

Maine Yankee

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

February 28, 2005

MN-05-010

RA-05-012

UNITED STATES NUCLEAR REGULATORY COMMISSION
Attention: Document Control Desk
Washington, DC 20555

- References:
- (1) License No. DPR-36 (Docket No. 50-309)
 - (2) MYAPC Letter to USNRC, MN-00-004, dated January 13, 2000, Maine Yankee License Termination Plan
 - (3) MYAPC Letter to USNRC, MN-01-023, dated June 1, 2001, Revision 1, Maine Yankee's License Termination Plan
 - (4) MYAPC Letter to USNRC, MN-01-032, dated August 13, 2001, Revision 2, Maine Yankee's License Termination Plan
 - (5) MYAPC Letter to USNRC, MN-02-048, dated October 15, 2002, Revision 3, Maine Yankee's License Termination Plan
 - (6) NRC Letter to MYAPC dated February 28, 2003, Issuance of Amendment No. 168 to Facility Operating License No. DPR-36 - Maine Yankee Atomic Power Station (TAC No. M8000)

Subject: Revision 4, Maine Yankee's License Termination Plan

In accordance with 10 CFR 50.71(e), Maine Yankee (MY) hereby submits an update to the License Termination Plan (LTP). The updated LTP (Revision 4) continues to demonstrate that the remainder of decommissioning activities: (1) will be performed in accordance with Title 10 Code of Federal Regulations, (2) will not be inimical to the common defense and security or to the health and safety of the public, and (3) will not have a significant effect on the quality of the environment.

This 10 CFR 50.71(e) update¹ contains changes necessary to reflect current information² and analyses, including NRC approved addenda to LTP Revision 3, approved license amendments, and changes made in accordance with 10 CFR 50.59. The LTP revision history and the update approach to Revision 4 are discussed further below. Attachment 1 provides a summary listing of the key LTP Revision 4 changes. Attachment 2 provides a List of Effective Sections and Attachments (Only those Sections and Attachments requiring update are reflected as "Revision 4". The Sections and Attachments requiring no update remain labeled as "Revision 3"). Attachment 3 provides the complete, updated LTP via CD-ROM. Changes are identified by right margin revision bars.

¹ Also in accordance with LTP Section 1.1 and 1.4.

² Note that Section 3 of the LTP has not been updated to reflect the current status of dismantlement activities. Dismantlement status is being provided via the Final Status Survey (FSS) Reports that are submitted to the NRC for review.

Rec'd 4/4/05
DCW

Maine Yankee LTP Revision History

Reference 2 transmitted the initial Maine Yankee LTP for NRC review and approval. Reference 3 transmitted LTP Revision 1 and reflected changes in the approach for decommissioning and revised criteria for completion of decommissioning activities. LTP Revision 1 also incorporated MY responses to comments and questions from the State of Maine, Friends of the Coast, and the NRC. Reference 4 transmitted LTP Revision 2 which incorporated additional changes resulting from on-going stakeholder interface, as well as internal MY LTP review and refinement. Reference 5 transmitted LTP Revision 3 which incorporated additional changes addressing NRC Requests for Additional Information (RAI), and other decommissioning updates. Reference 6 provided the NRC SER on LTP Revision 3, and incorporated the NRC approved LTP Revision 3 and associated LTP addenda correspondence³ into the MY license.

LTP Revision 4 Update Approach

The LTP is part of the FSAR per 10 CFR 50.82 and therefore the 10 CFR 50.71(e) update rule applies. However, the LTP has certain attributes that make it somewhat different from the FSAR and therefore the update rule is applied in a slightly different manner. First, the LTP is inherently a plan and as such is subject to change. The LTP approval process established the special criteria under which the LTP is changed, identifying which changes require prior NRC notification and/or approval. The second element of the decommissioning licensing process that differs from the FSAR is that the fulfillment of the plan is described in additional submittals to the NRC staff in the form of FSS reports (see footnote 2). These reports describe the final implementation of demolition activities and the approach and results of the final status survey, survey unit by survey unit. As such, updates to the plan, following 10 CFR 50.71(e), include those changes to the plan that: (1) have been submitted to the NRC for review and approval or (2) evaluated and implemented under 10 CFR 50.59 and the special criteria related to changes in the LTP.

Revision 4 also includes another category of changes, namely those submitted to the NRC (after Revision 3 was submitted) during the final stages of the review process. These are referred to as Revision 3 Addenda (see footnote 3). The NRC, in approving the LTP, recognized the approved LTP as Revision 3, including the addenda. Thus, Revision 4 simply incorporates the Revision 3 Addenda changes.

3 Three addenda letters were submitted to the NRC: (1) MN-02-058, LTP Revision 3 Addenda dated November 21, 2002 - Clarifications and Minor Corrections to Maine Yankee License Termination Plan Revision 3; (2) MN-02-061, dated November 26, 2002, Maine Yankee License Termination Plan, Rev. 3 Addenda and Additional Information Related to the Eberline Model E600 Instrument; (3) MN-02-063, dated December 12, 2002, Update on Forebay Dike Coring Results and Associated Changes to LTP Attachment 2H (LTP Revision 3 Addenda).

Finally, it should be understood that Revision 4 does not reflect the current status of plan implementation. That is the role of the FSS Reports.

The following is a description of the change rationale and content, on a section-by-section basis:

Chapter 1 - Changes were primarily to reflect LTP correspondence and revision history.

Chapter 2 - Characterization information was revised, under 10 CFR 50.59, if later remediation, sampling and surveys revealed significant and material changes to site characterization.

Chapter 3 - Information was updated, under 10 CFR 50.59, only if significant and material changes were made to the decommissioning approach for a survey area.

Chapter 4 - No update review was considered warranted for ALARA related analyses. The only change to this section is related to License Amendment 170.

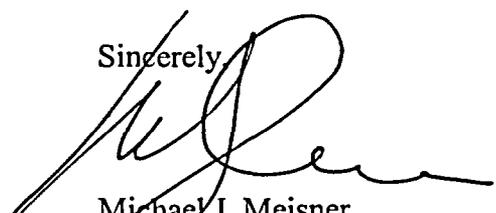
Chapters 5 and 6 - Changes were primarily due to LTP Revision 3 Addenda, changes related to License Amendment 170, and changes implemented under 10 CFR 50.59.

Chapters 7 and 9 - No changes were considered appropriate for Chapters 7 and 9.

Chapter 8 - The only change to this section is related to the Forebay Remediation Plan as approved by Maine Department of Environmental Protection.

If you have any questions, please contact us.

Sincerely,



Michael J. Meisner
Vice President and Chief Nuclear Officer

Attachments

1. Listing of Key Changes - LTP Revision 4
2. List of Effective Sections and Attachments – LTP Revision 4
3. License Termination Plan, Revision 4 (CD-ROM)

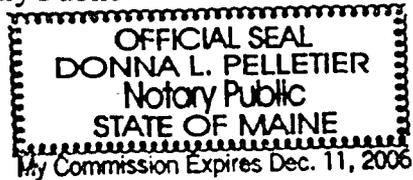
cc: Dr. R. R. Bellamy, NRC Region I
Mr. D. R. Lewis, Esq., Shaw Pittman
Mr. C. Pray, State of Maine, Nuclear Safety Advisor
Mr. P. J. Dostie, State of Maine, Division of Health Engineering
Mr. L. Camper, Director, Division of Waste Management
Mr. M. Rosenstein, USEPA Region I
Mr. S. J. Collins, NRC Regional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

STATE OF MAINE

Then personally appeared before me, Michael J. Meisner, who being duly sworn did state that he is the Vice President and Chief Nuclear Officer of Maine Yankee Atomic Power Company, that he is duly authorized to execute and file the foregoing request in the name and on the behalf of Maine Yankee Atomic Power Company, and that the statements therein are true to the best of his knowledge and belief.

Donna L. Pelletier

Notary Public



Attachment 1

Listing of Key Changes - LTP Revision 4

LTP Section	LTP Section Title	Source of LTP Change⁴
1.2 and 1.7	“Operating and Decommissioning History” and “References”	MY and NRC correspondence submitting and approving LTP Revision 3 and associated Addenda
1.6 & Preface	Maine Yankee LTP Information Contact	Updated contact information
2.5.3.b	Activated Concrete / Rebar	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170)
2.5.3.d	Nuclide Profile - Groundwater and Surface Water	LTP Revision 3 Addenda dated November 21, 2002 - Clarifications and Minor Corrections to Maine Yankee License Termination Plan Revision 3 (HSA, background, groundwater, and miscellaneous) (MN-02-058)
2.7	References (2.7.24 & 2.7.25)	LTP Revision 3 Addenda dated November 21, 2002 - Clarifications and Minor Corrections to Maine Yankee License Termination Plan Revision 3 (HSA, background, groundwater, and miscellaneous) (MN-02-058)
2.7	References (2.7.26)	LTP Revision 3 Addenda dated December 12, 2002, Update of Forebay Dike Coring Results and Associated Changes to LTP Attachment 2H (LTP Revision 3 Addenda) (MN-02-063)
Attachment 2A.3	Non-Impacted Area Assessment - Historical Site Assessment	LTP Revision 3 Addenda dated November 21, 2002 - Clarifications and Minor Corrections to Maine Yankee License Termination Plan Revision 3 (HSA, background, groundwater, and miscellaneous) (MN-02-058)

⁴ All changes were made either (1) as a result of prior NRC approval (noted as “License Amendment” or “LTP Revision 3 Addenda”) or (2) under the provision of 10 CFR 50.59 (all other changes.)

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change⁴
Attachment 2B Table 2B-8	Radiological Characterization Water Sample Results for Affected and Unaffected Environs, Including Environs Background Study	LTP Revision 3 Addenda dated November 21, 2002 - Clarifications and Minor Corrections to Maine Yankee License Termination Plan Revision 3 (HSA, background, groundwater, and miscellaneous) (MN-02-058)
Attachment 2F – Page 5,6	Analysis of Concrete Sample Variance	Maine Yankee Letter MN-03-023, May, 6, 2003, "Maine Yankee Comments on NRC's Safety Evaluation on the Maine Yankee License Termination Plan." Comment 11 - Clarification of the second evaluation of the individual core data set.
Attachment 2H	Forebay and Diffuser Characterization Discussion	LTP Revision 3 Addenda dated December 12, 2002, Update of Forebay Dike Coring Results and Associated Changes to LTP Attachment 2H (LTP Revision 3 Addenda) (MN-02-063)
3.1.3	Introduction - Decontamination & Dismantlement Process Summary	Free release process of PMP 6.0.22 summarized in LTP Section 3.1.3 in accordance with ASLB Settlement Agreement No. A.3 closure discussions
3.1.3	Introduction - Decontamination & Dismantlement Process Summary	FSS Survey Area Turnover and Control (PMP 6.7.5) - Clarifies requirements for confirmatory measurements on the surface of soil fill material after super structure demolition
3.2.1	Major Decommissioning Activities	Update on completed activities
4.2.1	Remediation Actions / Structures	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170 - Realistic Release Rates for Activated Concrete)
4.2.1 Attachment 4C	Structures Remediation Surveys - Gamma Scans	Remediation Surveys - Structural Concrete Gamma Scans description
4.4.3.b	Remediation Methods and Cost / Structure Activated Concrete	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170 - Realistic Release Rates for Activated Concrete)

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change⁴
5.1.2.a	Introduction - Overview - Survey Preparation	FSS Survey Area Turnover and Control (PMP 6.7.5) - Turnover surveys made optional and equipment staging in survey areas revised to address loose contamination on external surfaces (PMP 6.7.5)
5.2.3 Table 5-1E	Initial Classification of Basements, Land, Embedded Piping and Buried Piping Table 5-1E Survey Area Classification - Embedded and Buried Pipe	Maine Yankee letter to NRC dated May 13, 2004, Reassessment of Area Classification of Containment Foundation Drains from Class 1 to Class 2 and Revision of FSS Requirements
5.3.1.a Table 5-2	Establishing Survey Units - Survey Unit - Survey Unit Size - Table 5-2	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from Amendment 170)
5.4.3 & 5.12.35	Background Reference Areas	Added reference to Background White Paper per NRC staff recommendation
5.5.1 and 5.12.37 and 5.12.38	“Survey Measurement Methods” and “References”	Maine Yankee Letter to NRC, MN-03-051, dated September 3, 2003, “Technical Basis Document for NRC Review - Forebay FSS Survey Measurement Methods (In-Situ Gamma Spectroscopy) - 30 Day Notice per LTP Requirement” and Maine Yankee Letter to NRC, MN-03-067, dated October 21, 2003, “Maine Yankee Response to NRC and State of Maine Comments on the Technical Basis Document for NRC Review - Forebay FSS Survey Measurement Methods (In-Situ Gamma Spectroscopy)”
5.5.1.a	Survey Methods and Instrumentation - Survey Measurement Methods - Structures	Use of SPA-3 Gamma Detector for Concrete FSS Scans to Reduce the amount of smoothing needed during Concrete Remediation (PMP 6.7.1)
5.5.1.a	Survey Methods and Instrumentation - Survey Measurement Methods – Structures – Concrete with Activated Radionuclides	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170 – Realistic Release Rates for Activated Concrete)

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change⁴
5.5.1.d	Survey Methods and Instrumentation - Survey Measurement Methods - Specific Areas and Conditions	Add method for surveying & reusing class 1 & 2 stored excavated soil
5.5.2.d	Instrumentation - Minimum Detectable Concentration - Open Land Area and Structure Scan MDC Using Alarm Set Point	LTP Revision 3 Addenda dated November 26, 2002, Maine Yankee License Termination Plan, Rev. 3 Addenda and Additional Information Related to the Eberline Model E600 Instrument (MN-02-061)
5.5.2.d	Instrumentation - Minimum Detectable Concentration - Open Land Area and Structure Scan MDC Using Alarm Set Point - Maximum scan grid size of 10 m ² .	Revised Report on Eberline Model E-600 Field Testing (MN-03-009) - Maine Yankee Response to SOM Comment No. B.5
5.12.36	Reference MN-03-009	Revised Report on Eberline Model E-600 Field Testing (MN-03-009) - Maine Yankee Response to SOM Comment No. B.5
5.5.2.d	Instrumentation - Minimum Detectable Concentration - Open Land Area and Structure Scan MDC Using Alarm Set Point	Use of SPA-3 Gamma Detector for Concrete FSS Scans to Reduce the amount of smoothing needed during Concrete Remediation (PMP 6.7.1)
Table 5-5 and Table 5-6	“Survey Instrument Efficiencies” and “Measurement Detection Sensitivities”	Updated with current FSS instrument efficiencies
5.5.2.e Table 5-6	Instrumentation - Detection Sensitivities	LTP Revision 3 Addenda dated November 26, 2002, Maine Yankee License Termination Plan, Rev. 3 Addenda and Additional Information Related to the Eberline Model E600 Instrument (MN-02-061)
5.5.2.e Table 5-6	Instrumentation - Detection Sensitivity - Table 5-6	Use of SPA-3 Gamma Detector for Concrete FSS Scans to Reduce the amount of smoothing needed during Concrete Remediation (PMP 6.7.1)
5.5.2.e Table 5-6	Instrumentation - Detection Sensitivity - Table 5-6	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170 – Realistic Release Rates for Activated Concrete)

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change⁴
5.6.1 Table 5-7	Investigation Levels and Elevated Areas Test - Investigation Levels	LTP Revision 3 Addenda dated November 26, 2002, Maine Yankee License Termination Plan, Rev. 3 Addenda and Additional Information Related to the Eberline Model E600 Instrument (MN-02-061)
5.6.2	Investigation Levels and Elevated Areas Test - Investigation Process	LTP Revision 3 Addenda dated November 26, 2002, Maine Yankee License Termination Plan, Rev. 3 Addenda and Additional Information Related to the Eberline Model E600 Instrument (MN-02-061)
5.6.2	Investigation levels and Elevated Areas Test - Investigation Process	Spray Building Survey Unit 1 Release Record - Clarify requirements for investigations
5.6.3	Investigation Levels and Elevated Areas Test - Elevated Measurement Comparison (EMC)	LTP Revision 3 Addenda dated November 26, 2002, Maine Yankee License Termination Plan, Rev. 3 Addenda and Additional Information Related to the Eberline Model E600 Instrument (MN-02-061)
5.6.3	Investigation Levels and Elevated Areas Test - Elevated Measurement Comparison (EMC)	Evaluation of LTP Change: Elevated Measurement Comparison (EMC) Unity Rule (PMP 6.7.4)
5.9.2	Reporting Format - Survey Unit Release Record	FSS Data Processing and Reporting (PMP 6.7.8) - Minor reorganization of information included in release record and FSS report
5.9.3	Reporting Format - Final Status Survey Report	FSS Data Processing and Reporting (PMP 6.7.8) - Minor reorganization of information included in release record and FSS report
5.10.1.b	FSS Quality Assurance Program (QAP) - Project Management and Organization - Superintendent of Radiation Remediation	FSS Survey Area Turnover and Control (PMP 6.7.5) - Turnover surveys made optional and equipment staging in survey areas revised to address loose contamination on external surfaces (PMP 6.7.5)
5.11.1.d	Access Control Measures - Turnover	FSS Survey Area Turnover and Control (PMP 6.7.5) - Turnover surveys made optional and equipment staging in survey areas revised to address loose contamination on external surfaces (PMP 6.7.5)

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change^d
5.12	References (5.12.34)	Use of SPA-3 Gamma Detector for Concrete FSS Scans to Reduce the amount of smoothing needed during Concrete Remediation (PMP 6.7.1)
Attachment 5A	Embedded and Buried Piping Remaining on Site	Maine Yankee letter to NRC dated January 26, 2005, Area Classification Change: Storm Drains (D3500) - Section 7
Attachment 5A	Embedded and Buried Piping Remaining on Site	Maine Yankee letter to NRC dated May 13, 2004, Reassessment of Area Classification of Containment Foundation Drains from Class 1 to Class 2
6.6.1.b	Material Specific Dose Assessment Methods and Unitized Dose Factors - Contaminated Basement Surfaces - Mathematical Model	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
6.6.1.d	Material Specific Dose Assessment Methods and Unitized Dose Factors - Contaminated Basement Surfaces - Model Input Parameters	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
6.6.2 Table 6-5	Activated Basement Concrete / Rebar	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
6.6.9 Table 6-10B	Forebay and Diffuser	Elimination of unnecessary conservatism in the Forebay ledge and dike soil DCGLs
6.7 Table 6-11	Material Specific DCGLs and Total Dose Calculation - Table 6-11 Contaminated Material DCGL	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
Table 6-11	Table 6-11 Contaminated Material DCGL	Deep Soil Co-60 DCGL Change - to restore the original intent of the License Termination Plan to simplify dose modeling by restricting the Deep Soil DCGL to be the same as the Surface Soil DCGL.

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change⁴
6.7.2	Activated Concrete/Rebar	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
6.8.1	Area Factors: Basement Contamination	Evaluation of LTP Change: Elevated Measurement Comparison (EMC) Unity Rule (PMP 6.7.4)
6.8.1	Area Factors: Basement Contamination	Allows the use of either Equation 19 or 20 of LTP Section 6.8.1 for the Area Factor used in the Unity Rule for contaminated basement concrete (restricting the number of elevated areas in a survey unit).
6.8.2 Table 6-12	Surface Soil and Deep Soil Area Factors	LTP Revision 3 Addenda dated November 21, 2002 - Clarifications and Minor Corrections to Maine Yankee License Termination Plan Revision 3 (HSA, background, groundwater, and miscellaneous) (MN-02-058)
6.8.5	Activated Concrete/Rebar Area Factors	<ul style="list-style-type: none"> • Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete) • Allows the use of either Equation 19 or 20 of LTP Section 6.8.1 for the Area Factor used in the Unity Rule for activated concrete (restricting the number of elevated areas in a survey unit).
6.10.7 6.10.8	References	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
Attachment 6-6	Activated Concrete Inventory - Deleted	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)

Attachment 1

LTP Section	LTP Section Title	Source of LTP Change⁴
Attachment 6-13	Attachment 6-13 DCGL/Total Dose Spreadsheets	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
Attachment 6-13	Attachment 6-13 DCGL/Total Dose Spreadsheets	Deep Soil Co-60 DCGL Change - to restore the original intent of the License Termination Plan to simplify dose modeling by restricting the Deep Soil DCGL to be the same as the Surface Soil DCGL.
Attachment 6-17	Unitized Dose Factors for Activated Rebar - Deleted	Decrease soil DCGL inside RA to 2.39 pCi/g and use building specific surface area to volume ratio for containment (resulting from License Amendment 170– Realistic Release Rates for Activated Concrete)
Attachment 6-20	Dose Model Input Parameters	New attachment per ASLB Settlement Agreement No. A.8
8.2 8.9.40	Site Description after License Termination	Maine Yankee letter to NRC dated February 24, 2003, Maine Yankee Forebay Remediation Plan Approved by Maine Department of Environmental Protection (MDEP)(MN-03-008) - Forebay “end state”

Attachment 2

LTP Revision 4 - List of Effective Sections and Attachments

Section / Attachment	Revision Number	Comments
Preface	4	
1	4	
Attachment 1A	3	
2	4	
Attachment 2A	4	
Attachment 2B	4	
Attachment 2C	3	
Attachment 2D	3	
Attachment 2E	3	
Attachment 2F	4	
Attachment 2G	3	
Attachment 2H	4	
Attachment 2I	3	
3	4	
Attachment 3A	3	
4	4	
Attachment 4A	3	
Attachment 4B	3	
Attachment 4C	4	New Attachment
5	4	
Attachment 5A	4	
6	4	
Attachment 6-1	3	
Attachment 6-2	3	
Attachment 6-3	3	
Attachment 6-4	3	
Attachment 6-5	3	
Attachment 6-6	4	deleted

Attachment 2

Section / Attachment	Revision Number	Comments
Attachment 6-7	3	
Attachment 6-8	3	
Attachment 6-9	3	
Attachment 6-10	3	
Attachment 6-11	3	
Attachment 6-12	3	
Attachment 6-13	4	
Attachment 6-14	3	
Attachment 6-15	3	
Attachment 6-16	3	
Attachment 6-17	4	deleted
Attachment 6-18	3	
Attachment 6-19	3	
Attachment 6-20	4	new attachment
7	3	
8	4	
9	3	

Attachment 3

**MAINE YANKEE LICENSE TERMINATION PLAN
REVISION 4
(Enclosed CD-ROM)**