June 8, 2010

MEMORANDUM TO: Larry W. Camper, Director
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

THRU: Keith I. McConnell, Deputy Director **/RA/**
Decommissioning and Recovery
Licensing Directorate
Division of Waste Management
and Environmental Protection
Office of Federal and State Materials
and Environmental Management Programs

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SUBJECT: INTEGRATED DECOMMISSIONING IMPROVEMENT PLAN REVISION 3 — FY 2010 KNOWLEDGE MANAGEMENT AND OTHER IMPROVEMENT TASKS FOR URANIUM RECOVERY CLOSURE AND DECOMMISSIONING

During FY 2004, the staff developed a process for “continuous improvement”, which resulted in periodically identifying improvements to the Decommissioning Program and documenting them in the Integrated Decommissioning Improvement Plan (IDIP). The staff has identified a list of improvement tasks and documented them as IDIP Revision 3. This latest revision expands the original scope of IDIP to include improvements for the Uranium Recovery Closure Program and to emphasize knowledge management activities to preserve and

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transfer knowledge from experienced staff to staff that are new to the program or have new responsibilities in the program. The enclosed list of tasks will be added to the Operating Plan along with staff assignments and schedules to ensure proper implementation.

Enclosure: IDIP Revision 3

cc: DURLD staff
PAB staff

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OFC	DWMEP	DWMEP	DWMEP	DWMEP	DWMEP	DWMEP	DWMEP	DWMEP
NAME	RJohnson	TRowe	LChang	CMcKenney	RTadesse	BVonTill	BWatson	KMConnell
DATE	4/15/10	4/15/10	4/15/10	5/15/10	5 /3/10	5/13/10	5/2/10	06/8/10

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INTEGRATED DECOMMISSIONING IMPROVEMENT PLAN, REVISION 3
FY 2010 KNOWLEDGE MANGEMENT AND OTHER IMPROVEMENT TASKS FOR URANIUM RECOVERY CLOSURE AND DECOMMISSIONING

Background:

During FY 2009, all Division of Waste Management and Environmental Protection (DWMEP) staff involved with the Uranium Recovery Closure and Decommissioning Programs was asked to recommend tasks that could improve its work. The staff was encouraged to focus on improvements in the areas of knowledge management and uranium recovery closure. Over 20 staff members submitted 50 recommendations. Each recommendation included a statement of the scope, product, and benefit to the program. The recommendations were grouped into: 1) knowledge management tasks; 2) new code development and training; and 3) business process improvements. Subsequently, the branch chiefs reviewed the recommendations and approved the tasks listed below based on the benefits and available resources. These approved tasks will be added to the Operating Plan along with staff assignments and schedules to ensure proper implementation. Descriptions of the tasks are given in the attachment and should be used as a starting point to understand the scope and product for each task. The tasks listed below have a number that refers to the numbered descriptions in the attachment.

During FY 2004, the staff prepared the first Integrated Decommissioning Improvement Plan (IDIP) that documented planned improvements directed by the Commission (License Termination Rule Analysis SRM-SECY-03-0069) and identified by the staff in its Program Evaluation of the Decommissioning Program during FY 2003. Subsequently, the staff developed a process for "continuous improvement" which resulted in periodically identifying additional improvements to the Decommissioning Program and documenting them in IDIP Revision 1 in March 2005 and Revision 2 in April 2007. The improvement tasks listed below are documented as IDIP Revision 3. As mentioned above, IDIP Revision 3 expands the original scope of IDIP to include improvements for the Uranium Recovery Closure Program. IDIP Revision 3 also reflects an emphasis on knowledge management activities to preserve and transfer knowledge from experienced staff to staff that are new to the program or have new responsibilities in the program. Finally, the process for identifying improvements in IDIP Revision 3 used an approach where all staff were asked to identify improvements to the program based on their own work experience.

FY 2010 Tasks:

1. Collect and consolidate uranium recovery closure and transition guidance (17,18)

    a. Collect old UR Management Directives and site specific documents (Brandt) Completed
    b. Catalogue locations of UR Management Directives and site specific documents (Brandt) 6/10
    c. Input UR Management Directives into ADAMS (Conway) 6/10
    d. Input site specific documents into ADAMS (Buckley, Shepherd, Chang, Conway, Brandt, Carter) 7/10

Enclosure

e. Evaluate UMTRCA Project Information package and consider updating (Gillen/Chang) 8/10
f. Clearly define the closure process with DOE and licensees (Gillen/Chang) 12/10
g. Consolidate material similar to Decommissioning Consolidation (Gillen/Chang)

1. Draft 8/11
2. Final 8/12

2. Evaluate further consolidation of decommissioning guidance

a. Consolidate guidance for Test and Research Reactor decommissioning in NUREG-1737 into NUREG-1757 (Hickman) (10)
b. Consolidate guidance for Power Reactors into NUREG-1757 (Banovac) (11)

3. Prepare interim guidance for selected decommissioning topics

Focus on the following topics that have lessons learned from staff reviews that should be documented for licensees and staff future use. Prepare interim guidance and add to the Decommissioning web site. Consider revising formal guidance in the future when enough changes are needed to be cost effective and justify the two-year formal process. Erosion control guidance applies to both uranium recovery closure sites and decommissioning sites

a. Model abstraction of complex groundwater sources (Arlt) (5)
b. Use of site-specific Kds (Barr) (7)
c. Sensitivity and uncertainty (Esh) (8)
d. Partial site release (Schwartzman) (9)
e. Cost benefit analysis/ALARA (DSchmidt) (27)
f. Erosion control design challenges and rock placement procedures (TJohnson) (2)
g. Erosion control rock durability analyses and rock selection procedures (RJohnson) (3)

4. Collect, preserve, and transfer knowledge from staff reviews

Develop products that record staff's review knowledge in an appropriate product such as a desk guide/notebook or internal report. Work on the following topics and others as approved by the branch chief. Conduct staff seminars on selected topics to transfer review experience and lessons learned.

a. Erosion control site summaries for UR sites and West Valley (TJohnson) (2)
b. Erosion control rock durability desk guide (RJohnson) (4)
c. Plant transfer factor desk guide (Grossman) (6)
d. Sensitivity and uncertainty desk guide (Esh) (8)
e. Erosion control knowledge transfer from TJohnson to DMandeville (28)
f. Knowledge transfer seminars (1,12)

1. NRC/EPA MOU (RChang)
2. International decommissioning trends (G.Gnugoli, completed)
3. NRC involvement with military remediation (RJohnson)
4. Others approved by branch chiefs

5. Evaluate regulatory significance of engineered cover research (Benson Report) (14)

   a. Establish Engineered Cover Technical Group (completed) (HArlt, DMandeville, GAlexander, TJohnson, RJohnson, JPhillip)
   b. Evaluate significance to NRC regulated sites and recommend actions
   c. Evaluate need for revised guidance

6. New training and development

   a. Provide the upgraded NRC F-104 training course on Health Physics for Uranium Recovery completed in FY 2009 to the Agreement States (BWatson) (22)
   b. Incorporate Radiation Survey Instrumentation and Scan MDSs for Uranium Recovery Facilities completed in FY 2009 into the F-104 training course (BWatson) (23)
   c. Conduct HP workshop on Radon 222 and Progeny and incorporate into the F-104 training course (TYoungblood/BWatson) (24)
   d. Sponsor a new training class on Visual Sample Plan to support decommissioning radiological surveys for hard-to-detect radionuclides (BWatson) (25)
   e. Provide the F-104 course to a group of international regulators from Europe and Asia (BWatson) (26)

7. Business processes

   a. Conduct staff qualification program (TCarter)
   b. UR closure site coordination meetings (RChang) (20)
   c. Evaluate UR “go-bys” and develop PM aid (sample letters, review documents) (17)
   d. Improve UR DOE transition process (site transfer protocol, quarterly calls; annual inspections and report reviews) (19)
   e. Seek additional UR closure improvement from staff with historical experience (21)
   f. Clarify review responsibilities for reactor decommissioning financial assurance, revise P&PL (TSmith) (15)
   g. Document Part 72 general license process and roles (JShepherd) (13)
   h. Clarify power and test reactor decommissioning transfer process with NRR (Hickman) (16)

ATTACHMENT
DESCRIPTION OF KNOWLEDGE MANAGEMENT AND OTHER IMPROVEMENT TASKS

Topic	Description	Benefit	Product
Topic 1 (#19) NRC/EPA Memorandum of Understanding Training	Staff would create a refresher seminar for all new and existing staff in headqarters and the regions to remind them of their obligations under the NRC/EPA MOU.	With this seminar, it is expected that NRC staff will not miss any licensing deadlines due to MOU interactions.	Hourly seminar on the NRC/EPA MOU.
Topic 2 (#22) Erosion Control Design Challenges and Procedures	This topic would include: examples from NRC reviews of erosion control challenges and mitigation with design controls; development of technical bases for erosion protection designs; sediment evaluation and prediction; gully headcut prediction; use of redundant conservative designs; case studies; development of a hypothetical site that illustrates a range of design challenges together with mitigating design approaches; and an annotated outline for rock placement procedures and inspections. This topic would also include site summaries documenting erosion control designs and challenges at sites NRC regulates including Title I, Title II, WIR, and West Valley sites.	The recommended knowledge management and interim guidance topics will benefit near-term and future projects in decommissioning, uranium recovery, and WIR. Site summaries document knowledge and design challenges for future reviewers of Title I and II sites. The design challenges topic also would be useful for the review of the five new applications for conventional mills that would likely have some types of erosion controls.	Prepare knowledge management products, such as site summaries, Q & As, lessons learned, and case study notebooks, which discuss approaches, lessons learned, and give examples where appropriate. Also, the Q & As and lessons learned could be used to eventually prepare interim guidance and revised guidance in NUREG-1757 and NUREG-1623 for the topics or simply incorporated in a new Appendix as has already been done in NUREG-1757.

Topic	Description	Benefit	Product
Topic 3 (#23) Erosion Control Rock Durability Analyses and Procedures	This topic would include: petrographic and X-ray diffraction analyses and examples to identify and quantify adverse minerals and alteration; representative sampling approaches; rock durability analogue examples for key rock types; use of rock analogues to evaluate future weathering effects; example weathering rate studies; approaches for selecting rock sources; annotated outline for rock removal procedures; and methods for mitigating marginal rock quality and adverse rock features (e.g., oversizing, overthickening, and procedures to avoid features during removal).	The recommended knowledge management and interim guidance topics will benefit near-term and future projects in decommissioning, uranium recovery, and WIR. The rock durability topic would be useful for the review of the five new applications for conventional mills that would likely have some types of erosion controls. Four applications are expected in FY 2010 and early FY 2011. Interim guidance or Q & As or lessons learned could be provided to these applicants early in FY 2010 along with existing guidance for use in preparing their submittals.	Prepare knowledge management products, such as Q & As, lessons learned, and case study notebooks, which discuss approaches, lessons learned, and give examples where appropriate. Also, the Q & As and lessons learned could be used to eventually prepare interim guidance and revised guidance in NUREG-1757 and NUREG-1623 for the topics or simply incorporated in a new Appendix as has already been done in NUREG-1757.

Topic	Description	Benefit	Product
Topic 4 (#24) Erosion Control Rock Durability Case Studies/Example Reviews	This topic would include the preparation of notebooks of recent staff reviews of different rock types (granite, basalt, diabase, limestone, sandstone, alluvial deposits) and sites (Cabot, Shieldalloy, Rio Algom, Sequoyah Fuels, Savannah River, Moab, Lakeview). The notebooks would also include: licensee DP sections and supporting reports such as procedures, and NRC staff TERs, Completion Reports, and photographs. A summary for each rock type and site that includes the key issues and lessons learned from the review that could be useful for future reviews.	The recommended knowledge management and interim guidance topics will benefit near-term and future projects in decommissioning, uranium recovery, and WIR. The Case Study Notebooks will provide examples for future staff reviews of the types of review products and technical issues that have been addressed by licensees and staff and that will likely be useful in future reviews of new UR applications/rec plans.	Prepare knowledge management products, such as case study notebooks, which discuss approaches, lessons learned, and give examples where appropriate.
Topic 5 (# 25) Guidance on model abstraction of complex groundwater sources for decommissioning sites	Unique/challenging groundwater issues in complex decommissioning reviews have contributed to historical challenges with site progress. These challenges coupled with interest in moving forward point to a need for a better understanding of these technical issues and potential solutions. Some complex groundwater sources are abstracted, or simplified, in the models used by licensees. There is a lack of guidance on how to appropriately use simplified models to evaluate complex source terms. There is available information on this topic inside and outside the agency (NUREG 1762) that could be tailored for the needs of decommissioning, then consolidated and recorded. Develop guidance for NRC staff and licensees on when model abstraction is appropriate and how such abstractions should be completed. During this process, the staff would evaluate the need for more complex groundwater modeling codes.	The review will be completed in a quicker manner for the licensee. NRC staff will be able to perform their review in a more consistent manner with a better understanding of the system, a greater accuracy of the results, and a quicker review time. Improved progress on working through decommissioning projects and better measurement of success at reducing the number of decommissioning sites, including complex sites.	Guidance document “desk guide” on model abstraction of complex groundwater sources for decommissioning sites.

Topic	Description	Benefit	Product
Topic 6 (#27) Plant Transfer Factor Desk Guide	Create an internal desk guide to: summarize the use of transfer factors for food chain pathways in dose assessments; describe the physical processes underlying the transfer factors; highlight approaches that licensees can use to justify and treat uncertainty for transfer factors; and describe methods NRC staff can use to review and document radionuclide transfer factors. This includes review procedures for justifying transfer factors and the treatment of uncertainty in transfer factors.	Better access to current information on plant transfer factors will lead to a more consistent application of plant transfer factors in dose assessments.	An internal desk guide for staff on plant transfer factors.
Topic 7 (#30) Revise Guidance on Kds	NUREG-1757, Vol. 2, Appendix I.6.4.4, on the use of Site-Specific Distribution Coefficients for Soil or Concrete needs to be revised. This section addresses the use of literature values or RESRAD default parameter values as the appropriate range for use in a sensitivity analysis. This section contradicts section I.6.4.2 which states distributions need to be consistent with known or expected site conditions. (Section I.6.4.2 should be strengthened as well) It also fails to consider the quality of the source of the literature values or RESRAD default parameter values which in some cases is very poor (for example Kds for Radium). Statements made in this section about the appropriate range of values and significant impacts on dose are too vague. This section also references Volumes I and II of EPA report 402-R-99-004A, 8/99. A reference to Volume III of this report should be included.	We do not want to be placed in a position of asking licensees for information that is contradictory to our guidance and we do not want guidance promoting the use of parameter values that are not applicable to certain situations. Additionally, licensees probably do not want to follow our guidance when preparing documents only to have it refuted by our staff.	Revised text for NUREG-1757, Vol 2, Appendix I

Topic	Description	Benefit	Product
Topic 8 (#31) Sensitivity and Uncertainty	The portion of NUREG-1757, Appendix I on the use of sensitivity and uncertainty (and its references in other parts of Appendix I) should be revised and expanded upon. The PAB staff is performing work to develop a desk guide for sensitivity and uncertainty for complex modeling activities. Results from this work could be used to provide clearer guidance to staff and licensees at decommissioning sites. Additional examples and guidance could be provided.	Clearer, concise guidance with additional examples will benefit both the staff and licensees in reviewing and developing site-specific models, respectively.	Desk guide for internal use on sensitivity and uncertainty for complex modeling situations Revised text for NUREG-1757, Vol. 2, Appendix I.
Topic 9 (# 32) Partial Site Release Guidance Revision	Revise NUREG-1757, Vol.2, Appendix K on Partial Site Release to incorporate lessons learned and provide clarity to existing text. After use at three or more sites, some improvements in the text of the chapter could be made to improve clarity and provide additional examples.	Clearer guidance is of direct benefit to all stakeholders – staff, licensees, and the public.	Revised text for the Partial Site Release appendices.
Topic 10 (#35) Incorporating NUREG-1537 into NUREG-1757	Currently NUREG-1757, Vols. 1 and 2, contain references to NUREG-1537 in the Foreword. NUREG-1537 involves the licensing of Research and Test Reactors. Staff should review NUREG-1537 to see if the existing guidance applies to DURLD's current processes, whether it should be incorporated into a future revision of NUREG-1757, and whether the decommissioning section of NUREG-1537 should be updated.	This will help ensure uniformity in how DURLD terminates licenses, and also create a centralized repository for guidance.	Review of NUREG-1537 to determine what it discusses on the decommissioning of research and test reactors. Determine whether it would be worthwhile to incorporate information from NUREG-1537 to NUREG-1757 and whether NUREG-1537 should be updated.

Topic	Description	Benefit	Product
Topic 11 (# 37) Including Part 50 sites into NUREG-1757	NUREG-1757 Vol.2, applies to Part 50 sites; parts of NUREG-1757 Volume 1 apply to Part 50 sites; and Volume 3 does not apply to Part 50 sites. In addition, NUREG-1700 applies to some part 50 licensees. Determine whether to include some or all aspects of reactor decommissioning (including financial assurance) in NUREG-1757, or whether we should just reference Reg Guides, etc. related to reactor decommissioning in 1757. If we were to revise NUREG-1757, so it was more completely applicable to reactors, consider whether Reg Guides would then be superceded, and whether reactor licensees would know to look in 1757 for guidance.	This will help create a centralized repository for guidance.	Determine whether reactor decommissioning guidance for Part 50 sites should be more completely consolidated into NUREG-1757.
Topic 12 (#39) Training on Emerging Issues	Often, emerging issues come to an individual staff member's attention that affects the entire Decommissioning Program. In order to share insight into these emerging issues with other staff, training should be provided for the Decommissioning Program	This will allow all decommissioning staff to be cognizant of emerging issues, and how to deal with them.	The creation of a 1 hour training session every two weeks that is available for staff to share insights with other staff.

Topic	Description	Benefit	Product
Topic 13 (#40) Part 72 General License Process	Develop staff guidance that clearly describes the process for the general licensing of ISFSIs and delineate the roles and responsibilities of NMSS/SFST, the Region, and DURLD (if any). Currently, the "process" for general licensing of ISFSIs for power reactor sites, under Part 72, Subpart K, is not described in guidance. [The process appears to be the following: NMSS/SFST handles the review and approval of spent fuel storage casks. The Region inspects the site to determine whether it meets the conditions of the general license in 10 CFR 72.212, including whether the site parameters are enveloped by the cask design basis. The DURLD PM appears to not have a role in the process, as there is no "licensing piece" to the process (besides the SFST review of cask), and most of the work is done in inspection space.]	This will help create/ensure a clear understanding for staff and management (in DURLD, in NMSS/SFST, and in the Region) of the general license process and responsibilities of the various groups in assuring compliance with the general license requirements in Part 72, Subpart K. The DURLD PM is generally expected to be aware of and/or understand all activities at his/her site, but cannot do this as the PM is not aware of the general license process. Developing guidance that describes the process and roles/responsibilities will enable the DURLD PM to track, understand, and communicate progress on the general license and licensee compliance with Part 72, Subpart K. This understanding would also enable the PM to respond to public inquiries and concerns about the spent fuel management at the site, and thus, increase public confidence.	Develop staff guidance that clearly describes the process for general licensing of ISFSIs and delineate the roles and responsibilities of NMSS/SFST, the Region, and DURLD (if any).

Topic	Description	Benefit	Product
Topic 14 (#41) Incorporation into NUREG-1757 The Research Work on The Performance of Soils and Geosynthetics in Engineered Covers in Full Scale Cover Materials In-situ	Staff should work on incorporating the information from this research into NUREG-1757.	Updated guidance for staff and licensees to use.	Revised NUREG-1757 that includes research on the performance of soils and geosynthetics in engineered covers in full scale cover materials in situ
Topic 15 (#43) Clarify Financial Assurance Review Responsibilities Between NRR and FSME	Clarify financial assurance review responsibilities between NRR and FSME at all stages (e.g., site-specific cost estimate 5 years before shutdown, cost estimate in PSDAR or at 2 years after shutdown, annual decommissioning funding reports, and updated estimate of remaining costs in the LTP), as there is confusion and/or possible disagreement between the Offices of who has the lead responsibility and how the non-lead office should be involved or consulted during the reviews.	The benefit for pursuing this recommendation would be to create a clear understanding of responsibilities, to assure that financial assurance reviews will be completed (and to fill any potential existing gaps in FA reviews) and that the appropriate staff in both offices will be involved.	Work with NRR to clarify financial review responsibilities.
Topic 16 (#44) Compare FSME P&P 5-1 which pertains to reactor transition procedures to NRR's Office Instruction	Look at FSME P&P 5-1 and NRR's corresponding Office instruction on reactor transition procedures, to determine if they need to be updated or clarified, and to make sure that the two procedures (which should be identical) are consistent with each other.	The benefit would be clarification and consistency of internal staff guidance (FSME P&P and NRR office instructions), if we end up needing to update this internal guidance.	A comparison of FSME P&P 5-1 and NRR's comparable Office Instruction.

Recommendations for UR	Description	Benefit	Product
Topic 17 (#46) Establish strong Documentation/Guidance	a. Resurrect the old UR Management Directives, and extract all documents related to site closure and transition to DOE; Update these documents as necessary; Consolidate these and any newer guidance documents (created since management directives went into non-use) into one source of guidance for UR Site Closure and Transition (following the Decommissioning consolidated guidance model). b. Re-look at old 3-volume UMTRA Project Information Package (informal gathering of documents related to the Title I program). Determine if it would be useful to formalize and update this as a separate consolidated package. c. Resurrect an old collection of "go-by's." This is an informal gathering of sample letters, review documents, licensing actions, etc kept by Betty Garrett in a 3-ring binder. Review the old collection; supplement, revise, and replace as necessary; produce as a more formal up-to-date aid to project managers and reviewers.	These actions would establish a consolidated, updated set of staff aids that would result in a more consistent and efficient program, with much less wasted time trying to piece together the accepted process and basis for decisions.	Update, review and consolidate older Uranium Recovery Reclamation/Decommissioning Guidance.

Topic 18 (#47) Clearly define the closure process	Develop a clearly defined step-by-step closure process for each category of UR site closure, i.e., 1) Title I site; 2) Title II NRC conventional mill; 3) Title II NRC ISR; 4) partial site closure; and 4) Agreement State site. • Document steps of present processes; • Assess the processes for areas where efficiencies can be gained; • Seek licensee and DOE feedback and get buy-in on any changes to processes; • Formalize the final step-by-step process for each category of sites.	These actions would establish a set of clearly defined processes that would result in a more consistent and efficient program, with much less wasted time trying to piece together the accepted process and basis for decisions.	Develop a step-by-step closure process for each category of uranium recovery site.

Topic 19 (#48) Interact effectively with DOE	Tracking system: Create a tabular system for tracking responsible staff, site contacts, and actions (particularly those involving interaction with DOE) associated with all UR sites in closure. Protocol: Work with DOE to update the old license termination/site transfer protocol and have new version signed by management of both agencies. Quarterly call: Continue and strengthen quarterly teleconferences with DOE staff. Using the previously developed tracking system during these calls to exchange information related to generic and site-specific UR site closure activities. Annual inspections: Ensure that NRC staff occasionally accompanies DOE during annual site inspections and reviews the annual reports submitted	These actions would result in an improved working relationship with DOE, and as such the efficiency and effectiveness of the transfer process would be enhanced by a clarity of regulatory framework and site/activity status.	Develop a tracking system for uranium recovery processes and actions for more effective interaction with DOE. Work with DOE to develop a new protocol for site transfer. Budget for NRC accompaniment on annual inspections, and LTSP reviews.

Topic 20 (#49) Maintain a strong focus on closure sites	Establish lead staff person for UR Closure: This assignment would include being the liaison with DOE; updating the tracking system; leading the quarterly DOE phone call; ensuring all staff assigned to work on UR closure sites have the necessary guidance and procedures; answering staff and external inquiries on closure of UR sites; etc Operating Plan: Ensure that all closure activities (generic and specific) are tracked in the Operating Plan, with clear goals for completion of NRC actions	As work for uranium recovery sites (particularly those in the closure process) is dispersed among the Division's Branches, a strong central focal point for tracking and leading closure site activities will result in efficiencies by ensuring consistency and timeliness of NRC actions.	Establish a lead for UR closure, as well as ensuring that milestones are tracked in the operating plan.
Topic 21 (#50) Take advantage of staff historical experience	Seek additional program improvement ideas from remaining staff with strong historical experience: M. Fliegel, R. Weller, D. Sollenberger Use retired annuitants to pass on experience in this area through short training seminars/presentations and through involving them in the development/update/revision of program documentation discussed above	These actions would avoid the loss of a valuable historic perspective on process, past decisions, lessons learned, successes/failures, etc.	Creation of knowledge management seminars/presentations using retired annuitants. Seek additional program improvement ideas from retired annuitants.

Topic 22 Training for Agreement States on Health Physics for uranium recovery	Provide the upgraded NRC F-104 training course on Health Physics for Uranium Recovery completed in FY 2009 to the Agreement States.	Increase knowledge of State regulators having uranium recovery sites.	Class is scheduled for July 2010 in Denver, Colorado.
Topic 23 Upgrade training for uranium recovery	Incorporate Radiation Survey Instrumentation and Scan MDCs for uranium recovery facilities completed in FY 2009 into the F-104 training course.	Increase NRC inspector, HQ staff and State regulators knowledge on the detection and measurement of radionuclides associated with contamination control programs at uranium recovery facilities.	HP workshop information conducted by Dr. Eric Ablequist in 2009 will be incorporated into F-104 by ORISE.
Topic 24 Workshop and upgrade training on Radon 222	Conduct HP workshop on radon 222 and progeny and incorporate into the F-104 training course.	Increase NRC inspector, HQ staff and State regulators knowledge on radon detection, measurement and dose from effluents.	HP workshop information to be conducted in April 2010 by Dr. Paul Frame will be incorporated into F-104 by ORISE.
Topic 25 New training on Visual Sample Plan (VSP)	Sponsor a new training class at NRC on Visual Sample Plan computer program to support decommissioning radiological surveys for hard-to-detect radionuclides.	VSP is employed in the development of radiological survey plans for surface and subsurface soils when there are no gamma emitting radionuclides to measure and use as surrogates for hard-to-detect radionuclides.	VSP provides a sound technical basis that the staff will be able to evaluate licensee radiological characterization and final status survey plans. VSP should result in licensees saving resources by reducing the number of samples and laboratory analysis. The first class is scheduled for May 25-28, 2010, and is contracted to be gien biannually for the next three years.

Topic 26 Training for international regulators on health physics for uranium recovery	Provide the F-104 course to a group of international regulators from Europe and Asia.	This initiative supports the NRC Strategic Plan safety goal to work with international counterparts to exchange information, expertise, operating experience, and ongoing research to recognize and respond to emerging technical issues and provide best practices.	The class is being coordinated with OIP and is tentatively scheduled for late FY 2010.
Topic 27 Update cost benefit and ALARA guidance for decommissioning	Consider the following topics for developing or updating decommissioning guidance a. Plain English discussion of ALARA for LTR compliance b. Discount rate for calculating present value of dose benefits identified in 8/16/08 FRN 72FR46102 c. Difficult-to-quantify benefits and detriments d. ALARA decision making when not all impacts are quantifiable e. Radon mitigation for restricted use termination f. Cost benefit analyses for NEPA g. Restricted use ALARA examples	Interim guidance would be available for NRC staff and licensees to use for issues and lessons learned identified in past staff reviews.	Interim guidance on the NRC Decommissioning web page, and eventually to be included in an update to NUREG-1757, Vol. 2.

Topic 28 Erosion control knowledge transfer	The FY 2010 retired annuitant renewal package for Ted Johnson was required to include an Exit Strategy to document how knowledge and experience would be transferred to Doug Mandeville in the technical and regulatory aspects of hydraulic design for both conventional and ISR uranium recovery facilities. A training plan was developed that included the following task: a. Obtain background knowledge of NRC-licensed sites primarily through review of site summaries and example Technical Evaluation Reports for Title I and II sites. b. Training in hydraulic design including: NUREG-1623 erosion protection procedures; case studies illustrating common problems and challenges; c. Participate in on-going design reviews that are likely to continue such as Lakeview, and Dewey Burdock. d. Participate in inspections and site visits such as Moab, (possible), and Ambrosia Lake.	Transfer of sufficient knowledge and experience should provide the capability needed to achieve continuity of ongoing reviews and inspections at sites work is expected to continue into the next year or two. Such training and knowledge transfer follows through on the commitment in the FY 2010 retired annuitant renewal package for Ted Johnson.	Products are mostly what would be learned while participating in reviews and inspections, but reviews of sites summaries and submittals would also result in written comments.