous CISI interval also contained the same frequency requirement, this examination will be performed at least three times in the proposed 15-year Type A test interval.

NRC Request 4

In Section 4.1.3.2 of Attachment 1 of the April 4, 2007 submittal, it is stated that the CISI at Braidwood and Byron were developed in accordance with the 1992 Edition with 1992 Addenda of ASME Code, Section XI Subsections IWE and IWL, as modified by NRC rulemaking in Title 10 of the Code of Federal Regulations (10 CFR) Part 50, Section 50.55a, 10CFR50.55a. When does the current inspection interval of the ASME Code, Section XI CISI program end? Please provide information, with time-period, regarding the edition of the ASME Code that will be used for the CISI program interval that includes the requested 5-year extension period?

Response

The current CISI intervals for Braidwood end on July 28, 2008, and October 16, 2008, for Units 1 and 2, respectively. For the next CISI interval, which includes the requested five year extension period, Braidwood will be committed to the 2001 Edition with 2003 Addenda of ASME Code, Section XI.

The current CISI intervals for Byron end on January 15, 2016, for both units. For the current CISI interval, which includes the requested five year extension period, Byron is committed to the 2001 Edition with 2003 Addenda of ASME Code, Section XI.

NRC Request 5

Section 4.1.3.2 of Attachment 1 of the April 4, 2007, submittal includes a brief generic description of IWE/IWL CISI program at Braidwood and Byron. Please provide a description and schedule of the CISI methods used and historic highlights of examinations/tests performed on the containment pressure-retaining SSCs, significant findings and actions taken that demonstrate effective implementation of the CISI programs at Byron and Braidwood to ensure that containment structural and leak-tight integrity will be maintained. Please include relevant highlights of examinations performed on the containment penetrations (with seals, gaskets, and bolted connections), the metallic liner, moisture barrier, the reinforced concrete containment structure and its post-tensioning system. Also, discuss with schedule the IWE/IWL CISI program examinations of these containment pressure-retaining SSCs that are or will be scheduled to be performed prior to and during the requested 5-year extension period of the

ATTACHMENT
Response to Request for Additional Information

ILRT interval. Also, indicate the dates when the most recent IWE and IWL examinations were completed for each of the units at Byron and Braidwood.

Response

The schedule for IWE/IWL CISI program examinations that will be performed prior to and during the requested five year extension period is provided in response to NRC Request 3 above. The remaining information related to previous CISI inspections and historic highlights was previously submitted to the NRC in the following documents.

Braidwood Inservice Inspection Summary Reports

1. Letter from G. K. Schwartz (Commonwealth Edison Company) to U. S. NRC, "Braidwood Station, Unit1 Inservice Inspection Summary Report," dated February 11, 1999
2. Letter from G. K. Schwartz (Commonwealth Edison Company) to U. S. NRC, "Braidwood Station, Unit 2 Inservice Inspection Summary Report," dated August 13, 1999
3. Letter from G. K. Schwartz (Commonwealth Edison Company) to U. S. NRC, "Braidwood Station, Unit 1 Inservice Inspection Summary Report," dated June 28, 2000
4. Letter from G. K. Schwartz (Exelon Generation Company, LLC) to U. S. NRC, "Braidwood Station, Unit 2 Inservice Inspection Summary Report," dated January 26, 2001
5. Letter from M. J. Pacilio (Exelon Generation Company, LLC) to U. S. NRC, "Braidwood Station, Unit 1 Inservice Inspection Summary Report," dated July 31, 2003
6. Letter from T. P. Joyce (Exelon Generation Company, LLC) to U. S. NRC, "Braidwood Station, Unit 2 Inservice Inspection Summary Report," dated February 12, 2004
7. Letter from K. J. Polson (Exelon Generation Company, LLC) to U. S. NRC, "Braidwood Station, Unit 1 Inservice Inspection Summary Report," dated July 28, 2006
8. Letter from T. Coutu (Exelon Generation Company, LLC) to U. S. NRC, "Braidwood Station, Unit 2 Inservice Inspection Summary Report," dated January 29, 2007

Byron Inservice Inspection Summary Reports

1. Letter from K. L. Graesser (Commonwealth Edison Company) to U. S. NRC, "ComEd Byron Station Unit 2 Inservice Inspection Report for Interval 1, Period 3, Outage 3 (B2R07)," dated August 13, 1998
2. Letter from W. Levis (Commonwealth Edison Company) to U. S. NRC, "Byron Station Unit 2 Inservice Inspection Report for Interval 2, Period 1, Outage 1 (B2R08)," dated February 11, 2000
3. Letter from W. Levis (Commonwealth Edison Company) to U. S. NRC, "Byron Station Unit 1 Inservice Inspection Report for Interval 2, Period 2, Outage 1," dated January 4, 2001

ATTACHMENT
Response to Request for Additional Information

4. Letter from R. P. Lopriore (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 2 90-Day Inservice Inspection Report for Interval 2, Period 1, Outage 2 (B2R09)," dated July 19, 2001
5. Letter from R. P. Lopriore (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 2 90-Day Inservice Inspection Report for Interval 2, Period 2, Outage 1 (B2R10)," dated January 3, 2002
6. Letter from R. P. Lopriore (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 1 90-Day Inservice Inspection Report for Interval 2, Period 2, Outage 2 (B1R11)," dated June 27, 2002
7. Letter from S. E. Kuczynski (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 1 90-Day Inservice Inspection Report for Interval 2, Period 3, Outage 1 (B1R12)," dated January 12, 2004
8. Letter from S. E. Kuczynski (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 2 90-Day Inservice Inspection Report for Interval 2, Period 2, Outage 2 (B2R11)," dated July 2, 2004
9. Letter from S. E. Kuczynski (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 1 90-Day Inservice Inspection Report for Interval 2, Period 3, Outage 1 (B1R13)," dated June 20, 2005
10. Letter from S. E. Kuczynski (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 2 90-Day Inservice Inspection Report for Interval 2, Period 3, Outage 1 (B2R12)," dated January 10, 2006
11. Letter from S. E. Kuczynski (Exelon Generation Company, LLC) to U. S. NRC, "Byron Unit 2 90-Day Inservice Inspection Report for Interval 2, Period 3, Outage 1 (B1R13) – amended page," dated January 31, 2006
12. Letter from D. M. Hoots (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 1 90-Day Inservice Inspection Report for Interval 3, Period 1, Outage 1 (B1R14)," dated January 16, 2007
13. Letter from D. M. Hoots (Exelon Generation Company, LLC) to U. S. NRC, "Byron Station Unit 2 90-Day Inservice Inspection Report for Interval 3, Period 1, Outage 1 (B2R13)," dated July 31, 2007

NRC Request 6

Are bellows used on penetrations through containment pressure-retaining boundaries at Braidwood and Byron? If so, please provide information on their location, inspection, testing and operating experience with regard to detection of leakage through penetration bellows.

ATTACHMENT
Response to Request for Additional Information

Response

There is only one pressure-retaining boundary penetration per unit at Braidwood and Byron that has a bellows. This penetration is around the fuel transfer tube, and is in the fuel transfer canal going between containment and the fuel handling building, which houses the spent fuel pool. These bellows are not regularly inspected. They are tested in accordance with 10 CFR 50, Appendix J. The dates of the last completed test, next planned test, as well as the current test frequency, are provided in response to NRC Request 1 above. No issues with these bellows leaking have been identified at Braidwood and Byron.

NRC Request 7

Please provide information of instances, if any, during implementation of the IWE/IWL CISI program, for each of the units at Byron and Braidwood, where existence of or potential for degradation conditions in inaccessible areas of the containment structure and metallic liner were identified and evaluated based on conditions found in accessible areas as required by 10 CFR 50.55a(b)(2)(viii)(E) and 10 CFR 50.55a(b)(2)(ix)(A). If there were any instances of such conditions, please discuss the findings and actions taken.

Response

There have been no conditions at Byron or Braidwood where existence of or potential for degradation conditions in inaccessible areas of the containment structure and metallic liner were identified and evaluated based on conditions found in accessible areas as required by 10 CFR 50.55a(b)(2)(viii)(E) and 10 CFR 50.55a(b)(2)(ix)(A). However, as discussed below, there are some inaccessible areas below the containment moisture barrier (MB) that have become augmented areas at Braidwood. The MB area has been recognized as an area susceptible to accelerated degradation and aging, as discussed in NRC Information Notice 97-10, "Liner Plate Corrosion in Concrete Containments."

Braidwood MB Degradation

There are approximately 20 localized liner areas that are inaccessible below the containment MB that were identified as augmented areas in March 2000, during Braidwood Unit 1 refueling outage A1R08. There are approximately 80 localized liner areas that are inaccessible below the containment MB that were identified as augmented areas on Unit 2 in May 1999 and October 2000, during refueling outages A2R07 and A2R08. These areas have some pitting (i.e., metal loss) and corrosion. The maximum metal reduction identified was 5/64" and 6/64" deep for Units 1 and 2, respectively, and the liner nominal thickness is 8/32".

The degradation to the liner in these inaccessible areas below the MB is suspected to be the result of MB aging and mechanical damage to the MB from impacts during maintenance activities. This combined with impingement of water, possibly the result of fan cooler condensate leakage, established the conditions for liner degradation. The water had a flow path between the degraded MB and the metal liner, and became entrapped below the Tremco epoxy sealant, which comprises the MB, into the Cerablanket material below it and above the compressible material in the 2" annular space between the basemat and the containment liner.

ATTACHMENT
Response to Request for Additional Information

The surface of the liner remained wetted adjacent to the Cerablanket material, and with the presence of oxygen, the liner coating and liner started to degrade.

As a result, engineering evaluations were performed and corrective actions (i.e., surface preparation of the liner degraded areas, application of new coatings, installation of new MB material, and categorization of the degraded liner as augmented) were taken to prevent further liner degradation. For Unit 1, these actions were completed during the March 2000 refueling outage, and subsequent refueling outages as needed. For Unit 2, these actions were completed during the October 2000 refueling outage, and subsequent refueling outages as needed.

These corrective actions have been determined to be effective, since followup VT-1 and ultrasonic examinations of the augmented liner areas in May 2006 and October 2006 for Units 1 and 2, respectively, have confirmed that the MB was intact prior to removal, and the Cerablanket material below the MB was dry. In addition, negligible changes from the previous augmented examinations in 2003 were found, and no active corrosion was identified. These augmented examinations will be performed again on each unit during the next CISI period.

Byron MB Degradation

Several instances of containment MB degradation were identified in both Byron Units 1 and 2, prior to the implementation of the IWE/IWL CISI program. As a result, the Unit 2 containment MB was completely replaced during the Spring 2001 refueling outage. The Unit 1 containment MB was partially replaced during the Fall 2000 refueling outage to address only the degraded areas, since the scope of degradation was small. The examination of the exposed liner plates directly behind the MB during the replacement activities revealed no liner plate degradation. Therefore, no augmented examinations were required for Byron Units 1 and 2. In addition, since no degradation was found in the exposed areas, no evaluation of inaccessible areas of the liner plate directly behind the MB was necessary.

NRC Request 8

In the fifth paragraph of Section 4.1.3.2 in Attachment 1 of the LAR, it is stated that "As part of the ASME IWL-2521 inspections and tests of post-tensioned tendon systems" A similar reference to ASME IWL-2521 examinations and tests of post-tensioned tendons is made in the sixth paragraph. Staff notes that IWL-2521 relates to only tendon selection and does not include the requirements for inspections, examinations and tests. The requirements for examination of unbonded post-tensioning systems is covered by IWL-2520 in its entirety (IWL-2521 thru IWL 2526) and not just IWL-2521, and therefore the reference to IWL-2521 in this context is not sufficient. Please clarify this reference to the IWL section in the April 4, 2007, submittal with regard to your tendon surveillance program. Also, with regard to the regression analyses of the tendon prestressing forces, please confirm if the analyses were based on individual tendon lift-off forces measured during tendon surveillances and indicate the number of surveillances from which data was used. Also explain the reason why annual grease can inspections in areas susceptible to moisture intrusion is being performed only at Braidwood and not at Byron. Please confirm if accessible grease caps are visually examined as part of the CISI programs at both Braidwood and Byron Stations as required by 10 CFR 50.55a(b)(2)(viii)(A).

ATTACHMENT
Response to Request for Additional Information

Response

The Containment Post Tensioning System Surveillance Program is conducted in accordance with the ASME Code, Section XI. The requirements of Subsections IWA and IWL are implemented in their entirety. In addition, the mandatory requirements and criteria as specified in 10 CFR 50.55a(b)(2)(vi) and (ix) are implemented at Braidwood and Byron.

The regression analysis is performed primarily from data obtained from the control tendon for each group (i.e., vertical, horizontal, and dome groups). Since they have not undergone more than two lift-off inspections, sufficient data is not available for non-control tendons to perform a regression analysis to predict future lift-off forces (i.e., more than two data points are required to identify a trend). Non-control tendon data is, however, considered in the analysis. A set of regression analyses is performed for the control tendons. The results of the regression analyses are then extended to the non-control tendons. Data from surveillance activities extending back to 1987 (i.e., the first surveillance) was used in the regression analysis.

Braidwood conducts an annual examination of grease cans in areas susceptible to moisture intrusion because there has been a history of identification of the existence of free water at specific tendon anchorage locations. These locations are primarily located below grade level. However, free water has been collected from dome tendon anchorage locations. Due to this known condition, grease cans are examined for evidence of water leakage, grease leakage, and conditions that could indicate degradation of the anchorage components. These examinations are performed as an annual surveillance in the summer months when grease leakage would be most likely detected.

Annual examination of grease cans is not performed at Byron because, unlike Braidwood, there is not a history of identification of the existence of free water at specific tendon anchorage locations at Byron. However, Byron conducts visual examination of grease cans in the tendon tunnels on a 20-month frequency due to evidence of minor grease leakage at several locations. This examination frequency is used to identify leaking cans and allow corrective actions to be implemented in a timely manner to prevent significant loss of grease. Grease cans are examined for evidence of water leakage, grease leakage, and conditions that could indicate degradation of the anchorage components.

As required by 10 CFR 50.55a(b)(2)(viii)(A), grease caps installed at Braidwood and Byron are visually inspected during every surveillance with a five year frequency. Each of the grease caps in each unit is inspected for evidence of grease leakage, grease cap deformation, evidence of free water, and evidence of corrosion that challenges the capability of the grease cap to contain the grease.

NRC Request 9

Section 4.1.3.4 of Attachment 1 of the April 4, 2007, submittal states that the Maintenance Rule Baseline Inspections included the internal containment structures. Please explain the relevance of these inspections to the 10 CFR 50 Appendix J Option B Leakage Testing Program. Please identify the pressure-retaining SSCs of the containment system at Braidwood and Byron that

ATTACHMENT
Response to Request for Additional Information

come under the purview of the Appendix J Containment Leakage Testing Program and were included in these inspections.

Response

At Braidwood and Byron Stations, structures including the containment buildings are monitored within the scope of the Maintenance Rule. This monitoring takes credit for the IWE and IWL inspections. The inspections discussed in Section 4.1.3.4 of Attachment 1 of the April 4, 2007, submittal refer to the IWE and IWL inspections, not separate inspections. The Maintenance Rule program does not require any additional inspections of pressure-retaining SSCs of the containment system that come under the purview of the Appendix J Containment Leakage Testing Program.