

# Maine Yankee

321 OLD FERRY RD. • WISCASSET, ME 04578-4922

January 26, 2005

MN-05-003

RA-05-004

## UNITED STATES NUCLEAR REGULATORY COMMISSION

Attention: Document Control Desk

Washington, DC 20555

- References:
- (1) License No. DPR-36 (Docket No. 50-309)
  - (2) Maine Yankee Letter to the USNRC, MN-02-048, dated October 15, 2002, Revision 3, Maine Yankee's License Termination Plan
  - (3) USNRC Letter to Maine Yankee, dated February 28, 2003, Issuance of Amendment No. 168 to Facility Operating License
  - (4) USNRC letter to Maine Yankee, dated August 23, 2002, "Maine Yankee Atomic Power Station re: License Termination Plan Issues"
  - (5) Maine Yankee letter to the NRC, MN-04-035, dated May 13, 2004 "Area Classification Change: Containment Foundation Drain"

Subject: Area Classification Change: Storm Drains (D3500) - Section 7

Maine Yankee is hereby notifying the NRC of its intention to change the classification of a portion of storm drain piping section 7 from Class 1 to Class 3. Maine Yankee will implement this change to the LTP under the provisions of 10 CFR 50.59 within fourteen days of the date of this letter in accordance with LTP Section 5.6.4.

License Termination Plan Section 5, Attachment 5A describes the embedded and buried pipe that will remain on site and identifies the classification and final status survey requirements for each pipe. In this LTP Attachment, storm drain piping sections 5 through 7 are classified as Class 1 buried pipe. This classification change applies to the portion of section 7 storm drain piping upstream of manhole 27 as shown on Figure 1. Attached are revised pages of LTP Section 5, Attachment 5A indicating these changes with respect to the pages submitted in Reference No. 5.

In accordance with Maine Yankee License Termination Plan section 5.6.4, Maine Yankee may reduce an area classification if certain criteria are met and following notification of the NRC. LTP section 1.4.1, requires this notification to be made as early as practical but not less than 14 days prior to implementation. Therefore, Maine Yankee is making this notification to the NRC at least fourteen days in advance of implementing this LTP change and prior to submittal of the FSS Report containing the survey information for the subject survey unit. Maine Yankee plans to submit the final status survey information for buried storm drain piping (FD-3500) in the FSS Final Report No. 8 scheduled for February 17, 2005.

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According to the LTP section 5.6.4, a survey unit (or portion of a survey unit) may be reclassified from Class 1 to Class 3 if it meets certain criteria. This criteria is provided below followed by an evaluation demonstrating how the criteria is satisfied:

1. The survey unit (or portion of a survey unit) to be reclassified as Class 3 would be required to meet Class 3 requirements (per LTP Section 5.2.2), i.e., have a low probability of containing residual radioactivity.

Evaluation:

Section 7 of the Storm Drain System includes manholes 25A, 25B, 38 and 26 to 29. These manholes and connected piping drained the land surrounding the Fire Pond (including the overboard drain for the Fire Pumps), the land around the Warehouse, and the land outside the west boundary of the Restricted Area (RA). This land had been previously surveyed under the FSS program and was found to meet the criteria of Class 3 land. Water entering section 7 was clean (either fire pond water from Montsweag Brook or storm water runoff from the surrounding land and road surfaces). Only the portion of section 7 from the Fire Pond up to, but not including manhole 27 is being reclassified as Class 3.

None of the structures or systems, which drain via this pipe section, had radioactive material present in other than a closed container (viz., the warehouse at times received sealed sources in their original shipping containers.) The Fire Protection System was classified as Class 3 and there was no evidence of contamination detected during characterization and maintenance of the system as a closed, independent system with no active cross-connection to any contaminated system. There is an extremely low probability of section 7 of the Storm Drain System being contaminated.

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2. There is sufficient knowledge regarding the distribution of contamination within the reclassified Class 3 area to support a conclusion that the area has a low probability of containing residual radioactivity.

#### Evaluation

This section was conservatively classified as Class 1 because it joined a portion of the storm drain system at manhole 27 that did drain the north portion of the RA. Manhole 27 is on the down stream portion of section 7 so any minor activity contained in the down stream section would be diluted by clean water coming from section 7. Both section 7 and the section connected at manhole 27 drained to Bailey Cove via outfall 006. Outfall 006 has been routinely monitored and the discharged water has typically been found to be less than MDA values with sporadic positive counts just above the MDA values. MDA's were maintained at approximately environmental LLD's associated with the Radiological Environmental Monitoring Program (REMP).

Table No. 1 presents the outfall monitoring data for the period between January 2004 and termination of the outfall as an overboard discharge point in October 2004. The results show no impact on storm water from any of the areas drained. With no activity detectable in the storm water flow, there is little potential for any activity to be present in, or on, the pipe surface.

Therefore, Maine Yankee believes that there is sufficient historical knowledge regarding the distribution of contamination within the portion of storm drain piping section 7 to support a conclusion that the area has a low probability of containing residual radioactivity.

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**Table No. 1 - 2004 Sample Results from Outfall 006**

Date	H-3 (uCi/ml)	Co-60 (uCi/ml)	Cs-137 (uCi/ml)
1/6/04 <	1.74E-06 <	1.09E-08 <	1.23E-08
1/14/04 <	1.70E-06 <	1.42E-08 <	1.57E-08
1/21/04 <	1.59E-06 <	1.44E-08 <	1.48E-08
1/28/04 <	1.70E-06 <	1.44E-08 <	1.43E-08
2/3/04 <	1.61E-06 <	1.36E-08 <	1.38E-08
2/11/04 <	1.74E-06 <	1.35E-08 <	1.36E-08
2/17/04 <	1.63E-06 <	1.35E-08 <	1.35E-08
2/25/04 <	1.54E-06 <	1.42E-08 <	1.47E-08
3/4/04 <	1.74E-06 <	9.10E-09 <	9.62E-09
3/8/04 <	1.70E-06 <	1.26E-08 <	1.30E-08
3/17/04 <	1.66E-06 <	1.30E-08 <	1.42E-08
3/25/04 <	1.53E-06 <	1.23E-08 <	1.22E-08
4/1/04 <	1.62E-06 <	1.03E-08 <	1.01E-08
4/8/04 <	1.66E-06 <	1.13E-08 <	1.30E-08
4/15/04 <	1.62E-06 <	1.28E-08 <	1.34E-08
4/21/04 <	1.64E-06 <	1.17E-08 <	1.18E-08
4/28/04 <	1.62E-06 <	1.28E-08 <	1.34E-08
5/5/04 <	1.61E-06 <	1.42E-08 <	1.49E-08
5/12/04 <	1.73E-06 <	1.41E-08 <	1.48E-08
5/18/04 <	1.62E-06 <	1.50E-08 <	1.54E-08
5/26/04 <	1.66E-06 <	1.53E-08 <	1.63E-08
6/3/04 <	1.73E-06 <	1.28E-08 <	1.29E-08
6/10/04 <	1.66E-06 <	1.17E-08 <	1.20E-08
6/17/04 <	1.78E-06 <	1.16E-08 <	1.28E-08
6/23/04 <	1.72E-06 <	1.24E-08 <	1.29E-08
7/1/04 <	1.66E-06 <	1.52E-08 <	1.56E-08
7/6/04 <	1.70E-06 <	1.30E-08 <	1.33E-08
7/13/04 <	1.77E-06 <	1.20E-08 <	1.15E-08
7/20/04 <	1.81E-06 <	1.24E-08 <	1.23E-08
7/28/04 <	1.65E-06 <	1.21E-08 <	1.26E-08
8/3/04 <	1.67E-06 <	1.21E-08 <	1.24E-08
8/11/04 <	1.59E-06 <	1.36E-08 <	1.61E-08
8/19/04 <	1.68E-06 <	1.24E-08 <	1.30E-08
8/31/04 <	1.73E-06 <	1.26E-08 <	1.23E-08
9/7/04 <	1.78E-06 <	1.51E-08 <	1.37E-08
9/15/04 <	1.65E-06 <	1.86E-08 <	1.66E-08
9/22/04 <	1.68E-06 <	1.49E-08 <	1.59E-08
9/30/04 <	1.66E-06 <	1.48E-08 <	1.98E-08
10/6/04 <	1.65E-06 <	1.52E-08 <	1.56E-08
10/12/04	N/A	< 1.75E-08 <	2.05E-08

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3. Scan coverage for the reclassified area will meet Table 5-3 requirements.

Evaluation:

LTP Table 5-3 requires the scan coverage for a Class 3 survey unit to be between 1 and 10%. LTP Attachment 5A states that, for Class 3 Survey Units, "the areal extent of the scanning will be determined by engineering judgment and should be in the range of 1 to 10% of the accessible surfaces of the systems." Maine Yankee will apply these scan coverage requirements to the remaining portions of storm drain piping section 7 upstream of the manhole 27.

Based upon the foregoing information, Maine Yankee believes that a reclassification of storm drain section 7 upstream of manhole 27 satisfies the applicable criteria of the License Termination Plan.

If you have any questions, please contact me.

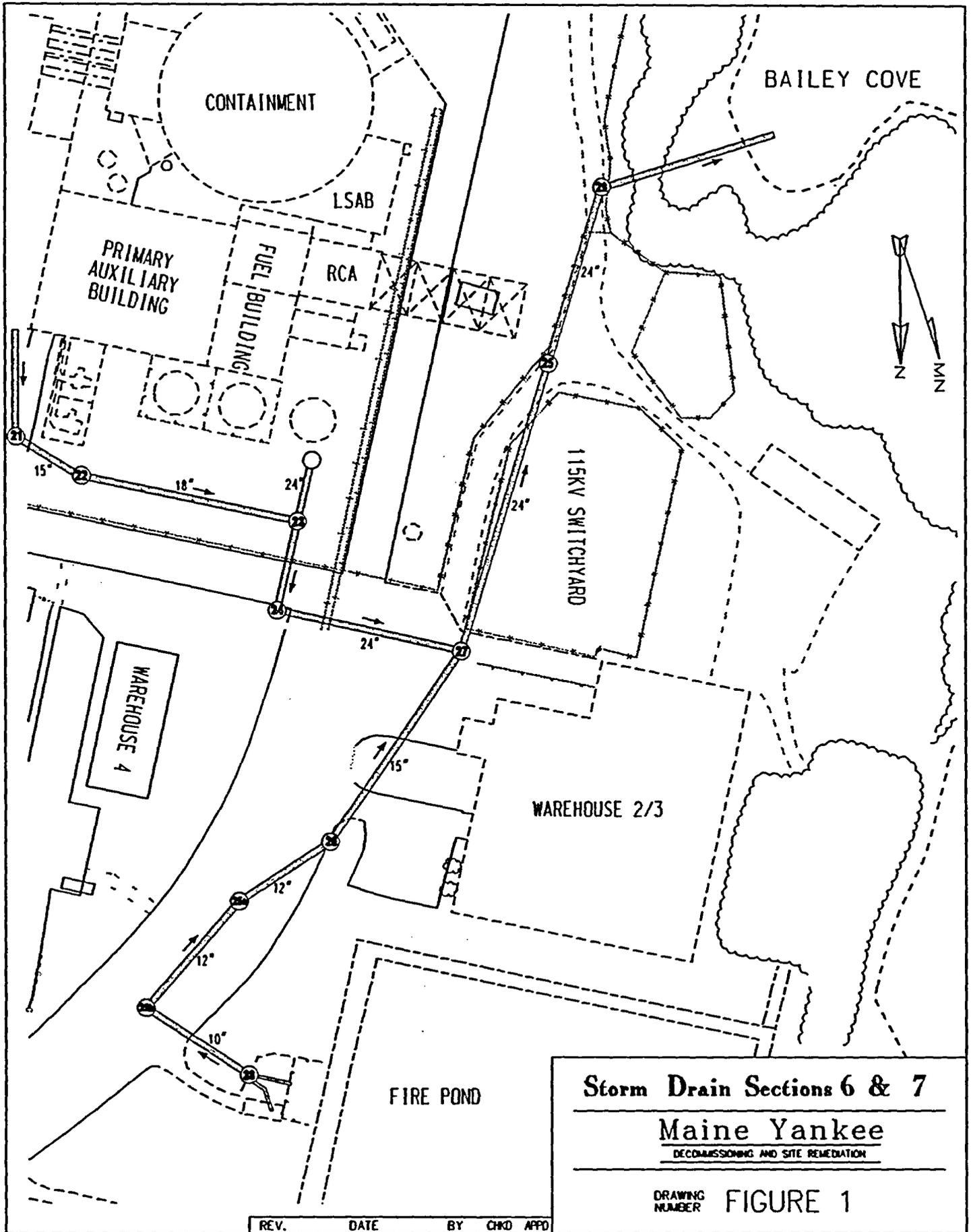
Sincerely,

A handwritten signature in black ink that reads "Michael J. Meisner" followed by "for M.J.M." in a cursive style.

Michael J. Meisner  
Vice President and Chief Nuclear Officer

Attachment: LTP Rev. 3 Addenda dated January 26, 2005 – Attach 5A, pgs. 6 & 8 of 10

cc: Dr. R. R. Bellamy, NRC Region I  
Mr. C. Pray, State of Maine, Nuclear Safety Advisor  
Mr. P. J. Dostie, State of Maine, Division of Health Engineering  
Mr. D. Gillen, NRC Acting Director, Division of Waste Management  
Mr. S. J. Collins, NRC Regional Administrator, Region I  
Mr. J. Buckley, NRC NMSS Project Manager, Decommissioning  
Mr. M. Roberts, NRC Region I  
Mr. R. Shadis, Friends of the Coast



**Storm Drain Sections 6 & 7**  
**Maine Yankee**  
DECOMMISSIONING AND SITE REMEDIATION

DRAWING NUMBER **FIGURE 1**

REV.	DATE	BY	CHKD	APPD

**ATTACHMENT**

**LTP Rev. 3 Addenda dated January 26, 2005 – Attach 5A, pgs. 6 & 8 of 10**

**Residual Contamination Potential:** The Storm Drain piping has a low potential in some legs and a high potential in some legs for residual contamination. Sections 1 through 4 and section 7 upstream of manhole 27 have a low potential for residual contamination. Sections 5 through 7 (downstream of and including manhole 27) have a high potential for residual contamination. Sections 1 through 4 and section 7 upstream of manhole 27 drain areas that have historically been outside the Restricted Area and have a low potential for residual contamination. Sections 5 through 7 (downstream of and including manhole 27) drain areas in and adjacent to the Restricted Area and may have become contaminated due to loose surface contamination in and on yard structures and equipment being washed into the drain legs by rain water runoff and snow melting.

**Survey Units:** The Storm Drain piping may will be divided into two survey units. The first survey unit will include sections 1 through 4 and section 7 upstream of manhole 27 of the piping. The initial MARSSIM classification for this section of the piping will be Class 3. The basis for classification is operational knowledge, survey data obtained for initial site characterization activities and as part of the Continuing Characterization Survey, and results of the Radiological Environmental Monitoring Program. The second survey unit will consist of sections 5 through 7 (downstream of and including manhole 27) of the piping. The initial MARSSIM classification for this section of the piping will be Class 1. The basis for classification is operational knowledge and survey data obtained during initial site characterization and the Continuing Characterization Survey.

#### Roof Drains (D3600)

**System Description:** The Roof Drain (RD) system removed water from the roofs of various site buildings and transferred the water to the Storm Drain system. The Roof Drains from buildings outside the RCA were routed to the Storm Drain piping sections that will be classified as Class 3. The Roof Drains from buildings inside the RCA were routed to the Storm Drain piping sections that will be classified as Class 1.

**Residual Contamination Potential:** Sections of the Roof Drain system outside the RCA have a low potential for residual contamination. Sections of the Roof Drain system inside the RCA have a high potential for residual contamination.

**Survey Units:** The portions of the system that will remain following demolition of above grade structures are buried and embedded sections of the system that are associated with the Storm Drain system. For this reason, the Roof Drains will be surveyed as part of the Storm Drain system.

#### Containment, Primary Auxiliary Building and Containment Spray Building Penetrations (D3700)

**System Description:** Several Containment Building penetrations will remain following demolition of the above grade structure. The penetrations contain embedded piping from numerous primary and secondary systems. The remaining penetrations are as follows:

- Approximately 20 linear feet of up to 1" piping
- Approximately 35 linear feet of 1.5" piping
- Approximately 50 linear feet of 2" piping
- Approximately 35 linear feet of 3" piping
- Approximately 55 linear feet of 4" piping
- Approximately 100 linear feet of 6" piping
- Approximately 45 linear feet of 8" piping
- Approximately 5 linear feet of 10" piping

measurements to be collected. The systematic spacing of the survey measurements is in keeping with the guidance of NUREG-1575 and NUREG-1727. Total Surface Contamination measurements will be collected using a pipe crawler.

Containment Foundation Drains (C2000) - Moved to "Class 2 Survey Units"

Storm Drains (D3500)

Survey Unit: The Class 1 survey unit for the Storm Drain piping consists of the section of the piping bound by Manholes 30A and 31 through 37 and the section of the piping bound by Manholes 21 through 24, ~~25A, 25B, 26~~ through ~~29~~ and 38. The survey unit includes an unnumbered manhole adjacent to the location of tank TK-16 in the Restricted Area yard.

Physical Characteristics: The remaining sections of buried Storm Drains piping consist of both metal and concrete piping. Some of the metal sections are smooth wall and some are corrugated.

Decontamination: The piping will require decontamination prior to performance of the Final Status Survey. The decontamination will consist of removing the sand and sediment from the piping low points and accesses (the manholes). The sand in the piping contains naturally occurring radioactive material.

Scan Surveys: Although this is Class 1 piping, physical access limits available measurement locations and scan survey locations. Therefore, scan surveys for the Storm Drain piping will be limited to accessible portions of the piping. Scan surveys will be performed in areas with the highest potential for contamination based on professional judgment. For this reason, the scan survey will be biased to piping low points and interfaces and the scan survey will be performed in the vicinity of the Total Surface Contamination measurements identified for the piping. Scan surveys will be performed on as much of the interior surfaces of the piping as possible.

Survey Location Designation: Survey measurements for the Storm Drain piping will be collected at existing access points. The locations will be selected based on engineering judgment and biased to areas expected to contain the highest residual activity levels. As the Final Status Survey of the remaining embedded and buried piping for the Storm Drain system will be biased and not random, the minimum number of measurements collected on the system interior surfaces will be the number calculated using the methods described above or 30 measurements, whichever is greater.

Building Penetrations (D3800)

Physical Characteristics: The remaining embedded piping in the Building Penetrations survey unit consists of smooth metal piping surfaces.

Decontamination: The embedded piping remaining in the system will be decontaminated prior to performance of the Final Status Survey.

Scan Survey Coverage: 100% of the accessible system surfaces will receive a scan survey. Sections of embedded piping that are inaccessible will receive 100% gross removable contamination surveys. This will include sections that are too small to allow probe entry into the pipe.

Survey Location Designation: Each penetration will be assigned a number. The number of fixed point measurements will be calculated using the method described in the "sample size determination" section of this plan. The measurements will be randomly assigned to the penetrations. The random measurements will be used due to the difficulty of performing a systematic survey of the penetrations. The penetrations