

NRC STAFF GUIDANCE ON ASSESSING RESIDUAL RADIOACTIVITY AND
THE NEED TO CONSIDER REMEDIATION PRIOR TO
DECOMMISSIONING TO MEET REGULATORY REQUIREMENTS

In 1997, NRC modified 10 CFR 20 by specifying that criteria for license termination would be calculated dose. The license termination rule (LTR) also requires license applicants to demonstrate how the proposed facility will minimize the introduction of radiological contamination into the environment. In 2003, the Commission approved rulemaking to reduce the likelihood of future legacy sites – those with insufficient resources to complete decommissioning, and the final Decommissioning Planning Rule (DPR) was published on June 17, 2011, and is effective on December 16, 2012. Simply stated, the DPR extends the LTR requirements to existing licensees. The rule also explicitly states that the subsurface must be included in the required surveys.

Identifying the frequencies and locations, in all three dimensions, of sampling is an essential part of an effective monitoring program. In addition to monitoring inside buildings, locating wells downstream from, and close to, potential leaks and spills requires knowledge of the subsurface hydrogeology and the plant physical layout. The procedure establishing the frequency of sampling should include variables to account for infrequent natural events and facility upsets. Records of all results, including no detects, becomes the basis for a sampling scheme to demonstrate compliance with release criteria at license termination. Licensees should also consider how best to deal with identified contamination. Experience demonstrates that prompt remediation of contamination that can migrate through the subsurface is less costly than delaying action until license termination.

Staff guidance on implementing the DPR is in Draft Regulatory Guide DG-4014. NRC plans to issue it for public comment in November. There will be a public workshop about the middle of the 60 day comment period.

Staff is currently developing a technical basis for a potential rule that would require prompt remediation for some conditions. Staff will send recommendations to the Commission in spring 2012.



NRC'S DECOMMISSIONING PLANNING RULE

AND FOLLOW-ON ACTIVITIES



HISTORY OF THE DPR

- SUBPART E TO PART 20 (JULY, 1997)
 - DOSE LIMITS FOR LICENSE TERMINATION
 - APPLICANTS TO MINIMIZE CONTAMINATION
- SECY-03-0069 (JUNE 2003)
- LIQUID RELEASE TASK FORCE (SEP 2006)



DECOMMISSIONING PLANNING RULE

- MINIMIZE INTRODUCTION OF CONTAMINATION
- MONITOR SITE INCLUDING SUBSURFACE
- KEEP IN DECOMMISSIONING RECORDS
- UPDATE FINANCIAL ASSURANCE



DPR SURVEYS AND RECORDS

- MODIFIES §20.1501(a) SURVEYS
 - EXPLICITLY INCLUDES SUBSURFACE
 - DOES NOT CHANGE "NECESSARY [AND] REASONABLE" SURVEYS
- ADDS NEW §20.1501(b)
RECORD RESULTS IN RECORDS IMPORTANT TO DECOMMISSIONING



DPR GUIDANCE

- DRAFT REGULATORY GUIDE DG-4014
 - MINIMIZE NEW CONTAMINATION
 - CONDUCT SURVEYS OF SITE
 - RETAIN RECORDS OF SURVEYS
- NUREG-1757 V. 3 R. 1
 - PLAN TO PAY FOR ACTUAL REMEDIATION
 - CHANGES TO REPORTING AND INSTRUMENTS



DG-4014: CONDUCT SURVEYS

- SURVEYS PER § 20.1501(a)
 - SURFACE
 - ACCESSIBLE AREAS
 - NOT READILY ACCESSIBLE
 - SUBSURFACE IS EXPLICIT REQUIREMENT
 - NEAR TO POTENTIAL SOURCES
 - IN GW FLOW PATHS (DOWNSTREAM)
 - NEI-07-07 OBJECTIVES MEET RULE INTENT



DG-4014: KEEP RECORDS

- RECORDKEEPING PER § 20.1501(b)
 - RETAIN SURVEY RESULTS WITH “RECORDS IMPORTANT TO DECOMMISSIONING”
 - SIGNIFICANT RESIDUAL RADIOACTIVITY REQUIRES REMEDIATION AT TIME OF LICENSE TERMINATION FOR UNRESTRICTED RELEASE
 - BASES FOR CHARACTERIZATION SURVEYS AT LICENSE TERMINATION



DG-4014: FINANCES

- UPDATE FINANCIAL ASSURANCE
 - DETAILS IN RG-1.159 & NUREG-1757 V. 3 R. 1
 - ESTIMATE COST TO REMEDIATE
 - JUSTIFY REMEDIATION SCHEDULE
 - ARRANGE FOR SUFFICIENT FUNDS
 - §50.75 major factors that could affect the cost
 - §50.82 site-specific cost estimate



GUIDANCE SCHEDULE

- DG-4014 SCHEDULED FOR 60-DAY PUBLIC COMMENT PERIOD NOVEMBER 2011
- PUBLIC WORKSHOP ABOUT DECEMBER
- FINAL GUIDE, RG-4.22, ABOUT APRIL 2012



FOLLOW-ON ACTIVITIES

- STAFF REQUIREMENTS MEMO FOR DPR: TECHNICAL BASIS FOR NEW RULE TO MANDATE PROMPT REMEDIATION
 - ADDRESS REMEDIATION DURING OPERATIONS
 - SEEK PUBLIC COMMENT, HOLD WORKSHOP
 - DEFINE CRITERIA TO REQUIRE ACTION



EARLY REMEDIATION ALTERNATIVES

- KEEP CURRENT PRACTICE – CASE-BY-CASE
- SPECIFY LIMITS (RULE) TO REQUIRE ACTION
- POLICY TO ADDRESS SPECIFIC SITE CONDITIONS



SCHEDULE FOR FOLLOW-ON

- PUBLIC INPUT (WEBINAR) JULY 2011
- RECOMMEND TO COMMISSION APRIL 2012
 - PUBLIC COMMENT PERIOD CLOSED SEP. 16
 - INTERNAL REVIEW FALL 2011
- RESPOND TO COMMISSION DIRECTION



QUESTIONS

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