INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF NRC REGION II PROGRAM

April 15-19, 1996

PROPOSED FINAL REPORT

Office of Nuclear Material Safety and Safeguards

U.S. Nuclear Regulatory Commission

Attachment 1

1.0 INTRODUCTION

This report presents the results of the review of the Region II (RII) nuclear materials program. The review was conducted during the period April 15-19, 1996, by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Georgia. Team members are identified in Appendix A. The review was conducted in accordance with the September 12, 1995, NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period March 1994 to March 1996, were discussed with RII management on April 19, 1996.

[Paragraph on Results of MRB meeting will be included in final report. Attachment 1, Region's response, and Attachment 2, MRB meeting minutes, will be included in final report.]

The RII nuclear materials program is administered by the Director, Division of Nuclear Materials Safety (DNMS), who reports directly to the Regional Administrator. As part of a 1995 reorganization, DNMS now has three Branches. The DNMS organization chart is included as Appendix B. The RII program was responsible for almost 900 specific licensees at the time of the review.

In preparation for the review, a questionnaire addressing the common and non-common indicators was sent to the Region on February 13, 1996. RII provided its response to the questionnaire on March 21, 1996. A copy of that response is included as Appendix C to this report.

The review team's general approach for conduct of this review consisted of: (1) examination of RII's response to the questionnaire; (2) analysis of quantitative information from the licensing, inspection, and resource utilization data bases; (3) technical review of selected files; (4) field accompaniments of four RII inspectors on nine inspections; (5) review of decommissioning and fuel cycle files; and (6) a series of interviews with staff and management to answer questions or clarify issues. The team evaluated the information that it gathered against the IMPEP performance criteria for each common and non-common indicator and made a preliminary assessment of RII's performance. As noted above, that preliminary assessment was discussed with program management before the team's departure.

Section 2 below discusses RII's and other NRC actions in response to recommendations made following the previous review. Results of the current review for the IMPEP common performance indicators are presented in Section 3. Section 4 discusses results of the applicable non-common indicators, and Section 5 summarizes the review team's findings and recommendations.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

The previous IMPEP review concluded on May 6, 1994, and the results were transmitted in draft form on June 7, 1994 for regional comment. The Region provided comments on June 30, 1994, and the comments were incorporated into the final report, which was issued on August 9, 1994 (following a Management Review Board meeting on August 2, 1994).

2.1 Status of Items Identified During 1994 IMPEP Review

The 1994 review resulted in a number of recommendations for action by the Region or the program office. The Region provided responses to the recommendations on June 30, 1994, and April 10, 1995. The IMPEP team assessed the status of each of these items as part of the 1996 review. A brief discussion and evaluation of each recommendation follows:

Recommendation 1. RII should provide greater focus to conducting initial inspections of new licenses in accordance with the requirements in Inspection Manual Chapter (IMC) 2800.

Status: This recommendation is closed. As RII indicated in its June 30, 1994 response, it took immediate action to revise the method for tracking these licensees, contacting them, scheduling the required inspections, and providing additional management oversight. A review of 15 new licenses issued in early 1995 showed improved timeliness for RII's initial inspections. Section 3.1 of this report provides additional discussion.

Recommendation 2. The Office of Nuclear Material Safety and Safeguards (NMSS) should work with the Technical Training Center (TTC) and others, as appropriate, to assure availability of training courses such as Nuclear Medicine, as well as Teletherapy and Brachytherapy for qualification of inspectors and license reviewers.

Status: This recommendation is closed. Written regional responses, conversations with regional staff and management, and review of the RII training records indicate this problem has been addressed, for the courses discussed above.

Recommendation 3. In the near term, RII should assure that checklists used by license reviewers address ALARA as well as verification of sealed source and device registry. In the longer term, NMSS should develop uniform licensing checklists for the regions which incorporate these areas and others.

Status: This recommendation is closed. The review team determined that RII's licensing checklists address ALARA as well as verification of sealed source device registry. NMSS is in the process of developing licensing checklists.

Recommendation 4. NMSS should revise the inspection field notes to reflect current inspection philosophy by including a specific section on observation of licensee operations.

Status: This recommendation is closed. Since the 1994 IMPEP review, NMSS has formed an Inspection Procedure (IP) 87100 Task Force that is revising the field notes and text in IP 87100, "Licensed Materials Programs." The task force is breaking IP 87100 into a number of smaller procedures, one for each major type of materials licensee. The task

force has incorporated a section on observations of licensee operations into the prototype that will serve as the basis for each of the sets of inspection field notes. When the new field notes are issued in final form in late summer 1996, each will contain the section from the prototype on observations of licensee operations.

Recommendation 5. RII should assure that inspections of sealed source licensees include recordkeeping for decommissioning.

Status: This recommendation is closed. The 1994 IMPEP team stated that three of the ten inspections reviewed did not include recordkeeping for decommissioning. The review team observed in the inspection files that recordkeeping for decommissioning is now being reviewed by RII inspectors on most inspections. Seven of the eight cases reviewed by the 1996 IMPEP team included reviews of recordkeeping for decommissioning. The one inspector who did not review this area joined the RII materials inspection program during the review period and was not aware of the Region's emphasis on reviewing recordkeeping for decommissioning. RII showed considerable progress in this area since the 1994 IMPEP.

Recommendation 6. NMSS should develop guidance to assure that Regions are informed of, and inspect license operations which are geographically within their jurisdiction, but are licensed within another Region.

Status. This recommendation is closed. IMC 2800, "Materials Inspection Program," was revised on April 17, 1995. The revision contained explicit guidance to all regions on informing other regions of licensed operations which are geographically within their jurisdiction, as well as guidance on how to request "assist" inspections from other regions. In addition, the review team found that RII had a healthy program of requesting assist inspections of other regions for facilities licensed by RII but physically located in other regions, as evidenced in memoranda that RII had sent to other regions requesting assist inspections.

Recommendation 7. RII should review its allegation files to assure their completeness as "stand alone" records and should also assure that inspection files are devoid of any reference to allegations in accordance with NRC policy.

Status. This recommendation is closed. During review of allegation files the review team noted that files contained information including the completed allegation receipt form, allegation review board assignment, inspection report identifying follow up action taken in response to the allegation, and alleger closeout correspondence. The review team found the information sufficient to allow files to stand alone for review purposes.

Recommendation 8. RII should reconcile its internal written procedure (Branch Guidance Memorandum 4.2) for event evaluation and its informal practices for event evaluation.

Status. This recommendation remains open. NMSS Branch Instruction 4.2, (Rev. 1), "Event Followup Checklist", was revised and issued August 1, 1994, by a DNMS Branch Chief to outline actions to be taken in response to reports of events. Review of event files showed the procedure was not always used or did not contain the completed checklist. RII noted that the cause of the procedure not always being followed or event files not containing the checklist was that RII did not enforce the procedure. Discussions with the Deputy Director, DNMS and other staff indicated that the procedure was being considered for further revision.

Recommendation 9. NMSS should review the status of Regional Operating Instruction (ROI) 1030, "Processing Allegations, Complaints and Concerns," during its next quarterly report to DEDS on status of Independent Review Team recommendations.

Status. This recommendation is closed, per the August 1994 IMPEP report. As noted in the final August 1994 IMPEP report, this item was closed by memorandum dated July 27, 1994 from R. Bernero, NMSS, to H. Thompson, DEDS, after ROI 1030 was revised on June 30, 1994. A related recommendation is provided under the "Response to Incidents and Allegations" indicator, involving implementation of a recent revision to ROI 1030.

In summary, the team considers all of the above 1994 recommendations closed, with the exception of Recommendation 8.

3.0 COMMON PERFORMANCE INDICATORS

IMPEP identifies five common performance indicators to be used in reviewing both NRC Regional and Agreement State programs. These indicators include: (1) Status of Materials Inspection Program; (2) Technical Staffing and Training; (3) Technical Quality of Licensing Actions; (4) Technical Quality of Inspections; and (5) Response to Incidents and Allegations.

3.1 Status of Materials Inspection Program

The review team focused on five factors in reviewing this indicator: inspection frequency, overdue inspections, initial inspection of new licenses, timely dispatch of inspection findings to licensees, and geographic bias. This evaluation is based on the RII questionnaire responses relative to this indicator; data gathered independently from the NRC's Licensing Management System, and other NRC, NMSS, and RII statistical databases; examination of licensing and inspection casework files; and interviews with managers and staff.

Review of RII's inspection priorities showed that the inspection frequencies for various types or groups of licenses are consistent with program office guidance as provided in Inspection Manual Chapter (IMC) 2800, "Materials Inspection Program." In addition, the Region is properly implementing a recent policy change which allows individual licensee inspection schedules to be reduced or extended based on inspection findings and previous licensee performance. The Region implements this guidance using a standard form which the inspector completes at the time the inspection report is issued. The form includes the inspector's recommendation for adjusting the next scheduled inspection date based on IMC 2800 guidance. The inspector's recommendation is reviewed and approved by the inspector's Branch Chief who then forwards the completed form to the Licensing Assistant for computer update. A computer printout indicated that 78 future inspection intervals will be extended, and 14 will be reduced based on this protocol.

At the time of this IMPEP review, RII had no core or non-core program inspections overdue in accordance with IMC 2800 guidance (25% beyond the cited frequency). Throughout the two-year review period, RII had virtually no inspections overdue at any time, except for a brief period in 1995. At that time, NMSS reduced inspection frequencies for some categories of licenses, and all four NRC regions had temporary backlogs created in the affected categories. However, RII promptly scheduled and conducted these inspections, and quickly eliminated the backlog.

The 1994 IMPEP team had recommended that RII place greater emphasis on conducting initial inspections in accordance with IMC 2800. The Manual Chapter requires initial inspections of new licensees within six months of license issuance in those cases where the licensee has commenced operations, or has come into possession of licensed material; and within 12 months in all other cases. The 1994 IMPEP team found 10 of 30 instances in which initial inspections had not been completed, and found 6 other instances in which the initial inspections were a few months late.

The 1996 IMPEP team found that considerable improvement had been made with respect to initial inspections, allowing the review team to close the 1994 recommendation. The 15 new licenses issued by RII in the first six months of 1995 were reviewed against their initial inspection dates. The review showed that 10 of the 15 were inspected and their reports issued, within six months or less of license issuance. Two other inspection reports were completed in the seventh and eighth months; and two others within 12-13 months. In summary, 14 of the 15 new licenses were inspected within the IMC 2800 guidelines. The only outstanding initial inspection was a gauge licensee in storage in a location outside the Region. RII was working with Region III (RIII) to assure the licensee would be inspected prior to operations.

The timeliness of inspection findings was also evaluated. Based on actual FY95 and FY96 RITS data provided by NMSS, RII had issued inspection reports, on average, within 6-7 days of completing the inspections. This average includes those reports issued in the field. This was well-within the goal of 30 days, and was the quickest of any of NRC's regions. The average for

issuance of reports from the RII office is less than 30 days, but greater than 7 days.

For NRC regions, IMPEP teams review a region's scheduling of inspections to determine whether or not there is any evidence of geographic bias, such as the possibility that some licensees are inspected more frequently than others because they are easier-to-reach. The review team found no evidence of this, based on a computer tally of inspections conducted in each state. This tally aligned closely with the number of licenses in each state. One RII supervisor indicated that he makes a special effort on inspection assignments to avoid the perception that he might favor certain inspectors in particular parts of the Region.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Status of Materials Inspection Program, be found satisfactory.

3.2 Technical Staffing and Training

Issues central to the evaluation of this indicator include the DNMS materials program staffing level, technical qualifications of the staff, training, and staff turnover. To evaluate these issues, the review team examined RII's questionnaire responses relative to this indicator, interviewed DNMS management and its newly-hired staff, and analyzed budgeted resource allocations vs. actual expenditures.

Since the last IMPEP review, a reorganization resulted in the creation of DNMS in place of the Division of Radiation Safety and Safeguards. The new Division includes three Branches: Materials Licensing and Inspection Branches 1 and 2, and the Fuel Facilities Branch. One result of this reorganization was the elimination of a layer of supervision. Another result was the integration of licensing and inspection functions in the two materials branches. A review of the January 30, 1996, Staffing Plan showed that DNMS was staffed with 22 direct FTE and 10.25 overhead FTE in support of NMSS activities at the time the Plan was developed. This included 13 direct FTE in materials and 9 FTE in fuel cycle activities. At the time of the IMPEP review in April, staffing dropped to 21 direct FTE with one loss in the fuel cycle program. Although this was somewhat less than what was budgeted by NMSS (23.6 FTE) for FY96 activities, no adverse impacts were observed in the materials area. The only vacancy was in the fuel cycle program. In materials, the IMPEP team found a good mix of personnel between licensing (5.4 FTE) and inspection (7.6 FTE), which should allow maximum flexibility if future staff resources need to be diverted from one area to another. Additional discussion of resource utilization appears in Section 4 of this report.

Since the prior IMPEP review, three full-time employees left the materials program, as did the laboratory technician. This attrition included one individual who left NRC after taking maternity leave; a second person who transferred to another region, and a third who became a consultant. Over a

two-year period, this is a modest attrition rate, and there was no evidence that the losses were symptomatic of any program or management weaknesses.

Three individuals joined the materials program in this time period. Two of these three individuals had previous materials program experience. One became a qualified inspector in 1989 in RIII. He joined the RII materials program in October 1995, from the reactor inspection program. He expects to complete the Licensing Practices and Procedures course in June 1996, after which he will qualify as a License Reviewer according to the requirements in IMC 1246, "Materials License Reviewer Qualifications." The second inspector qualified in 1990, then internally transferred to support RII's reactor health physics activities. He returned to the materials program in 1996, and acquainted himself with recent materials program changes. He is now moving into the materials licensing area, and should qualify as soon as he completes the necessary number of licensing reviews in each program code.

The third addition to the materials staff transferred to the program in January 1995, after working in the safeguards inspection area. Her previous inspection experience is now being bolstered by specific training and qualification activities that will give her more materials experience. She received partial inspector qualification in February 1996, and expects to complete the final two courses needed for full inspector qualification later this year. Two senior staff members currently review her work.

An IMPEP team member evaluated the three additions' technical credentials and their progress in training, finding each of them to be well-qualified for their current assignments, and making good progress in reviewer or inspector qualification.

At the time of the review, RII had five qualified license reviewers and eleven qualified inspectors (however, a few of the staff were currently engaged in other program initiatives). These are good numbers for a program with 900 licenses. The Region's practice is to qualify new staff members in the inspection area first, then shift them to licensing. Following this approach, five inspectors are scheduled to take the next Materials Licensing Practices and Procedures course later this year. This will be a significant step in increasing the number of individuals with licensing signature authority.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Technical Staffing and Training, be found satisfactory.

3.3 Technical Quality of Licensing Actions

The review team examined completed licenses and casework for twenty-four license actions in nineteen specific license files, representing the work of seven Regional license reviewers. The license reviewers and supervisors were interviewed when needed to supply additional information regarding licensing decisions or file contents.

Licensing actions were reviewed for completeness; consistency; proper isotopes and quantities authorized; qualifications of authorized users; adequate facilities and equipment; and operating and emergency procedures sufficient to establish the basis for licensing actions. Licenses were reviewed for accuracy; appropriateness of the license and of its conditions and tie-down conditions; and overall technical quality. Casework was reviewed for timeliness; adherence to good health physics practices; reference to appropriate regulations; documentation of safety evaluation reports; product certifications or other supporting documents; consideration of enforcement history on renewals; pre-licensing visits; peer or supervisory review as indicated; and proper signature authorities. The files were checked for retention of necessary documents and supporting data.

The license actions reviewed ranged from a fixed gauge license amendment to a nuclear pharmacy new license. The actions reviewed included the following types of licensees: academic broad scope, beta eye applicators, portable and fixed gauges, small laboratories, broad research and development, special nuclear material, and nuclear medicine. Licensing actions included seven new licenses, five renewals, eight amendments, and four terminations. A list of these licenses with case-specific comments can be found in Appendix D.

The review team found that the licensing actions were generally thorough, complete, consistent, and of acceptable or higher quality with health and safety issues properly addressed. Special license tie-down conditions were stated clearly, backed by information contained in the file, and inspectable. Terminated licensing actions were well documented, showing appropriate transfer records and survey records. The licensee's compliance history was taken into account when reviewing renewable applications. The Region's licensing guides and license policy procedures were revised and updated during the review period, and reviewers were observed to have good research skills in using these and other licensing documents.

The reviewer checked the "tie-down conditions" (i.e., the license conditions that reference licensee-submitted documents) that RII uses on license renewals, and on expired licenses that are issued after expiration as new licenses. The reviewer found that these tie-down conditions routinely referred to old applications or old supporting documentation. Some of the old information no longer applies, or has been superseded by more recent licensee applications or amendment requests. The review team recommends that RII license reviewers add written, explanatory comments in the tie-down condition listing the applicable sections in each old reference (i.e., references before the most recent license application). These comments will assist inspectors and future license reviewers in clarifying which information is being tied-down in the old references.

The review team, through interviews, determined that license reviewers generally discussed unusual and difficult licensing actions with senior staff and managers, although specific records of the discussions were not always retained. Files contained appropriate deficiency letters and documentation of telephone conversations with licensees. The license reviewer generally signed all new or renewed licenses and amendments. For those cases in which the

reviewer lacked signature authority for the type of license, a senior reviewer with full signature authority or a Branch Chief signed the license.

The review team also evaluated the Region's response, and the implementation of the response, to the 1994 IMPEP recommendation on the Technical Quality of Licensing Actions indicator. The review team concludes that the response, as implemented, forms a sufficient basis for the recommendation involving licensing checklists to be closed.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Technical Quality of Licensing Actions, be found satisfactory.

3.4 Technical Quality of Inspections

The review team performed accompaniments of RII inspectors on a total of 9 inspections and reviewed inspection documentation, to include field notes, NRC Forms 591, and a Notice of Violation (NOV), for 8 materials inspections conducted during the review period. The accompaniments and casework covered a range of license types to include medical, academic, and industrial licenses. Appendix E provides a list of licensees inspected during the accompaniments. Appendix F provides a list of the inspection cases reviewed in depth.

A review team member and a senior inspector from RIII accompanied 4 RII inspectors on 9 inspections in advance of the on-site IMPEP review. Accompaniments were performed at the following license types: master material license (U.S. Navy) permittee, broad scope medical, medical institution with a quality management program (QMP), high-dose rate afterloader, radiography field inspection, fixed gauge, and portable moisture density gauge. The accompaniments were conducted with new, mid-level, and senior inspectors.

On the accompaniments, the RII inspectors generally demonstrated adequate inspection techniques and knowledge of the regulations. The inspectors were prepared for, and with one exception, thorough in their reviews of the licensees' radiation safety programs. After observing the inspections, both accompaniers suggested that some of the inspectors should emphasize performance-based inspection techniques more heavily in conducting the inspections. For instance, the inspectors should emphasize observations of licensee activities in progress during the inspection. The accompaniers concluded that the technical performance of the inspections was satisfactory, with one minimally satisfactory exception, and the inspections were adequate to assess radiological health and safety at the licensed facilities.

The one exception mentioned above involved an inspection at a broad scope licensee by a relatively junior inspector. Although no specific health and safety concerns were noted, the accompanier noted that the inspection focused on records review rather than observations and discussions with staff that use the licensed materials. During the file review, the review team focused closely on this issue and found that a nuclear pharmacy inspection conducted by the same inspector documented observations of the licensee. In balancing

this accompaniment with the other accompaniments and file reviews, the review team concluded that the inspection in question was not indicative of the Region's overall technical quality of inspections. However, the Region should consider the accompaniment feedback in staff development and when assigning broad scope inspections.

During the accompaniments and while on-site in RII, the review team determined that RII is performing inspections of materials licensees on an unannounced basis, including some unannounced initial inspections. (Initial inspections may be announced pursuant to NRC IMC 2800.) Field notes prepared by inspectors were found to be complete and consistent with guidance from NMSS. Inspectors were using the most recent version of the inspection field notes.

A review of the inspection files showed that inspections were thorough and did not miss critical health and safety areas. However, this determination could only be made in some cases because the inspection field notes had a "check" next to safety-related items, with little further written documentation. Most of the field notes did not contain notes of observations of the licensee, or demonstrations by the licensee. Along with the findings during the accompaniments, the review team concluded that the limited documentation in the field notes regarding observations and demonstrations indicates that RII needs to conduct and document more performanced-based inspections. In discussions at the inspector, supervisor, and manager levels, all RII staff and management said that RII is emphasizing performing and documenting performance-based inspections, especially recently. This was evidenced in the RII DNMS FY96 Operating Plan. The plan notes a specific objective to, "Move carrying-out the inspection and licensing programs toward performance-based focus ..." and includes an attachment entitled, "Principles of Performance-Based Inspection." The Operating Plan attachment contains good, clear expectations of the inspectors on how to conduct performance-based inspections. The review team recommends that RII continue to emphasize performing and documenting performance-based materials inspections, and internally evaluate progress on this issue in about a year.

In the inspection files, the review team found that the field notes for assessing licensees' QMPs were being completed in accordance with Temporary Instruction (TI) 2800/025, "Quality Management Program and Misadministration Rule, Revision 1." The accompaniment at the high dose rate remote afterloader (HDR) found that the field notes from TI 2800/024, "Remote Afterloading Brachytherapy Inspections," were used. On the file review of another HDR inspection, the reviewer found that the TI 2800/024 field notes were not provided. TI 2800/024 expired in late 1995 and has not been formally extended, although NMSS gave verbal guidance to the regions to continue using the TI. The review team recommends that NMSS officially extend TI 2800/024, in writing, if materials inspectors are still expected to follow it and complete the HDR field notes.

In their response to the IMPEP questionnaire, RII reported that they had received 81 reciprocity filings between April 1994 and February 1996. Of those, 49 were for licensees with inspection frequencies of three years or less, such as radiographers. Twenty of the 49 higher priority reciprocity

licensees were inspected during the same time period. From the start of the review period through 1995, more than half of these higher priority reciprocity licensees were inspected (18 out of 34). During the first two months of 1996, RII reported that they had inspected 2 of the 15 higher priority reciprocity licensees. The reviewer found this reasonable, because many reciprocity licensees file early in the year so that they may work in areas under NRC jurisdiction at different times throughout the year.

RII also reported in their response to the IMPEP questionnaire that they performed 8 field inspections of non-reciprocity industrial radiographers during the review period. During FY95, RII reported inspecting 32 percent of non-reciprocity radiographers, which was slightly higher than 26 percent reported for FY94. RII did not report conducting any field inspections of non-reciprocity radiographers during FY96. The April 1995 revision to IMC 2800 instructs inspectors to conduct temporary jobsites inspections, "when possible." RII did a commendable job during FY94 and FY95 in conducting non-reciprocity radiography field inspections, and RII reports that they attempt to perform a field inspection of each radiography licensee during each inspection.

RII actively requests assist inspections of RII licensees with facilities in other regions, in accordance with IMC 2800. An inspection supervisor provided the reviewer with examples of documentation requesting assist inspections by each of the other regions. RII appears to be well ahead of the other regions in implementing this provision of IMC 2800.

The review team examined RII's program for inspection of the U.S. Navy Master Material License (MML). Inspection of the Navy MML is divided into four elements: inspections by RII of Navy permittees, assist inspections by the other regions of Navy permittees, accompaniments by the RII project manager with Navy inspectors, and an annual performance review of the Navy's licensed program. The RII project manager provided a document to the IMPEP team's reviewer showing that RII requested assist inspections by the other regions of Navy permittees during 1996. In addition, one of the review team's accompaniments included a Navy radiography permittee. The review team determined that RII has an active, effective inspection program for the Navy MML.

The IMPEP team reviewed supervisory accompaniments with regional inspectors. The review team cross-checked accompaniment dates with staff assigned to inspections, to determine if all inspectors were accompanied at least once each year. The review team found that not only were inspectors being accompanied once each year during calendar years 1994 and 1995, but some inspectors were accompanied more than once during a year. The only exceptions where once-a-year accompaniments were not performed involved inspectors principally assigned to perform other duties, such as licensing or Business Process Reengineering (BPR). An inspector informed the reviewer that the supervisory accompaniments provided good feedback.

Of the eight inspection files the IMPEP team reviewed, the supervisor signed the inspection field notes in a timely manner (i.e., within 30 days) on five

cases. Of the remaining three, the supervisor signed the field notes five weeks, seven weeks, and three months after the inspection date. In two of those three, NRC Forms 591 were issued to the licensee on-site with minor or no violations (so the significance of a timely supervisory review is lessened). In the seven week case, an NOV was issued to the licensee three weeks after the inspection, on which the supervisor concurred; then the supervisor signed the field notes four weeks later. The cause of the late supervisory sign-off may have been due to the December-January holiday period on two of the three cases. Considering all of the timeliness information and factors mentioned in this section, the review team concluded that RII does not appear to have a systemic problem on prompt supervisory review of the field notes.

The review team examined the RII radiochemical analysis laboratory. The laboratory was orderly, and the review team found that an adequate number and type of radiological survey instruments were available to allow the staff to evaluate the radiological status of licensed facilities. All survey instruments examined by the review team had been calibrated in February 1996 and were not scheduled for re-calibration until February 1997.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Technical Quality of Inspections, be found satisfactory.

3.5 Response to Incidents and Allegations

The review team evaluated RII performance involving incident response and allegation activities since the last review. This included responses to the questionnaire, interviews with the Deputy Director, DNMS, DNMS Branch Chiefs, and the Senior Allegations Coordinator (SAC), and evaluation of nine allegation files and 12 files containing incident reports. Incident cases reviewed included lost radioactive material, response to reports of equipment failures, misadministrations, and loss of criticality control at fuel cycle facilities. Regional reports were documented in Preliminary Notifications (PNs), event logs, and inspection report files. Appendix G contains a list of incident file casework and reviewer comments.

Incident file tracking for materials events and fuel cycle events were maintained by Division staff. The review team determined that a DNMS Branch Chief maintains a comprehensive "materials event log" that includes significant event information. The Fuel Facilities Branch of DNMS follows significant events at fuel cycle facilities, through its Facility Integration Matrix, discussed in Section 4.4 of this report.

The review team found that RII responses to incidents were prompt and technically complete. File reviews showed the Region's response actions to materials and fuel cycle incidents were timely and effective. These included both 10 CFR 20.2202 and 10 CFR 70.50 reportable events, and incidents requiring immediate licensee action. Reports of special inspections resulting from events were well documented, and RII took enforcement action when

appropriate. In cases with potential high safety significance, inspection reports or information provided by Branch Chiefs indicated that an on-site inspector or team thoroughly evaluated circumstances surrounding events. Less significant events were followed up during the next scheduled inspection. However, inspection field notes from irradiator inspections did not consistently reflect that events were followed up during inspections. The reviewer attributed this omission to field note forms lacking a specific event follow up element which directs the inspector to review abnormal operating conditions since the last inspection. The review team recommends that NMSS add event follow up as a section in the next revision to the irradiator inspection field notes.

The IMPEP team made performance evaluations of allegation files in the areas of investigation procedures, implementation of these procedures. internal and external coordination, and allegation follow up procedures. Allegation files were readily retrievable through the NRC Allegation Management System. Documentation was generally complete and files were very well organized. In most cases information contained in allegation files was indicative of good technical follow up activities by Regional staff. Allegations received prompt attention, tracking, and assignment to the Division by the Allegation Review Board. File reviews and interviews demonstrated that the Deputy Director, DNMS, was closely involved in ensuring proper Division action and disposition of assigned allegations. RII site investigations into allegations involving NRC licensed materials were well organized, with consideration given to safety issues and protection of alleger identity.

The review team evaluated the current version of ROI 1030, "Processing Allegations, Complaints, and Concerns," Revision 7, issued on March 18, 1996, which establishes Regional policy to process and control allegations received by Regional staff, and implement the guidance of NRC Management Directive 8.8, "Management of Allegations." The reviewer found ROI 1030, Rev. 7, to be an extensive, detailed policy to handle a diversity of situations associated with internal allegation management.

Comments on allegation files were discussed with the SAC or responsible Branch Chief. Although the Region followed up on most allegations in an appropriate technical and procedural manner, the reviewer identified one concern on a file regarding allegation information received by the Region which involved radioactive material licensed by the State of Florida (an Agreement State). In that case, the review team noted that RII had delayed follow up on reviewing the State of Florida's actions on allegations provided in letters to the State, then to NRC. At the time of the review, RII had not forwarded the letter containing the allegations to the State for follow up. The review team recommends that allegations received by the Region which are outside of NRC jurisdiction be referred expeditiously to the appropriate regulatory authority, and that the Region maintain close oversight of allegations referred to Agreement States.

The review team also identified an issue in this area related to external coordination, specifically involving the Region's responsiveness to allegers. Of the nine allegation files reviewed, initial acknowledgement letters were

generally issued within 30 days to allegers informing them that allegations were being processed. However, for allegations requiring longer time periods to resolve, written or telephone communications to the allegers were not found in most files updating the alleger on the status of the Region's actions. The next correspondence to the allegers found in most files was the closure letter after technical issues were addressed, sent 4 to 18 months following the initial acknowledgement letter. From discussions with the SAC and review of ROI 1030, Revision 7, dated March 18, 1996, the Region should advise the alleger of the status of the allegation in writing every six months for allegations requiring a lengthy resolution period. To ensure that lines of communications with an alleger will be maintained throughout the period in which technical evaluation of an allegation is being conducted, particularly for allegations requiring extended time periods to resolve, the review team recommends close adherence to ROI 1030 regarding advising allegers of the status of allegations every 6 months.

Based on the IMPEP evaluation criteria, the review team recommends that RII's performance with respect to the indicator, Response to Incidents and Allegations, be found satisfactory.

4.0 NON-COMMON PERFORMANCE INDICATORS

IMPEP identifies four non-common performance indicators to be used in reviewing RII: (1) performance with respect to Operating Plan goals, (2) resource utilization, (3) decommissioning activities, and (4) fuel cycle program activities.

4.1 Operating Plan Performance

Until FY96, NRC regional Operating Plan performance goals traditionally provided benchmark numbers of licensing actions and inspections that needed to be completed to achieve satisfactory performance. The FY96 Operating Plans changed the emphasis to focus regional efforts on proper program management needed to complete licensing actions in a timely fashion, and perform inspections, especially those in the core program, in accordance with IMC 2800 schedules. In other words, beginning with FY96, regions no longer were to be measured against a specific number of completed actions, but rather would be evaluated in accordance with IMPEP inspection performance indicators discussed in Section 3.1 of this report, and similar timeliness indicators used for evaluating trends with respect to backlogged licensing casework. Because these changes occurred during this IMPEP review period, the following paragraphs will discuss performance for FY94 and FY95 using the benchmarks in place at that time, but will discuss FY96 performance using the indicators described above.

In FY94, RII completed 547 licensing actions, as compared to a goal of 540 actions, exceeding the standard by 1%. In FY95, RII again exceeded its licensing goal, completing 514 compared to a goal of 510. Backlogged licensing casework has never been a significant problem in this region, as the

number of older cases stayed in the 12-14 range throughout those years. (This represented the lowest number of backlogged cases of any NRC region). In early FY96, the licensing backlog dropped to 7 by the time of the review (again, NRC's lowest figure). During the review period, the inventory of pending casework was reduced significantly from 152 in FY94, to 85 at the time of the on-site IMPEP review. This reduction was primarily the result of the March 1996 BPR initiative to extend most of the materials license expiration dates by an additional five years. Overall, the RII licensing program maintained a strong position throughout the review period.

In FY94, RII conducted 326 inspections; in FY95, RII completed 327 inspections, each year exceeding its Operating Plan goal of 320 by 2%. Throughout the review period, RII had virtually no overdue core inspections, except for a brief period in FY95. At that time, NMSS reduced some inspection frequencies, causing some of the medical licenses in the reduced inspection frequencies to become temporarily overdue in all regions. RII moved quickly to conduct these inspections, and had no past due inspections at the time of the on-site IMPEP review.

The FY96 regional Operating Plan includes expectations regarding the level of support for various NMSS program initiatives. The Region performed very well in this area. RII played a key role in the BPR initiative for the materials licensing program, the Part 34 (Radiography) Working Group, the Reciprocity Tracking System and other changes to IMC 1220 (Reciprocity). RII also provided strong support to the 1996 effort to extend material license expiration dates.

Based on these findings, the review team recommends a performance rating of satisfactory for this non-common indicator.

4.2 Resource Utilization

In FY95, RII programs under NMSS delegated authority were budgeted 25 FTE. In response to the FY96 President's budget update in December 1995, RII reported it had expended only 20.4 FTE, or 82% (excluding overtime and management time above the section level) of its authorized amount. The FY96 NMSS budget includes 23.5 FTE, and the Region had expended 10.2 FTE at the midpoint of the year. This projects to only 87% of the yearly budget provided for NMSS activities. Turnover in the fuel facilities program accounted for most of the shortfall, although RII also underexpended in the decommissioning and materials areas based on its decision not to refill a position. RII did this in anticipation of reduced workload due to inspection frequency and license renewal extensions. The Region also provided considerable support to RII reactor program projects, and NMSS program initiatives. The IMPEP team found no adverse impacts from these shortages in the materials or decommissioning area. As stated elsewhere in this report, there were no significant materials licensing or inspection backlogs at any time. Fuel cycle impacts are discussed in Section 4.4.

Based on the analysis of the resource expenditures and the Region's productive use of the resources, the review team recommends a performance rating of satisfactory for this non-common indicator.

4.3 Decommissioning Activities

The April 1996 review was the first time that the NRC staff used the non-common performance indicators for decommissioning during an IMPEP evaluation in RII. Proposed indicators were forwarded to Donald A. Cool, Director, Division of Industrial and Medical Nuclear Safety, by memorandum dated November 13, 1995, from John T. Greeves, Director, Division of Waste Management. The regions were on distribution for this memorandum. The proposed indicators were: quality of decommissioning reviews; financial assurance for decommissioning; termination radiological surveys; inspections; and staff qualifications. These proposed indicators were evaluated during the March IMPEP review in Region I (RI) and the April review in RII for applicability to decommissioning reviews. Based on the staff's experiences in Regions I and II, the staff will finalize the indicators and performance criteria.

The IMPEP team reviewed the Region's performance for this non-common indicator against existing guidance in the decommissioning area. The Division of Waste Management, NMSS, in cooperation with the regions and others, has the lead for developing an Inspection Manual Chapter and Decommissioning Handbook that specifically addresses the decommissioning program. This Manual Chapter will establish the requirements for reviewing decommissioning documentation, performing decommissioning inspections and termination site surveys. The proposed IMPEP evaluation criteria for the non-common decommissioning indicator may be modified once this Manual Chapter is finalized.

The review team examined the license files for the three sites that the Region indicated had received confirmatory surveys before license termination; 4 sites identified on the Oak Ridge National Laboratories (ORNL) review of terminated licenses; 12 license termination files for sites not listed on the Site Decommissioning Management Plan (SDMP) (RII currently does not have any sites listed on the SDMP); and 8 inspection reports for sites undergoing either complete or partial decommissioning. The review team also interviewed licensing and inspection staff involved in decommissioning licensed facilities.

In addition, the review team discussed the decommissioning of U.S. Navy facilities under the Master Materials License (MML) with the MML Project Manager. The Project Manager stated that, during the review period, no facilities under this license were decommissioned, other than permit terminations involving sealed sources. The RII staff indicated that they may request NMSS assistance during the June 1996 annual review of the Navy MML to review current Navy practices regarding the termination of radioactive materials permits issued under the MML.

RESULTS:

Quality of Decommissioning Reviews. The review team found that the decommissioning reviews were being performed satisfactorily. Technical decisions made by the staff were appropriate, given the type and extent of radioactive material usage at the facility. The review team noted that the RII staff were using several innovative forms and checklists for documenting staff and licensee actions during the license termination process.

Financial Assurance for Decommissioning. The review team did not review this indicator since on December 15, 1995, NMSS staff visited RII for the explicit purpose of reviewing financial assurance documentation. The results of the staff's review of the RII financial assurance documentation were summarized in a memorandum from Margaret Federline, NMSS, to Bruce Mallett, RII, dated January 29, 1996. RII replied to NMSS in a memorandum from Bruce Mallett to Margaret Federline, dated March 1, 1996, providing the status of RII's actions on the recommendations from the staff's review. The IMPEP team reviewed the status of resolution of the issues identified in the December 1995 NMSS review. Of the 5 outstanding financial assurance reviews identified by NMSS in December, 2 had been resolved in accordance with the NMSS recommendations; 2 were expected to be resolved within 60 days; and RII and the Office of the General Counsel determined that 1 did not need to be resolved. In their response to the IMPEP questionnaire, RII addressed 4 additional licensees, identified after the December 15, 1995, NMSS staff review, that had unresolved issues regarding their financial assurance mechanisms. RII staff stated to the review team that, as of the on-site IMPEP review, 3 licensees' financial assurance mechanisms had been received and forwarded to NMSS for review, and the Statement of Intent for the remaining licensee had been reviewed and approved by the RII staff.

Termination Radiological Surveys. The review team found that licensee survey results were being independently confirmed through a closeout inspection or confirmatory survey, as appropriate. Review of the surveys indicated that they were adequate, given the extent and significance of residual contamination at the facility.

Inspections. The review team found that inspections performed in support of site decommissioning were being performed adequately. The review team also noted that the fuel cycle facility inspection reports reviewed contained a thorough review and discussion of the decommissioning records maintained by the licensee.

Staff Qualifications. The review team found that all inspectors performing decommissioning inspections are qualified to IMC 1245, "Inspector Qualifications." In addition, licensing staff is qualified to IMC 1246, "Materials License Reviewer Qualification." Further information on the qualification of the staff can be found in Section 3.2 of this report.

RII staff is conducting the decommissioning and license termination programs in a manner that is protective of the public health and safety. The review

team does recommend however that the Manual Chapter currently being developed by NMSS include guidance regarding the following items:

- o The appropriate level of documentation needed to support the staff's decisions during license termination.
- o The records that should be included in the terminated license file to support the decision to terminate a license.
- o When closeout inspections should be conducted to support license termination.

The forms developed by the RII staff to document staff and licensee actions during the license termination process should provide a good basis for developing this guidance.

Based on these findings, the review team recommends a performance rating of satisfactory for this non-common indicator.

4.4 Fuel Cycle Program Activities

The fuel cycle facility portion of this report is based on interviews with personnel from the Fuel Facilities Branch of DNMS, and with the RII Emergency Response Coordinator. Documents reviewed included a sampling of inspection reports from three fuel facilities, training records, inspection planning and scheduling documents, reports and emergency preparation documents from the RII Incident Response Center (IRC), and other documents provided as appendices to the Region's response to the IMPEP questionnaire.

4.4.1 Program Description

The Region's fuel facility responsibilities include inspection of five major fuel cycle facilities: Babcock & Wilcox Naval Nuclear Fuel Division (Lynchburg, VA), Framatone Cogema Fuels (Lynchburg, VA), General Electric Nuclear Energy (Wilmington, NC), Nuclear Fuel Services (Erwin, TN), and Westinghouse Commercial Nuclear Fuel Division (Columbia, SC). The Fuel Facilities Branch also performs occasional licensing-related work for approval of certain changes in licensee physical security plans, and supports Headquarters' licensing and regulatory development efforts, when requested.

In addition, the Fuel Facilities Branch has inspection responsibility for several non-power reactors located at major universities in the Region. These are not part of the fuel facilities inspection program under NMSS oversight, but one of the inspectors in the branch normally divides his time between these reactors and fuel facilities.

4.4.2 Inspection Program Status

It has been necessary for the Region to closely manage its inspection program for major fuel cycle facilities in response to unscheduled activities

competing for resources and unexpected vacancies of qualified RII fuel cycle facility inspectors (discussed below). IMC 2600 specifies the frequency of fuel facility inspection procedures as ranging between "minimum" and "normal," while noting that the planned frequency for the low-enriched uranium fuel fabrication facilities is the "minimum" frequency. As a result of the unscheduled activites and unexpected vacancies, the entire fuel facilities inspection program (both for low-enriched and high-enriched uranium facilities) is being conducted at the "minimum" level, with one exception. (The exception is that, for certain procedures, the inspection program for the Framatone Cogema facility is being inspected at less than the "minimum" frequency specified in IMC 2600. This has not appeared to impact the protection of public health and safety. In view of the fact that this is one of the less complex facilities, only handling low-enriched uranium in pellet form, this exception appears justified and has been coordinated with Headquarters.)

The Babcock & Wilcox (Naval) facility processes high enriched uranium, and was scheduled for inspection by RII at the normal level. The loss of the facility's resident inspector, combined with the Branch's other understaffing (i.e., a lengthy vacancy and reassignment of staff to support the fuel transfer inspection and license renewal hearing preparation for the Georgia Institute of Technology research reactor, described in greater detail below), prevented the "normal" inspection program from being implemented completely. Instead, the "minimum" program has been implemented at this facility. This is considered acceptable from the point of view of IMC 2600, but the Region has indicated that they would prefer to inspect at a higher frequency.

The Region appears to be managing the available inspection resources in a reasonable manner to focus inspection resources where they are needed most in consideration of safety risk and licensee performance, despite the additional activities and staffing vacancies. It is apparent, however, that the current staffing situation would allow few additional losses before even the "minimum" level of fuel facility inspections could not be supported.

4.4.3 Personnel, Qualifications, and Training

4.4.3.1 Personnel

At the time of the review, RII had a vacancy for a fuel facilities inspector. The vacancy had existed for an extended period because RII managers believed the inspector who had previously filled the position would return from an extended maternity leave. However, the inspector did not return, and RII now intends to post and fill the position.

In addition, there was a period of several months during which the Resident Inspector position at the Babcock & Wilcox facility was not filled. This vacancy required inspectors assigned at other facilities to conduct frequent inspections at the Babcock & Wilcox facility, as a substitute for the routine inspection effort that would have been available from a resident inspector.

A third impact on the staffing of inspectors resulted from the reassignment of an inspector and the Fuel Facilities Branch Chief to work on the Georgia Institute of Technology effort involving a fuel transfer inspection and preparation for a hearing on the Georgia Institute of Technology research reactor license renewal.

To reduce the impact of the unscheduled activities and ameliorate the understaffing situation to some degree, RII management has arranged for Reactor Safety Division personnel to perform inspections at the Region's non-power reactors, which is normally a Fuel Facilities Branch responsibility. This demonstrates RII management's commitment to address the resource challenge.

The Region reported that a total of seven staff members associated with the fuel cycle facilities program (including those mentioned above) resigned or retired during the review period. Most of these individuals divided their effort between fuel facilities and reactor programs, with only a small fraction of their time devoted to the fuel cycle program. These losses occurred for personal reasons or in conjunction with a major reorganization in the Region in which DNMS' Section Chief positions were eliminated. There were no common factors in the departures that would reflect unfavorably on the fuel facilities inspection program.

4.4.3.2 Qualification

All inspectors currently assigned to the Fuel Facilities Branch are fully qualified for their assigned tasks. Some of the inspectors are focusing their training to qualify for additional positions to improve the organizational flexibility of the Branch.

Qualified inspectors also were named as backups for each of the project inspector assignments. As long as the understaffing condition continues, redirecting inspectors to perform backup roles would create staffing shortages for the assignments they would leave behind. However, the naming of backup inspectors is useful in preparing to respond to significant incidents. Also, such preparations are useful when RII needs to redirect an inspector from a facility presenting a lesser safety risk to one where the safety risk is greater, as RII did to compensate for the Resident Inspector vacancy.

4.4.3.3 Training

The existing staff vacancy will likely be filled by an individual requiring training to become qualified as an inspector. Presently, the Technical Training Center (TTC) does not plan to provide formal classroom training for FY97 to qualify fuel facility inspectors. There are not enough individuals throughout the Agency who need the training within the foreseeable future to justify the expense of classroom sessions. Thus, providing training for the existing RII vacancy, and for any additional vacancies that may occur in the near future, will present a challenge. This is not an issue for resolution by RII, however. It is a Headquarters responsibility to arrange for the availability of proper training of both regional and Headquarters-based

inspectors, as well as resident inspectors. The review team recommends that NMSS continue to investigate and consider alternatives to the in-house classroom training courses currently required to qualify fuel facility inspectors (for example, alternatives such as commercially available training, video tapes from previous courses, or computer-based individually paced training).

4.4.4 Inspection Quality

4.4.4.1 Inspection Reports

The reviewer observed that RII's fuel cycle facility inspection reports exhibit a high quality of inspection effort in the way findings are presented and issues are resolved. The reports appeared to conform to the version of IMC 0610, "Inspection Reports," in effect until February 1996, which specified the required format and content of NRC inspection reports. (IMC 0610 was revised, with significant changes, effective February 2, 1996. RII, NMSS, and the author of IMC 0610 are coordinating to schedule and provide training to RII staff on the new inspection guidance.)

The Region conducts a peer review program to analyze a selection of regional inspection reports. This results in fuel facility inspection reports being reviewed on an annual basis for quality and consistency.

4.4.4.2 Inspection Scheduling and Planning

The staff uses the Inspection Followup System (IFS) both to record inspection follow up items and obtain IFS reports of such items in planning for subsequent inspections. An administrative member of the Branch obtains IFS reports, as needed.

The Fuel Facilities Branch maintains excellent documentation of the priorities for inspection in terms of safety risk and performance for each licensee. Using this documentation, any inspector would be able to focus emphasis on the areas and processes within a facility that deserve special attention. The Region maintains a Facility Integration Matrix for each facility to help identify trends and patterns of licensee performance with regard to violations and reported incidents. This information is also used in planning inspections. The matrix is a good practice in managing and planning fuel facility inspections that could be used successfully by other regions, as well.

The Branch also conducts a self-assessment program on a quarterly basis, as part of a broader, region-wide self-assessment program. Feedback from this program has helped the Branch to focus attention on understaffing and the effect of understaffing on RII's fuel cycle facility inspection program.

Scheduling of inspections is now coordinated with Headquarters through use of a new Master Inspection Schedule, which includes all fuel facility inspections in each of the regions and in Headquarters. Use of the Master Inspection Schedule will also help to coordinate various non-inspection activities, such

as Licensee Performance Reviews, training sessions, counterpart meetings and conference calls. In the future, Headquarters will also be able to monitor the progress of RII's and other regions' inspection programs using the new Master Inspection Schedule.

4.4.5 Incident Response

Most licensee-reported incidents do not involve activation of the Region's IRC. Regional responses to incidents at fuel cycle facilities are closely coordinated with Headquarters. The Region's preparations for responses that would involve activation of the IRC appear to be complete and well-organized. Daily, weekly, monthly, semi-annual, and annual tasks to maintain IRC readiness are described in a notebook kept in the Region's IRC. Other documentation maintained at the Region's IRC includes site-specific data for each of the Region's fuel cycle facilities, action lists for different types of emergencies, personnel contact lists, and duty lists.

In a recent incident that required activation of the IRC, RII responded in an appropriate manner. The Region's response was followed up immediately with a self-assessment that revealed only minor areas for improvement. Examples of these areas included the need for better coordination of dose calculations between the Region and Headquarters, better flow of communications between the IRC and the site, and better documentation of assumptions that underlie the various modeling calculations described in the Emergency Response Manual. The review team found that the self-assessment process following the recent IRC activation was a RII strength.

4.4.6 Fuel Cycle Program Summary

Despite the competing resource priorities and understaffing difficulties, the review team found that the fuel cycle facilities inspection program was being implemented consistently with the program guidance. Based on these findings, the review team recommends a performance rating of satisfactory for this non-common indicator.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found the Region's performance with respect to each of the performance indicators to be satisfactory. Accordingly, the team recommends the Management Review Board find the RII program to be adequate to protect public health and safety.

Below is a summary list of recommendations, as mentioned in earlier sections of the report, for action.

1. The review team recommends that RII license reviewers add written, explanatory comments in the tie-down condition listing the applicable sections in each old reference (i.e., references before the most recent license application) (Section 3.3).

2. The review team recommends that RII continue to emphasize performing and documenting performance-based materials inspections, and internally evaluate progress on this issue in about a year (Section 3.4).

3. The review team recommends that NMSS officially extend Temporary Instruction 2800/024, "Remote Afterloading Brachytherapy Inspections," in writing, if materials inspectors are still expected to follow it and complete the HDR field notes (Section 3.4).

4. The review team recommends that NMSS add event follow up as a section in the next revision to the irradiator inspection field notes (Section 3.5).

5. The review team recommends that allegations received by the Region which are outside of NRC jurisdiction be referred expeditiously to the appropriate regulatory authority, and that the Region maintain close oversight of allegations referred to Agreement States (Section 3.5).

6. The review team recommends close adherence to Regional Operating Instruction 1030, Revision 7, dated March 18, 1996, regarding advising allegers of the status of allegations every 6 months, particularly for allegations requiring extended time periods to resolve (Section 3.5).

7. The review team recommends that the decommissioning Manual Chapter currently being developed by NMSS include guidance regarding the following items:

   - o The appropriate level of documentation needed to support the staff's decisions during license termination.
   - o The records that should be included in the terminated license file to support the decision to terminate a license.
   - o When closeout inspections should be conducted to support license termination (Section 4.3).

8. The review team recommends that NMSS continue to investigate and consider alternatives to the in-house classroom training courses currently required to qualify fuel facility inspectors (for example, alternatives such as commercially available training, video tapes from previous courses, or computer-based individually paced training) (Section 4.4).

APPENDIX A:

Region II IMPEP Team Members

NAME	AREA OF RESPONSIBILITY
Scott Moore, NMSS/IMNS	Team Leader Technical Quality of Inspections
George Deegan, NMSS/IMNS	Status of Inspections Technical Staffing and Training Operating Plan Performance Resource Utilization
Elizabeth Drinnon, Georgia	Technical Quality of Licensing Actions
Craig Gordon, Region I	Response to Incidents and Allegations
Dominick Orlando, NMSS/DWM	Decommissioning Activities
Lance Lessler, NMSS/FCSS	Fuel Cycle Activities

APPENDIX B:

REGION II ORGANIZATION CHART WILL BE ADDED TO FINAL REPORT.

APPENDIX C:

REGIONAL RESPONSE TO QUESTIONNAIRE WILL BE ADDED TO FINAL REPORT.

APPENDIX D:

LICENSE FILE REVIEWS

(NOTE: The reviewers listed below do not always match the RII staff member signing the action, because of signature authority. The staff member completing the review is listed as the "Reviewer," not necessarily the individual signing the licensing action.)

REVIEW FILE #: L01
LICENSEE: West Virginia University
LICENSE #: 47-23035-01
LOCATION: Morgantown, WV
LICENSE TYPE: Academic, Type A Broad - program code 01100
ACTION TYPE: Amendment
DATE ISSUED: December 11, 1995
REVIEWER: J. Diaz-Velez

REVIEW FILE #: L02
LICENSEE: Enrique Gonzalez-Jimenez, M.D.
LICENSE #: 52-12202-03
LOCATION: Cagus, Puerto Rico
LICENSE TYPE: Private Practice/ Eye Applicator - program code 02210
ACTION TYPE: New
DATE ISSUED: September 11, 1995
REVIEWER: D. Collins

Comments:
a) License expired 6/30/95. Licensee notified telephonically on 7/20/95 that license had expired. Licensee sent in application on 7/26/95.

REVIEW FILE #: L03
LICENSEE: SMH Construction Company
LICENSE #: 47-25336-01
LOCATION: Beckley, WV
LICENSE TYPE: Measuring Systems, Portable Gauges - program code 03121
ACTION TYPE: New
DATE ISSUED: June 12, 1995
REVIEWER: J. Pelchat

Comments:
a) Condition 11a lists John Jones as an authorized user. No documentation in the file supports this person being on the license.

REVIEW FILE #: L04
LICENSEE: Greenhorne and O'Mara, Inc.
LICENSE #: 45-25294-01
LOCATION: Fairfax, VA
LICENSE TYPE: Measuring Systems, Portable Gauges - program code 03121
ACTION TYPE: New and Amendment No. 1
DATE ISSUED: April 22, 1994 and July 26, 1994
REVIEWER: D. Collins

REVIEW FILE #: L05
LICENSEE: Bayer Corporation
LICENSE #: 45-19163-02
LOCATION: Middletown, VA
LICENSE TYPE: In Vitro Testing Lab - program code 02410
ACTION TYPE: Renewal
DATE ISSUED: April 13, 1995
REVIEWER: H. Bermudez

Comments:
a) Several telephone calls were made which were referenced in a letter from the licensee. Reviewer did not document telephone calls requesting additional information.

REVIEW FILE #: L06
LICENSEE: College of William and Mary
LICENSE #: 45-03499-06
LOCATION: Williamsburg, VA
LICENSE TYPE: Research and Development, Other - program code 03620
ACTION TYPE: 2 Amendments (No. 3 & 4) and Renewal
DATE ISSUED: June 28, 1994; September 15, 1994 and March 9, 1995
REVIEWER: E. Wright

Comments:
a) Good follow up letter in file to the licensee explaining the license, and correcting misconceptions about the license.
b) Incorporated inspection finding in license tie-down condition about the Radiation Safety Committee.

REVIEW FILE #: L07
LICENSEE: Soil Consultants, Inc.
LICENSE #: 45-15200-04
LOCATION: Chantilly, VA
LICENSE TYPE: Measuring Systems, Portable Gauges - program code 03121
ACTION TYPE: New
DATE ISSUED: August 12, 1994
REVIEWER: E. Wright

Comments:
a) License expired February 28, 1994. Application submitted August 10, 1994. Telephone call by RII referenced in the licensee submittal, but no documentation in the file regarding contact with licensee about expired license.

REVIEW FILE #: L08
LICENSEE: Wind River Resources
LICENSE #: 47-25321-01
LOCATION: Clothier, WV
LICENSE TYPE: Measuring Systems, Fixed Gauges - program code 03120
ACTION TYPE: New and Amendment No. 1
DATE ISSUED: December 22, 1994 and April 2, 1996
REVIEWER: D. Collins

REVIEW FILE #: L09
LICENSEE: James Madison University
LICENSE #: SNM-1071
LOCATION: Harrisonburg, VA
LICENSE TYPE: SNM Plutonium - Neutron Sources less than 200 grams - program code 22120
ACTION TYPE: Renewal
DATE ISSUED: May 3, 1994
REVIEWER: E. Wright

REVIEW FILE #: L10
LICENSEE: Oldover Corporation
LICENSE #: 45-23380-01
LOCATION: Arvonia, VA
LICENSE TYPE: Measuring Systems, Gas Chromatograph - program code 03123
ACTION TYPE: Termination
DATE ISSUED: February 14, 1995
REVIEWER: D. Heim

REVIEW FILE #: L11
LICENSEE: Smith Kline Beacham Pharmaceuticals
LICENSE #: 52-23021-01
LOCATION: Guayama, Puerto Rico
LICENSE TYPE: Measuring Systems, Fixed Gauges - program code 03120
ACTION TYPE: Renewal and Termination
DATE ISSUED: September 15, 1994 and March 8, 1996
REVIEWER: J. Henson and E. Wright

REVIEW FILE #: L12
LICENSEE: Hari Dubey, M.D.
LICENSE #: 52-25004-01
LOCATION: Caguas, Puerto Rico
LICENSE TYPE: Eye Applicators, Strontium 90 - program code 02210
ACTION TYPE: Termination
DATE ISSUED: October 2, 1995
REVIEWER: D. Heim

REVIEW FILE #: L13
LICENSEE: Tennessee Valley Authority
LICENSE #: 41-06832-07
LOCATION: Chattanooga, TN
LICENSE TYPE: Measuring Systems, Portable Gauges - program code 03121
ACTION TYPE: Termination
DATE ISSUED: May 8, 1995
REVIEWER: E. Wright

REVIEW FILE #: L14
LICENSEE: Princeton Diagnostic Isotopes, Inc.
LICENSE #: 47-25322-01MD
LOCATION: Princeton, WV
LICENSE TYPE: Nuclear Pharmacies - program code 02500
ACTION TYPE: New
DATE ISSUED: March 3, 1995
REVIEWER: J. Henson

REVIEW FILE #: L15
LICENSEE: Department of the Army
LICENSE #: 01-12632-02
LOCATION: Fort Rucker, AL
LICENSE TYPE: Research and Development, Other - program code 03620
ACTION TYPE: New
DATE ISSUED: January 19, 1996
REVIEWER: J. Henson

Comments:
a) License expired September 30, 1995. Telephone conversation with licensee on January 4, 1996 initiated action.

REVIEW FILE #: L16
LICENSEE: U. S. Army, Test Measurement and Diagnostic Equipment Activity
LICENSE #: SNM-1998
LOCATION: Redstone Arsenal, AL
LICENSE TYPE: SNM Plutonium - Sealed Sources less than critical mass - program code 22150
ACTION TYPE: Amendment No. 2
DATE ISSUED: September 12, 1994
REVIEWER: J. Henson

REVIEW FILE #: L17
LICENSEE: Alliant Techsystems, Inc.
LICENSE #: SUB-1440
LOCATION: Rocket Center, WV
LICENSE TYPE: Source Material, Other, Greater that 150 kgm - program code 11300
ACTION TYPE: Amendment No. 7
DATE ISSUED: January 9, 1995
REVIEWER: J. Pelchat

REVIEW FILE #: L18
LICENSEE: Greenville Memorial Hospital
LICENSE #: 45-19128-01
LOCATION: Emporia, VA
LICENSE TYPE: Medical Institution, QMP Required - program code 02121
ACTION TYPE: Renewal
DATE ISSUED: January 8, 1996
REVIEWER: J. Pelchat

REVIEW FILE #: L19
LICENSEE: Department of the Navy
LICENSE #: 45-23645-01NA
LOCATION: Washington, D.C.
LICENSE TYPE: Research and Development, Broad, Multisite, Multiregional - program code 02210
ACTION TYPE: Amendment No. 4
DATE ISSUED: April 3, 1996
REVIEWER: E. Wright

Comments:
a) Several special tie-down conditions appear to be inspectable.

APPENDIX E:

REGIONAL INSPECTOR ACCOMPANIMENTS

Licensee:	Veterans' Affairs Medical Center
Location:	West Palm Beach, FL
License Type:	Medical Institution
Inspection Date:	March 25, 1996
License No.:	09-25328-01
Inspection Type:	Routine, unannounced
Priority:	3
Inspector:	A. Jones

Licensee:	Veterans' Affairs Medical Center
Location:	Miami, FL
License Type:	HDR and Broad Scope Medical
Inspection Date:	March 26 - 27, 1996
License No.:	09-00239-06
Inspection Type:	Routine, unannounced
Priority:	1
Inspector:	A. Jones

Licensee:	Nelson Excavating
Location:	Thomas, WV
License Type:	Byproduct Material Possession Only (Portable Gauge)
Inspection Date:	March 28, 1996
License No.:	47-24923-02
Inspection Type:	Special
Priority:	3
Inspector:	L. Franklin

Licensee:	Triad Engineering, Inc.
Location:	Morgantown, WV
License Type:	Portable Gauge
Inspection Date:	March 29, 1996
License No.:	47-17742-01
Inspection Type:	Routine, unannounced
Priority:	5
Inspector:	L. Franklin

Licensee: Wheeling Pittsburgh Steel Corp.
Location: Folansbee, WV
License Type: Fixed Gauge
Inspection Date: April 1 - 2, 1996
License No.: 47-16875-01
Inspection Type: Routine, unannounced
Priority: 5
Inspector: O. Masnyk Bailey

Licensee: Koppers Industries
Location: Folansbee, WV
License Type: Fixed Gauge
Inspection Date: April 2, 1996
License No.: 47-16933-02
Inspection Type: Routine, unannounced
Priority: 5
Inspector: O. Masnyk Bailey

Licensee: Advex Corporation
Location: Hampton, VA
License Type: Industrial Radiography - Temporary Job Sites
Inspection Date: April 2, 1996
License No.: 45-16452-01
Inspection Type: Field site (unannounced) at NASA-Langley Research Center, Hampton, VA
Priority: 1
Inspector: B. Parker

Licensee: U.S. Navy, Shore Intermediate Maintenance Activity
Location: Norfolk Naval Base, Norfolk, VA
License Type: U.S. Navy (Master Materials Licensee) radiography permittee
Inspection Date: April 3, 1996
License No.: Permit 45-32770-A1NP, Norfolk Naval Base
Inspection Type: Routine, unannounced
Priority: NA
Inspector: B. Parker

Licensee: NASA-Langley Research Center
Location: Hampton, VA
License Type: Special Nuclear Material (SNM) - Possession Only
Inspection Date: April 3, 1996
License No.: SNM-1288
Inspection Type: Routine, announced
Priority: 3
Inspector: B. Parker

Comment: The IMPEP reviewer did not count this as an "inspection" in the text of the IMPEP report. The inspector was not able to review the licensee's program, given limited time and licensee activities, including access to observe and inventory the remaining sources. RII decided to return at some later date to conduct the inspection.

Licensee: Sentara Hospital
Location: Norfolk, VA
License Type: HDR and Medical Institution - QMP Required,
Inspection Date: April 4-5, 1996
License No.: 45-00131-02
Inspection Type: Routine, unannounced
Priority: 1
Inspector: B. Parker

APPENDIX F:

INSPECTION FILE REVIEWS

File No.: I-1
Licensee: United Hospital Center
License Number: 47-01458-01
Location: Clarksburg, WV
License Type: High Dose Rate Remote Afterloader - 2230
Inspection Date: March 20, 1996
Priority: 1
Type of Inspection: Routine, unannounced
Inspector: L. Franklin
Date of Report: Form 591 dated March 20, 1996
Supervisory Review: J. Potter
Supervisory Review dated: April 3, 1996

Comments:

a) Good to reduce inspection frequency based on licensee good performance, per IMC 2800.
b) TI 2800/024 not completed.
c) Field notes not clear what observations were observed.

File No.: I-2
Licensee: Charleston Area Medical Center
License Number: 47-15473-02MD
Location: Charleston, WV
License Type: Nuclear Pharmacy - 2500
Inspection Date: August 11. 1995
Priority: 1
Type of Inspection: Routine, unannounced
Inspector: A. Jones
Date of Report: Form 591 dated August 11, 1995
Supervisory Review: C. Hosey
Supervisory Review dated: November 17, 1995

Comments:

a) Excellent to document watching package surveys.
b) Appropriate surveys, especially of hot lab periphery.

File No.: I-3
Licensee: Scientific Technical, Inc.
License Number: 45-24882-01
Location: Chesapeake, VA
License Type: Industrial Radiography - Temporary Job Sites - 3320
Inspection Date: November 29, 1995
Priority: 1
Type of Inspection: Routine, unannounced
Inspector: B. Parker
Date of Report: Form 591 dated November 30, 1995
Supervisory Review: C. Hosey
Supervisory Review dated: January 5, 1996

Comments:

a) Good to extend next inspection, based on licensee's good performance.
b) Recordkeeping for decommissioning marked "NA."
c) Attempted field inspection, but licensee cancelled work.
d) Excellent to document discussing 10 CFR 34.20 changes, and to observe the licensee's inventory.

File No.: I-4
Licensee: Fair Oaks Imaging Center
License Number: 45-25298-01
Location: Fairfax, VA
License Type: Medical Private Practice with QMP - 2200
Inspection Date: November 15, 1994
Priority: 3
Type of Inspection: Initial, unannounced
Inspector: J. Diaz Velez
Date of Report: NOVs dated December 7, 1994
Supervisory Review: C. Hosey
Supervisory Review dated: January 9, 1995

Comments:

a) Cannot tell from field notes what observations of licensees' operations were made.
b) Excellent documentation of what was discussed at the exit meeting.
c) Good to survey the hot lab and waste area boundaries.
d) Good notes on the QMP area and on training.
e) Very good documentation of RII evaluation and supervisory review of licensee's response to the NOV.

File No.: I-5
Licensee: University of Richmond
License Number: 45-08373-01
Location: Richmond, VA
License Type: Research & Development, Other - 3620
Inspection Date: July 12, 1994
Priority: 5
Type of Inspection: Routine, unannounced
Inspector: H. Bermudez
Date of Report: Form 591 dated July 12, 1994
Supervisory Review: C. Hosey
Supervisory Review dated: August 8, 1994

Comments:

a) Good to interview researchers.
b) Not clear from field notes whether operations were observed.
c) Not clear whether upcoming license expiration was discussed during the inspection.

File No.: I-6
Licensee: ATEC Associates of Virginia, Inc.
License Number: 45-16546-01
Location: Norfolk, VA
License Type: Portable Gauge - 3121
Inspection Date: February 28, 1995
Priority: 5
Type of Inspection: Special (license termination), unannounced
Inspector: J. Ennis
Date of Report: NA (no report sent to licensee)
Supervisory Review: C. Hosey
Supervisory Review dated: March 15, 1995

Comments:

a) Error regarding date of previous inspection may have just been written down incorrectly. Inspector explained that this was a termination inspection, not a follow up inspection.
b) Good note and documentation regarding disposition of each gauge.
c) No close out inspection results, such as Form 591, sent to the licensee.
d) Good note on where final dosimetry and recordkeeping for decommissioning files were transferred.

File No.: I-7
Licensee: Mingo Logan Col Company
License Number: 47-25025-01
Location: Wharncliffe, WV
License Type: Fixed Gauge - 3120
Inspection Date: February 1, 1995
Priority: 5
Type of Inspection: Routine, unannounced
Inspector: J. Mumper
Date of Report: Form 591 dated February 1, 1995
Supervisory Review: C. Hosey
Supervisory Review dated: February 7, 1995

Comments:

a) Field notes not clear on whether inspector observed licensee operations and interviewed staff.
b) Little detail on independent measurements.
c) Good documentation of shutter checks on gauges.
d) Field notes not clear on whom performs package receipt surveys, the licensee or the gauge service company.

File No.: I-8
Licensee: Green Bay Packaging, Inc.
License Number: 45-25268-01
Location: Winchester, VA
License Type: Fixed Gauge - 3120
Inspection Date: June 29, 1994
Priority: 5
Type of Inspection: Initial, unannounced
Inspector: M. Fuller
Date of Report: Form 591 dated June 29, 1994
Supervisory Review: C. Hosey
Supervisory Review dated: July 6, 1994

Comments:

a) Field notes unclear as to how the licensee performs exposure evaluations for the radiation protection program (e.g., to insure doses to public are acceptably low).

APPENDIX G:

INCIDENT FILE REVIEWS

File No. 1 Incident Log No. PN
Licensee: Department of Navy License: 45-23645-01NA
Site of Event: Portsmouth, VA
Date of Event: 11/18/94 Type of Event: Misadministration
Investigation Date: 11/28/94 Investigation Type: Site

Summary of Incident and Final Disposition: Brachytherapy misadministration due to sources loaded in wrong order. NOVs issued; licensee disputed findings based upon self-identification.

Comment:
a) No concerns

File No. 2 Incident Log No. Morning Report
Licensee: Veterans Administration License: 23-08786
Site of Event: Jackson, MS
Date of Event: 05/04/94 Type of Event: Overexposure
Investigation Date: 06/27/94 Investigation Type: Site

Summary of Incident and Final Disposition: Female patient underwent I-131 therapy while pregnant. Special inspection performed.

Comment:
a) Preliminary Notification not issued. PN not required per IMC 1120 criteria; however, the incident resulted in a significant fetal dose and may have been of significant interest to media, government, or the public.

File No. 3 Incident Log No. PN
Licensee: Wise Appalachian Regional Hospital License: 45-23524-01
Site of Event: Wise, VA
Date of Event: 10/20/95 Type of Event: Overexposure (Potential)
Investigation Date: 11/07/95 Investigation Type: Site

Summary of Incident and Final Disposition: Licensee reported high film badge reading. Investigation completed to make the determination that exposure was erroneous.

Comment: None

File No. 4
Licensee: University of Virginia
Site of Event: Charlottesville, VA
Date of Event: 03/14/95
Investigation Date: 03/23/95

Incident Log No. PN
License: 45-00034-26

Type of Event: Misadministration
Investigation Type: Site

Summary of Incident and Final Disposition: Brachytherapy misadministration.

Comment:
a) Good, timely inspection follow up

File No. 5
Licensee: Abbott Health Products
Site of Event: Vega Alta, PR
Date of Event: 04/15/94
Investigation Date: 04/15/94

Incident Log No. None
License: 52-24994-01

Type of Event: Equipment failure
Investigation Type: Phone

Summary of Incident and Final Disposition: Irradiator source rack did not return to the shielded position. NRC approval obtained to enter room and replace solenoid valves.

Comment:
a) July 28-30 inspection field notes do not discuss incident or indicate if licensee is following recommended procedures

File No. 6
Licensee: Abbott Health Products
Site of Event: Veta Alta, PR
Date of Event: 04/16/95
Investigation Date:

Incident Log No. None
License: 52-24994-01

Type of Event: Equipment failure
Investigation Type: Phone

Summary of Incident and Final Disposition: Failure in radiation monitor at access control point. NRC permission obtained on 04/17 to enter room and replace cables.

Comment:
a) Timely letter from NRC to licensee summarizing event and allowing licensee operations to continue
b) Field notes do not discuss incident or indicate licensee action, but area of concern observed during inspector facility tour

File No. 7 Incident Log No. None
Licensee: Winchester Medical Center License: 45-01589-01
Site of Event: Winchester, VA
Date of Event: 10/31/95 Type of Event: Misadministration
Investigation Date: 11/08/95 Investigation Type: Next inspection

Summary of Incident and Final Disposition: Medical misadministration, therapeutic I-131 administered ±20% of prescribed dose. Licensee slow in NRC notification. Prompt inspection follow up and disposition.

Comment:
a) "Program weakness" identified in lieu of violation

File No. 8 Incident Log No. PN
Licensee: West Virginia University Hospital License: 47-23066-02
Site of Event: Morgantown, WV
Date of Event: 07/19/94 Type of Event: Misadministration
Investigation Date: 08/01-02/94 Investigation Type: Site

Summary of Incident and Final Disposition: Licensee reported misadministrations involving Sr-89 on 7/19/94; 07/20/94 CAL was timely in suspending Sr-89 administrations.

Comment:
a) Copy of 08/01/94 follow up inspection not found in incident file

File No. 9 Incident Log No. None
Licensee: Veterans Administration Medical Center License: 45-09413-06
Site of Event: Richmond, VA
Date of Event: 10/03/95 Type of Event: Lost RAM
Investigation Date: 11/14/95 Investigation Type: Site

Summary of Incident and Final Disposition: I-125 seeds disposed of as regular trash. Inspection had NOVs for training in waste handling practices.

Comment:
a) No notification by licensee of waste transporter or landfill about loss of material
b) Inspection report did not identify licensee follow up with waste broker or disposal site

File No. 10 Incident Log No. PN
Licensee: Babcock & Wilcox Co - NNFD License: SNM-42
Site of Event: Lynchburg, VA
Date of Event: 07/19/95 Type of Event: Other
Investigation Date: 07/08 - 08/04/95 Investigation Type: Site

Summary of Incident and Final Disposition: Nitric acid spill caused ALERT. Event response appeared appropriate.

Comment: None

File No. 11 Incident Log No. Morning Report
Licensee: General Electric Co License: SNM-1097
Site of Event: Wilmington, NC
Date of Event: 08/20/95 Type of Event: Loss of control
Investigation Date: 08/22-24/95 Investigation Type: Site

Summary of Incident and Final Disposition: Loss of criticality control. Inspection results from reactive inspection 08/22-24/95 properly noted one non-cited violation and two inspector follow up items.

Comment: None

File No. 12 Incident Log No. Morning Report
Licensee: General Electric Co License: SNM-1087
Site of Event: Wilmington, NC
Date of Event: 11/26/95 Type of Event: Geometry Control Failure
Investigation Date: Investigation Type: Site

Summary of Incident and Final Disposition: Notification by licensee of minor loss of geometry control.

Comment:
a) 12/04-08/95 - no discussion of event in next inspection report

APPENDIX H:

DECOMMISSIONING FILE REVIEWS

ORNL Sites

File No.: ORNL-1
Licensee: DOA Army Medical Research Laboratory - Bldg 1025
Location: Fort Knox, KY
License No.: 16-00380-03
Docket No.:030-01746

File No.: ORNL-2
Licensee: American Lava Corporation
Location: Chattanooga, TN
License No.: SNM-00109 (AEC)
Docket No.:070-00105

File No.: ORNL-3
Licensee: American Lava Corporation
Location: Chattanooga, TN
License No.: C-3469
Docket No.:040-00575

File No.: ORNL-4
Licensee: Homer Laughlin China
Location: Newell, WV
License No.: SUB-00081
Docket No.:040-01957

CONFIRMATORY SURVEYS

File No.: C-1
Licensee: Atlantic Research Corporation
Location: Gainesville, VA
License No.: 45-02808-08
Docket No.:030-33680

File No.: C-2
Licensee: ITT Electro-Optical Products Division
Location: Roanoke, VA
License No.: STB-1374
Docket No.:040-08761

File No.: C-3
Licensee: Nuclear Diagnostic Systems Inc.
Location: Lorton, VA
License No.: 45-25035-01
Docket No.:030-30995

DECOMMISSIONING INSPECTIONS

File No.: I-1
Licensee: Atlantic Research Corp
Location: Gainesville, VA
License No.: 45-02908-08
Docket No.: 030-33680

File No.: I-2
Licensee: B&W Naval Nuclear Fuels Division
Location: Lynchburg, VA
License No.: SNM-42
Docket No.:70-27

File No.: I-3
Licensee: B&W Naval Nuclear Fuels Division
Location: Lynchburg, VA
License No.: SNM-42
Docket No.:70-27

File No.: I-4
Licensee: B&W Naval Nuclear Fuels Division
Location: Lynchburg, VA
License No.: SNM-42
Docket No.:70-27

File No.:I-5
Licensee: GE
Location: Wilmington, NC
License No.: SNM-1097
Docket No.:70-1113

File No.:I-6
Licensee: GE
Location: Wilmington, NC
License No.: SNM-1097
Docket No.:70-1113

File No.:I-7
Licensee: Nuclear Fuel Services, Inc.
Location: Erwin, TN
License No.: SNM-124
Docket No.: 70-143

File No.:I-8
Licensee: Nuclear Fuel Services, Inc.
Location: Erwin, TN
License No.: SNM-124
Docket No.: 70-143

TERMINATED SITES

File No.: T-1
Licensee: Geodax Technology, Inc.
Location: Roanoke, VA
License No.: 45-01291-04MD
Docket No.: 030-20060

File No.: T-2
Licensee: Mallinckrodt Medical, Inc.
Location: St. Louis, MO
License No.: 24-25311-01MD
Docket No.: 030-33626

File No.: T-3
Licensee: AFG Industries, Inc.
Location: Bridgeport, WV
License No.: 47-16753-01
Docket No.: 030-11580

File No.: T-4
Licensee: American Tobacco Co.
Location: Hopewell, VA
License No.: 45-00207-04
Docket No.: 030-06508

File No.: T-5
Licensee: Donaldson Mine Co.
Location: Cedar Grove, WV
License No.: 47-24928-01
Docket No.: 030-30092

File No.: T-6
Licensee: Professional Service Industries, Inc.
Location: Parkersburg, WV
License No.: 47-25093-01
Docket No.: 030-31587

File No.: T-7
Licensee: City of Alexandria
Location: Alexandria, VA
License No.: 45-18354-01
Docket No.: 030-14916

File No.: T-8
Licensee: Indeserve, Inc.
Location: Chesapeake, VA
License No.: 45-25074-01
Docket No.: 030-31378

File No.: T-9
Licensee: Old Dominion Fabricators
Location: Chester, VA
License No.: 45-15581-01
Docket No.: 030-09384

File No.: T-10
Licensee: Hospital Metropolitano
Location: San Juan, PR
License No.: 52-16033-03
Docket No.: 030-33113

File No.: T-11
Licensee: Zapati Haynie Corp
Location: Reedville, VA
License No.: 45-24826-02
Docket No.: 030-32093

File No.: T-12
Licensee: Atec Associates of Va.
Location: Norfolk, VA
License No.: 45-16546-01
Docket No.: 030-11215