

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

QUESTIONNAIRE

**REGION III**

**Reporting Period: March 29, 2003, to Present**

Note: If there has been no change in the response to a specific question since the last IMPEP questionnaire, the State or Region may copy the previous answer, if appropriate.

**A. GENERAL**

1. Please prepare a summary of the status of the State's or Region's actions taken in response to the comments and recommendations following the last review.

**The 2003 Region III IMPEP review did not identify any recommendations.**

**B. COMMON PERFORMANCE INDICATORS**

I. Technical Staffing and Training

2. Please provide the following organization charts, including names and positions:

- (a) A chart showing positions from Governor down to Radiation Control Program Director;

**Not Applicable.**

- (b) A chart showing positions of current radiation control program including management; and

**See attached Region III and DNMS Organizational Charts.**

- (c) Equivalent charts for sealed source and device evaluation, low-level radioactive waste and uranium recovery programs, if applicable

**Not Applicable for the Region III Office.**

3. Please provide a staffing plan, or complete a listing using the suggested format below, of the professional (technical) full-time equivalents (FTE) applied to the radioactive materials program by individual. Include the name, position, and, for Agreement States, the fraction of time spent in the following areas: administration, materials licensing & compliance, emergency response, low-level radioactive waste, uranium recovery, other. If these regulatory responsibilities are divided between offices, the table should be consolidated to include all personnel contributing to the radioactive materials program. Include all vacancies and identify all senior personnel assigned to monitor work of junior personnel. If consultants were used to carry out the program's radioactive materials responsibilities, include their efforts. The table heading should be:

<u>Name</u>	<u>Position</u>	<u>Area of Effort</u>	<u>FTE%</u>
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<b>NAME</b>	<b>POSITION</b>	<b>AREA OF EFFORT</b>	<b>FTE%</b>
<b>Patty Pelke</b>	<b>Branch Chief Materials Licensing Branch</b>	<b>Management</b>	<b>100</b>
<b>Colleen Casey</b>	<b>License Reviewer</b>	<b>Licensing</b>	<b>100</b>
<b>Sandy Frazier</b>	<b>Senior License Reviewer</b>	<b>Licensing Inspection</b>	<b>95 5</b>
<b>Loren Hueter</b>	<b>License Reviewer</b>	<b>Licensing</b>	<b>100</b>
<b>Jim Mullauer</b>	<b>License Reviewer</b>	<b>Licensing</b>	<b>100</b>
<b>Kevin Null</b>	<b>Senior License Reviewer</b>	<b>Licensing Inspection</b>	<b>95 5</b>
<b>Bill Reichhold</b>	<b>License Reviewer</b>	<b>Licensing</b>	<b>50</b>
<b>Toye Simmons</b>	<b>License Reviewer</b>	<b>Licensing</b>	<b>100</b>
<b>John Madera</b>	<b>Branch Chief Materials Inspection Branch</b>	<b>Management</b>	<b>100</b>
<b>Bob Gattone</b>	<b>Senior Materials Inspector</b>	<b>Inspection Licensing</b>	<b>95 5</b>
<b>Bob Hays</b>	<b>Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Ed Kulzer</b>	<b>Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Mike LaFranzo</b>	<b>Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Ken Lambert</b>	<b>Senior Materials Inspector</b>	<b>Inspection Licensing</b>	<b>95 5</b>
<b>George Parker</b>	<b>Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Debbie Piskura</b>	<b>Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Geoff Warren</b>	<b>Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Darrel Wiedeman</b>	<b>Senior Materials Inspector</b>	<b>Inspection</b>	<b>100</b>
<b>Pat Loudon</b>	<b>Branch Chief Decommissioning Branch</b>	<b>Management</b>	<b>100</b>
<b>Sarah Bakhsh</b>	<b>Decommissioning Inspector</b>	<b>Decommissioning Materials Inspection</b>	<b>80 20</b>
<b>Gene Bonano</b>	<b>Decommissioning Inspector</b>	<b>Decommissioning</b>	<b>100</b>
<b>Andrew Bramnik</b>	<b>Decommissioning Inspector</b>	<b>Decommissioning</b>	<b>0</b>
<b>Magda Gryglak</b>	<b>Decommissioning Inspector</b>	<b>Decommissioning</b>	<b>100</b>
<b>Peter Lee</b>	<b>Decommissioning Inspector</b>	<b>Decommissioning Licensing</b>	<b>95 5</b>
<b>George McCann</b>	<b>Senior Decommissioning Inspector</b>	<b>Decommissioning</b>	<b>100</b>

<b>Sam Mulay</b>	<b>Decommissioning Inspector</b>	<b>Decommissioning Materials Inspection</b>	<b>80 20</b>
<b>Bill Snell</b>	<b>Senior Decommissioning Inspector</b>	<b>Decommissioning</b>	<b>100</b>

4. Please provide a listing of all new professional personnel hired since the last review, indicate the degree(s) they received, if applicable, and additional training and years of experience in health physics, or other disciplines, as appropriate.

**Sarah Bakhsh joined DNMS in June 2003. She graduated from the University of Illinois in 2003 with a B.S. degree in chemical engineering.**

**Andrew Bramnik joined DNMS in July 2006. He graduated from The Ohio State University in 2006 with a B.S. degree in electrical and computer engineering.**

**Pat Loudon, Decommissioning Branch Chief, was reassigned to DNMS from DRP in May 2007.**

**Matthew Learn is a summer coop, currently working on his mechanical engineering degree from Northern Illinois University.**

5. Please list all professional staff who have not yet met the qualification requirements for a license reviewer or materials inspector. For each, list the courses or equivalent training/experience they need and a tentative schedule for completion of these requirements.

**Andrew Bramnik is in the Nuclear Safety Professional Development Program (NSPDP) and is currently undergoing qualification training. Expected NSPDP graduation and inspector certification by July 2008. Courses to be completed include:**

<b>Health Physics Technology</b>	<b>8/17/07</b>
<b>Introduction to Risk Assessment</b>	<b>9/27/07</b>
<b>Root Cause Workshop</b>	<b>11/9/07</b>
<b>MARSSIM</b>	<b>5/1/08</b>
<b>PRA Basics for Regulatory Apps</b>	<b>5/15/08</b>
<b>Environmental Monitoring for Radioactivity</b>	<b>6/13/08</b>

6. Identify any changes to your qualification and training procedure that occurred during the review period.

**DNMS uses qualification and training procedures found in NRC's Inspection Manual Chapter (IMC) 1246 "Formal Qualification Programs in the Nuclear Material Safety and Safeguards Program Area" and associated procedures. No significant changes to procedures occurred during the review period.**

7. Please identify the technical staff that left your program during the review period.

**Amber Morrell, NSPDP, left the NRC to pursue other employment opportunities, in May 2003.**

**Chris Miller, Decommissioning Branch Chief, was reassigned to HQ in June 2004.**

**Pat Hiland, Decommissioning Branch Chief, received a promotion to HQ in October 2004.**

**Ken O'Brien, Decommissioning Branch Chief, was reassigned to EICS in November 2004.**

**Ross Landsman, Senior Decommissioning Inspector, retired in May 2005.**

**Chris Martin, Decommissioning Inspector, left the NRC for other employment opportunities in July 2005.**

**Monte Phillips, Technical Assistant, was reassigned to DRP in October 2005.**

**Tony Go, Materials Inspector, was reassigned to DRS in July 2006.**

**Jamnes Cameron, Decommissioning Branch Chief, was reassigned to DRP in May 2007.**

8. List any vacant positions in your program, the length of time each position has been vacant, and a brief summary of efforts to fill the vacancy.

**Region III currently has no vacant positions in DNMS.**

9. For Agreement States, does your program have an oversight board or committee which provides direction to the program and is composed of licensees and/or members of the public? If so, please describe the procedures used to avoid any potential conflict of interest.

**Not Applicable.**

II. Status of Materials Inspection Program

10. Please identify individual licensees or categories of licensees the State is inspecting less frequently than called for in NRC's Inspection Manual Chapter (IMC) 2800 and explain the reason for the difference. The list only needs to include the following information: licensee name, license number, your inspection interval, and rationale for the difference.

**Region III follows the IMC 2800 inspection frequencies. Note that Region III inspects certain broadscope licensees more frequently than IMC 2800 requirements. See Divisional Instruction "DI-NR-001, Large Materials Licensee Initiative."**

11. Please provide the number of routine inspections of Priority 1, 2, and 3 licensees, as defined in IMC 2800; the number of initial inspections; and the number of increased controls inspections that were completed during the review period.

**Routine Inspections:**

<b>Priority 1:</b>	<b>83</b>
<b>Priority 2:</b>	<b>338</b>
<b>Priority 3:</b>	<b>331</b>

**Initial inspections: 207**

**Increased Controls Inspections: 46**

12. Please submit a table, or a computer printout, that identifies inspections of Priority 1, 2, and 3 licensees, increased controls, and initial inspections that were conducted overdue per the applicable guidance. Priority 1, 2, and 3 licensees and initial inspections must be

conducted at least as frequently as the inspection intervals established in IMC 2800. Increased controls inspections should be conducted at the intervals established in the Staff Requirements Memorandum for COMSECY-05-0028.

At a minimum, the list should include the following information for each inspection that was conducted overdue during the review period:

- (1) Licensee Name
- (2) License Number
- (3) Priority (IMC 2800)
- (4) Last inspection date or license issuance date, if initial inspection
- (5) Date Due
- (6) Date Performed
- (7) Amount of Time Overdue
- (8) Date inspection findings issued

Licensee Name	License Number	Pri. IMC 2800	Last Insp. Date	Date Insp. Due	Date Insp. OD	Date Insp. Comp.	Amt. of Time OD	Date Insp. Find. Issued
Centecor Biologics Note - new licensee, did not possess material during 4/16/03 insp. attempt	24-32396-01	5	4/16/03	4/04	5/04	3/28/06	23 mo.	3/28/06
Thermal Engineering	24-19500-01	1	10/23/03	10/04	2/05	3/29/05	1 mo.	3/29/05
St. Paul Radiology Note - new licensee, did not possess material during 10/9/03 insp. attempt	22-32425-01	3	10/9/03	10/04	10/04	5/18/05	7 mo.	5/18/05
Chart Industries	22-24393-01	1	8/6/03	8/04	12/04	7/19/05	8 mo.	7/19/05
Ridgewater College	22-15554-01	1	10/30/03	10/04	2/05	7/20/05	5 mo.	7/20/05
St. Joseph Hospital Note - Priority changed on 2/21/02 from 3 to 2 due to program code change from 2120 to 2230	24-11858-01	3/2 see note	9/12/01	2/04	9/04	8/31/05	11 mo.	8/31/05

Licensee Name	License Number	Pri. IMC 2800	Last Insp. Date	Date Insp. Due	Date Insp. OD	Date Insp. Comp.	Amt. of Time OD	Date Insp. Find. Issued
Daviess Community Hospital Note - Priority changed on 9/7/05 from 5 to 3 due to program code change from 2121 to 2120	13-16138-01	5/3 see note	12/1/99	12/04	08/04	9/23/05	13 mo.	9/23/05
Freeman-Oak Hill Health Center Note - 12/19/01 inspection listed priority as 3, but license program code is 2230, priority 2	24-17205-01	2	12/19/01	12/03	7/04	10/20/04	3 mo.	1//20/04

13. Please submit a table or computer printout that identifies any Priority 1, 2, and 3 licensees, increased controls, and initial inspections that are currently overdue, per the applicable guidance. At a minimum, the list should include the same information for each overdue inspection provided for Question 12 plus your action plan for completing the inspection.

**No inspections are currently overdue for inspection.**

14. Please provide the number of reciprocity licensees that were candidates for inspection per year as described in IMC 1220 and the number of candidate licensee reciprocity inspections that were completed each year during the review period.

Year	Candidates	Completed Candidate Inspections
2007 (through 8/1/07)	6	2
2006	6	4
2005	10	5
2004	9	3

2003	5	2
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III. Technical Quality of Inspections

15. What, if any, changes were made to your written inspection procedures during the reporting period?

**Region III's inspections are conducted in accordance with guidance provided in current NRC Inspection Manual Chapters and Management Directives. There have been revisions to the inspection guidance, including a significant revision to IMC 2800 during the IMPEP review period; however, those changes are not presented here. Instead, the NRC inspection information provided here relates to the Regional Procedures and Divisional Instructions used to guide our inspection activities.**

**The Regional Procedures closely parallel many agency procedures, such as the handling of allegations, and communications with outside agencies. Regional Procedures that were modified during the IMPEP review period included:**

- **RP-NR-004, "Recommending Third Party Assistance to Licensees" (11/01/04)**
- **RP-8.8, "Management of Allegations" (1/28/05)**
- **RP-2635, "Conflict of Interest Policy Regarding Assignment of Inspectors" (2/29/05)**
- **RP-8.81, "Handling of Office of Investigation Reports" (4/15/05)**
- **RP-8.3, "Augmented Team Inspection Reports" (4/15/05)**
- **RP-EM-006, "Disputed Violations" (5/17/05)**
- **RP-8.31, "Special Inspections at Licensed Facilities" (12/23/05)**
- **RP-1600, "Escalated Enforcement Process" (2/14/06)**

**DNMS also developed "Divisional Instructions" to address routine processes that were not otherwise documented in Agency or Regional Procedures. Divisional Instructions (DIs) that were developed and implemented during the IMPEP period include:**

- **DI-0400, "Follow-up to Suspended Licenses for Non-Payment of Fees" (4/03)**
- **DI-IMC-2800.02, "Communication of Program Code Changes and Significant Program Changes" (9/04)**
- **DI-IMC-2800.03, "Use of NRC Form 591M" (10/04)**
- **DI-IMC-2561, "Evaluation of Licensee Radiation Survey Program and Performance of Independent and Confirmatory Surveys" (2/05)**
- **DI-NR-002, "Inspection Follow-up to Suspended, Revoked, or Expired Licenses" (4/05)**
- **DI-IMC 0610, "Division Inspection Report Writing Guidance" (3/06)**
- **DI-IMC-2800, "Closeout of Nuclear Material Events Database Open Items" (7/06)**

- **DI-NR-001, "Large Materials Licensee Initiative" (7/07)**

16. Prepare a table showing the number and types of supervisory accompaniments made during the review period. Include:

Inspector                      Supervisor                      License Category                      Date

<b>INSPECTOR</b>	<b>SUPERVISOR</b>	<b>LICENSE CATEGORY</b>	<b>DATE</b>
Sarah Bakhsh	Ken O'Brien	PC 02110	1/8-9/04
Sarah Bakhsh	Ken O'Brien	PC 02500	1/28/04
Sarah Bakhsh	Ken O'Brien	PC 02120	1/28/04
Sarah Bakhsh	Ken O'Brien	PC 03121	5/5-6/04
Sarah Bakhsh	John Madera	PC 03211	8/4-5/05
Sarah Bakhsh	John Madera	PC 01100	9/1-2/05
Sarah Bakhsh	Jamnes Cameron	ISFSI	1/31-2/1/06
Sarah Bakhsh	Jamnes Cameron	Materials	3/14/06
Sarah Bakhsh	Jamnes Cameron	Materials	2/14-15/07
Gene Bonano	Chris Miller	Materials	3/11-12/04
Gene Bonano	Jamnes Cameron	Materials	7/12/05
Gene Bonano	Jamnes Cameron	Materials	9/22/05
Gene Bonano	Jamnes Cameron	Materials	1/10/06
Sandy Frazier	Gary Shear	PC 01100	9/15-17/03
Sandy Frazier	John Madera	PC 01100	9/13-14/04
Sandy Frazier	Patty Pelke	PC 02500	9/15/05
Sandy Frazier	Patty Pelke	PC 03613	4/19-20/07
Bob Gattone	Gary Shear	PC 02201	8/25/03
Bob Gattone	John Madera	PC 03211	8/19-20/04
Bob Gattone	John Madera	PC 02120	3/30-31/05
Bob Gattone	Madera/Shear	PC 02120	4/21/05
Bob Gattone	John Madera	PC 03211	8/4-5/05
Tony Go	Ken O'Brien	PC 03121	5/5-6/04
Tony Go	Patty Pelke	PC 03620	11/3/04
Tony Go	John Madera	PC 02120	9/13/05
Tony Go	John Madera	PC 02120	3/21/06

<b>Magda Gryglak</b>	<b>Chris Miller</b>	<b>ISFSI</b>	<b>8/6-7/03</b>
<b>Magda Gryglak</b>	<b>Ken O'Brien</b>	<b>ISFSI</b>	<b>7/16/04</b>
<b>Magda Gryglak</b>	<b>Jamnes Cameron</b>	<b>ISFSI</b>	<b>11/19/04</b>
<b>Magda Gryglak</b>	<b>Jamnes Cameron</b>	<b>ISFSI</b>	<b>1/19-20/05</b>
<b>Magda Gryglak</b>	<b>Jamnes Cameron</b>	<b>ISFSI</b>	<b>9/16/05</b>
<b>Magda Gryglak</b>	<b>Jamnes Cameron</b>	<b>ISFSI</b>	<b>1/31-2/1/06</b>
<b>Bob Hays</b>	<b>Gary Shear</b>	<b>PC 02110</b>	<b>4/21-23/03</b>
<b>Bob Hays</b>	<b>John Madera</b>	<b>PC 03320</b>	<b>8/18/04</b>
<b>Bob Hays</b>	<b>Patty Pelke</b>	<b>PC 03620</b>	<b>11/3/04</b>
<b>Bob Hays</b>	<b>John Madera</b>	<b>PC 03620</b>	<b>3/2/05</b>
<b>Bob Hays</b>	<b>John Madera</b>	<b>PC 03320</b>	<b>8/2/06</b>
<b>Bob Hays</b>	<b>Sam Lee</b>	<b>PC 03211</b>	<b>9/18-22/06</b>
<b>Bob Hays</b>	<b>Ken Lambert</b>	<b>PC 02500</b>	<b>11/15/06</b>
<b>Ed Kulzer</b>	<b>Chris Miller</b>	<b>Reactor</b>	<b>9/4/03</b>
<b>Ed Kulzer</b>	<b>Chris Miller</b>	<b>Reactor</b>	<b>9/23/03</b>
<b>Ed Kulzer</b>	<b>Ken O'Brien</b>	<b>Materials</b>	<b>7/12/04</b>
<b>Ed Kulzer</b>	<b>Ken O'Brien</b>	<b>Reactor</b>	<b>9/8/04</b>
<b>Ed Kulzer</b>	<b>Ken O'Brien</b>	<b>Reactor</b>	<b>9/9/04</b>
<b>Ed Kulzer</b>	<b>Ken O'Brien</b>	<b>Reactor</b>	<b>12/3-4/04</b>
<b>Ed Kulzer</b>	<b>John Madera</b>	<b>PC 03620</b>	<b>3/2/05</b>
<b>Ed Kulzer</b>	<b>John Madera</b>	<b>PC 03121</b>	<b>3/25/05</b>
<b>Ed Kulzer</b>	<b>John Madera</b>	<b>PC 03120</b>	<b>5/25/05</b>
<b>Ed Kulzer</b>	<b>John Madera</b>	<b>PC 03120</b>	<b>1/23-24/06</b>
<b>Ed Kulzer</b>	<b>John Madera</b>	<b>PC 03121</b>	<b>1/23-24/06</b>
<b>Ed Kulzer</b>	<b>John Madera</b>	<b>PC 03121</b>	<b>1/23-24/06</b>
<b>Ed Kulzer</b>	<b>Gary Shear</b>	<b>PC 03121</b>	<b>8/29-30/06</b>
<b>Ed Kulzer</b>	<b>Gary Shear</b>	<b>PC 03121</b>	<b>8/29-30/06</b>
<b>Ed Kulzer</b>	<b>Gary Shear</b>	<b>PC 03120</b>	<b>8/29-30/06</b>
<b>Mike LaFranzo</b>	<b>Chris Miller</b>	<b>Materials</b>	<b>7/31/03</b>
<b>Mike LaFranzo</b>	<b>Chris Miller</b>	<b>Materials</b>	<b>8/1/03</b>
<b>Mike LaFranzo</b>	<b>Chris Miller</b>	<b>Materials</b>	<b>8/21/03</b>

Mike LaFranzo	John Madera	PC 02120	8/30/04
Mike LaFranzo	John Madera	PC 02120	8/15/05
Mike LaFranzo	Patty Pelke	PC 03613	6/26/06
Mike LaFranzo	John Madera	PC 01100	8/26/06
Ken Lambert	John Madera	PC 02120	5/26/05
Ken Lambert	Patty Pelke	PC 02500	9/15/05
Ken Lambert	Patty Pelke	PC 02500	3/7-8/06
Ken Lambert	Patty Pelke	PC 03613	4/19-20/07
Ross Landsman	Chris Miller	ISFSI	4/24/03
Ross Landsman	Chris Miller	ISFSI	8/6-7/03
Ross Landsman	Ken O'Brien	ISFSI	7/16/04
Peter Lee	Chris Miller	Reactor	9/4/03
Peter Lee	Chris Miller	Materials	3/11-12/04
Peter Lee	Jamnes Cameron	Materials	1/13/05
Peter Lee	Jamnes Cameron	Reactor	3/31/05
Peter Lee	Jamnes Cameron	Materials	8/2/05
Peter Lee	Jamnes Cameron	Reactor	8/24-25/05
Peter Lee	Jamnes Cameron	Reactor	3/16/06
Peter Lee	Gary Shear	Reactor	3/20-22/06
Peter Lee	Jamnes Cameron	Materials	11/29/06
Chris Martin	Gary Shear	PC 02110	4/21-23/03
Chris Martin	Ken O'Brien	Materials	1/8-9/04
Chris Martin	Chris Miller	Materials	3/11-12/04
Chris Martin	Chris Miller	Materials	3/31/04
Chris Martin	Ken O'Brien	Materials	7/12/04
George McCann	Chris Miller	Materials	7/1/03
George McCann	Chris Miller	Materials	11/20-21/03
George McCann	Chris Miller	Materials	2/26/04
George McCann	Chris Miller	Materials	3/31/04
George McCann	Ken O'Brien	Materials	12/8/04
George McCann	Jamnes Cameron	Materials	1/13/05

<b>George McCann</b>	<b>Gary Shear</b>	<b>Materials</b>	<b>3/29-30/05</b>
<b>George McCann</b>	<b>Jamnes Cameron</b>	<b>Materials</b>	<b>8/26/05</b>
<b>George McCann</b>	<b>Jamnes Cameron</b>	<b>Materials</b>	<b>8/30-31/06</b>
<b>George McCann</b>	<b>Jamnes Cameron</b>	<b>Materials</b>	<b>1/24-25/07</b>
<b>George McCann</b>	<b>Gary Shear</b>	<b>Materials</b>	<b>5/29-31/07</b>
<b>Kevin Null</b>	<b>John Madera</b>	<b>PC 03613</b>	<b>9/18-19/03</b>
<b>Kevin Null</b>	<b>Gary Shear</b>	<b>PC 03613</b>	<b>3/3-4/04</b>
<b>Kevin Null</b>	<b>Patty Pelke</b>	<b>PC 03613</b>	<b>3/16-17/05</b>
<b>Sam Mulay</b>	<b>Jamnes Cameron</b>	<b>PC 02230</b>	<b>8/30/04</b>
<b>Sam Mulay</b>	<b>Gary Shear</b>	<b>PC 02200</b>	<b>8/22/05</b>
<b>Sam Mulay</b>	<b>John Madera</b>	<b>Materials</b>	<b>4/12-13/06</b>
<b>Sam Mulay</b>	<b>John Madera</b>	<b>Materials</b>	<b>5/29-31/07</b>
<b>George Parker</b>	<b>Gary Shear</b>	<b>PC 03121</b>	<b>6/10/03</b>
<b>George Parker</b>	<b>Gary Shear</b>	<b>PC 03121</b>	<b>6/11/03</b>
<b>George Parker</b>	<b>Gary Shear</b>	<b>PC 03320</b>	<b>6/12/03</b>
<b>George Parker</b>	<b>Ken O'Brien</b>	<b>PC 02500</b>	<b>1/28/04</b>
<b>George Parker</b>	<b>Ken O'Brien</b>	<b>PC 02120</b>	<b>1/28/04</b>
<b>George Parker</b>	<b>Ken O'Brien</b>	<b>PC 03121</b>	<b>5/5-6/04</b>
<b>George Parker</b>	<b>John Madera</b>	<b>PC 03211</b>	<b>8/19-20/04</b>
<b>George Parker</b>	<b>John Madera</b>	<b>PC 03511</b>	<b>11/4/04</b>
<b>George Parker</b>	<b>John Madera</b>	<b>PC 03120</b>	<b>8/7/06</b>
<b>George Parker</b>	<b>Ken Lambert</b>	<b>PC 01100</b>	<b>10/29-30/06</b>
<b>George Parker</b>	<b>Ken Lambert</b>	<b>PC 02500</b>	<b>11/15/06</b>
<b>Debbie Piskura</b>	<b>Gary Shear</b>	<b>PC 03121</b>	<b>9/2-3/03</b>
<b>Debbie Piskura</b>	<b>Ken O'Brien</b>	<b>PC 01100</b>	<b>2/12/04</b>
<b>Debbie Piskura</b>	<b>John Madera</b>	<b>PC 02120</b>	<b>3/30-31/05</b>
<b>Debbie Piskura</b>	<b>Madera/Shear</b>	<b>PC 02120</b>	<b>4/21/05</b>
<b>Debbie Piskura</b>	<b>John Madera</b>	<b>PC 02120</b>	<b>5/26/05</b>
<b>Debbie Piskura</b>	<b>John Madera</b>	<b>PC 02120</b>	<b>2/6-7/06</b>
<b>Debbie Piskura</b>	<b>John Madera</b>	<b>PC 02121</b>	<b>2/6-7/06</b>
<b>Debbie Piskura</b>	<b>John Madera</b>	<b>PC 02200</b>	<b>2/6-7/06</b>

Debbie Piskura	Ken Lambert	PC 01100	10/30-31/06
Bill Snell	Chris Miller	Reactor	8/4/03
Bill Snell	Ken O'Brien	Reactor	9/20/04
Bill Snell	Jamnes Cameron	Materials	4/27/05
Bill Snell	Jamnes Cameron	Reactor	9/20/06
Bill Snell	Jamnes Cameron	Materials	11/29/06
Geoff Warren	Gary Shear	PC 03320	9/4/03
Geoff Warren	Gary Shear	PC 03121	9/4/03
Geoff Warren	Gary Shear	PC 03120	9/5/03
Geoff Warren	Ken O'Brien	PC 02110	1/8-9/04
Geoff Warren	Ken O'Brien	PC 02500	1/28/04
Geoff Warren	Ken O'Brien	PC 02120	1/28/04
Geoff Warren	John Madera	PC 03121	7/14-15/05
Geoff Warren	John Madera	PC 02201	7/14-15/05
Geoff Warren	Jamnes Cameron	PC 03120	3/15/06
Geoff Warren	Jamnes Cameron	PC 03120	3/15/06
Geoff Warren	Gary Shear	PC 02120	5/25/06
Geoff Warren	Ken Lambert	PC 01100	10/29-30/06
Geoff Warren	Patty Pelke	PC 03521	6/19/07
Darrel Wiedeman	John Madera	PC 02120	8/31/04
Darrel Wiedeman	John Madera	PC 01100	9/1-2/05
Darrel Wiedeman	Steve Reynolds	PC 01100	6/12-16/06
Darrel Wiedeman	Sam Lee	PC 03211	9/18-22/06
Darrel Wiedeman	Terry Reis	PC 01100	1/22-24/07
Darrel Wiedeman	Bob Gattone	PC 03234	5/24/07

17. Describe or provide an update on your instrumentation, methods of calibration and laboratory capabilities. Are all instruments properly calibrated at the present time? Were there sufficient calibrated instruments available throughout the review period?

**Region III has a total of 85 portable radiation detection instruments available for use. These survey instruments cover a wide range of radiation detection capabilities that include gas-operated alpha detector floor monitors for decommissioning activities,  $\mu$ R/hr detection survey meters, energy compensated GM survey meters with beta-gamma pancake probes, various gamma photon detection survey instruments, and ionization chamber survey instruments with detection capability up to 10 R/hr.**

Region III also has 5 field survey instrument kits that contain data-log survey meters with alpha, beta, gamma, and scintillation probes. Additional instruments are available on a case-by-case basis through the Department of Energy's Region 5 Radiological Assistance Program at Argonne National Laboratory.

Region III contracts with a local calibration service, Radiation Safety Services, Inc. (RSSI). The RSSI facility can calibrate and repair all of Region III's radiation detection instruments. RSSI is licensed by the Illinois Emergency Management Agency and all calibrations meet the requirements of American National Standards Institute (ANSI) 323-1978 and MIL-STD-45662A.

Exposure and exposure rate at calibration points are determined using a NIST-calibrated MDH Model 1015 transfer instrument. The method eliminates errors due to scatter, uncertainty in the manufacturer's calibration of the source, and attenuator error found in calibration procedures that depend upon the inverse square law for exposure rate determination. To comply with the geometry requirements in ANSI 323-1978, exposure rates of 100 mR/hr or less are calibrated with an EON Corp. Model 64-764 low-range cesium-137 calibrator source. Exposure rates above 100 mR/hr are calibrated using a U.S. Nuclear Model CCSD-20E high range calibrator source.

Calibration for particulate radiation is NIST-traceable. Probe efficiencies for particulate radiation and specific gamma energies are determined in standardized geometries with NIST-traceable sources.

One alpha-emitting source and one selected energy beta source are used for each detector probe. Survey instruments that read in counts or count rates are calibrated in accordance with the manufacturer's specification using a pulse source that provides specified pulse heights and rates. Linear scale survey instruments are calibrated at two points on each scale at approximately 0.20 - 0.33 and 0.67 - 0.80 full scale. Logarithmic scale instruments are calibrated at least one point on each decade.

If a check source is supplied with the instrument, the reading it produces is documented on the calibration certificate and on the instrument calibration sticker. Calibration documentation, as a minimum, includes:

- a calibration certificate which includes instrument and probe information,
- calibration source information,
- field and response readings,
- efficiencies,
- calibration factor(s) (if appropriate),
- the person performing calibration,
- repairs or service performed,
- response to supplied check source and,
- the date the calibration was performed.

Certificates of Calibration for instruments with exposure or count rate errors that exceed 10% when received include both pre-calibration and post-calibration readings, and an instrument calibration sticker containing the calibration date, due date for next calibration, correction factor(s), if applicable, and the calibration certificate number.

All radiation detection instruments are calibrated annually, with the exception of the portable ion chambers, which are calibrated every six months. The RSO and assistant RSO maintain a database for all survey instruments which includes the instrument's location and calibration expiration dates. The database is reviewed monthly for upcoming expiration dates. Any survey instrument with an expiration date during that month, in use by an inspector or at a resident site, is exchanged to ensure that instruments with current

calibrations are used in the field. Survey instruments with expired calibration dates are sent to RSSI for re-calibration within 30 days. Region III maintains a sufficient inventory of survey instruments to ensure that inspection activities are not affected by instrument exchanges for calibrations.

IV. Technical Quality of Licensing Actions

18. How many specific radioactive material licenses does the Program regulate at this time?

**Currently, Region III regulates approximately 1250 specific licenses (as of July 16, 2007, the number was 1242 licenses).**

19. Please identify any major, unusual, or complex licenses which were issued, received a major amendment, were terminated, decommissioned, submitted a bankruptcy notification or renewed in this period.

**The Materials Licensing Branch did not receive or process any new or amended licenses that required emergency plans.**

**Major, unusual or complex licensing actions reviewed and issued during the IMPEP review period include the following:**

**Department of Veterans Affairs (DVA) Master Materials License (MML):**

**03-23853-01VA: New license for which the Commission approved issuance of a full MML to the DVA subject to increased NRC oversight for a two-year period, which included semiannual reviews of the DVA's implementation of its MML. Based on the DVA's performance during these two years, the NRC reduced its oversight of the VA MML program to the standard frequency described in IMC 2810, "Master Materials License Program." This was the first MML to be issued in accordance with NUREG-1556, Volume 10, "Program Specific Guidance About Master Materials Licenses."**

**American Radiolabeled Chemicals, Inc. (ARC); 24-21362-01: License renewal which required an Environmental Assessment based on the licensee's request to release Building 400 for unrestricted use. The licensee was required to obtain sufficient representative sampling to demonstrate their ability to comply with ALARA and Part 20 requirements by setting ALARA goals for air effluents at a fraction, e.g., 10 percent of the values in 10 CFR 20 Appendix B, Table 2, Columns 1 and 2, and demonstrating that the nearest member of the general public received no more than 10 mrem/yr from all of ARC's radioactive effluents. The review included a site visit by the license reviewer and a decommissioning inspector.**

**3M Company; 22-00057-61: License amendment to add a new panoramic irradiator. This was the first new panoramic irradiator constructed in Region III since requirements in 10 CFR Part 36 were published (February 1993) and IMC 2815 "Construction and Preoperational Inspection of Panoramic, Wet-Source-Storage Gamma Irradiators" was revised (March 2001). Construction activities and pre-operational testing required coordination with the engineering expertise in the Division of Reactor Safety (DRS). A total of five inspections and/or licensing site visits were conducted by representatives from the Materials Licensing Branch (including management), Materials Inspection Branch, and DRS, to ensure that the requirements of IMC 2815 were satisfied, verify construction, and observe pre-operational testing (pre and post source loading). In addition, the applicant was required to provide a dropped cask analysis to ensure that the design requirements in Section 36.39(c) were satisfied and was required to conduct an initial simulated cask load into the new hot cell prior to transferring an actual shipping cask with**

sources, into the facility.

**Missouri Baptist Medical Center; 24-11128-02:** License amendment to authorize intraoperative high dose rate brachytherapy. The review included a site visit by the reviewer.

**ATK Ordnance and Ground Systems, LLC; SUB-00971:** License termination for former depleted uranium production facility.

**Southeast Missouri State University; 24- 09296-02:** License amendment to authorize revised Decontamination and Survey Plan for Magill and Rhodes Hall to address americium-241 contamination that resulted from remodeling activities.

**William Beaumont Hospital; 21-01333-01:** License amendment to add a new gamma knife and subsequent request to move the gamma knife to a separate license (21-01333-02). The review included a site visit by the license reviewer and the Branch Chief.

**St. Joseph's Hospital; 13-32277-01:** Bankruptcy case identified by the HQ Fees Branch based on news article in local paper. Fees forwarded the web link for the news article to the Materials Licensing Branch Chief for follow-up. A bankruptcy team was activated and the license was successfully terminated.

**Department of Veterans Affairs Master Materials License; 03-23853-01VA:** License amendment to release facilities located at the DVA Medical Center located in Bath, New York for unrestricted use. The facility was not included as a permittee under the MML because they did not possess radioactive material. During a special inspection conducted by the DVA, they discovered several radioactive material standards with half-lives greater than 120 days. The DVA requested that the NRC review and approve the facility for unrestricted release in accordance with the Letter of Understanding between the NRC and DVA. An Environmental Assessment was prepared and the facility was released for unrestricted use.

**Shalom Services Corporation; 24-32655-01:** New license for portable gauges. The review included a new license site visit by the license reviewer.

**Gateway Constructors; 24-32656-01:** New license for portable gauges. The review included a new license site visit by the license reviewer.

**Heart and Wellness Institute, P.C.; 21-32654-01:** New license for a limited medical license. The review included a new license site visit by the license reviewer.

Major, unusual or complex decommissioning activities conducted during the IMPEP review period include the following:

**Alliant Technologies at the Twin Cities Army Ammunition Plant**

In 2004, Decommissioning Branch inspectors completed an inspection of Alliant Technologies at the Twin Cities Army Ammunition Plant, which involved a review of the licensee's actions and schedules for the completion of waste shipment activities and termination of the license. The Decommissioning Branch had project responsibility for this project, and terminated this license which removed a contaminated site from the Agency's national list of major contaminated sites. The Decommissioning Branch coordinated these activities closely with the State of Minnesota which was in the process of becoming an Agreement State at the time. The Region hosted a public Informational Meeting prior to the termination of the

license.

#### Upjohn & Pharmacia Company

In 2004, Decommissioning and Materials License Branch staffs collaborated in the review of Upjohn & Pharmacia Company's request for a partial release of its site. A Decommissioning Branch inspector conducted a site inspection to evaluate the licensee's efforts in decommissioning and release of five buildings. The inspector verified the licensee's claim that a decommissioning plan was not necessary and evaluated the decommissioning contractor's work. Site inspections were conducted that reviewed the licensee's decommissioning plan, observed the decommissioning contractor, and performed final status surveys in support of the overall review effort. As a result of the collaborative effort, the NRC completed a timely and verifiable review of this low frequency type of licensing action.

#### Battelle West Jefferson Decommissioning Project

In 2000, Battelle commenced decommissioning activities at the West Jefferson site in Ohio. Since the beginning of the decommissioning activity the Decommissioning Branch has maintained project management responsibilities for the site. The entire West Jefferson site comprises a 1,183 acre tract. The Nuclear Sciences Area occupies an 11-acre fenced enclosure in the northern portion of the West Jefferson site. The site consisted of four major buildings JN-1 (former hot cell facility), JN-2 (former sub-critical assembly and plutonium storage), JN-3 (former research reactor), and JN-4, JN-6 (former site guardhouse), and several smaller structures on a bluff overlooking Darby Creek and Battelle Lake. Buildings JN-1, JN-2 and JN-3 and their support structures were the focus of the final phase of the licensee's decommissioning project. Outside of the fenced area, several active and abandoned filter beds, and part of the site sanitary sewer systems were also included in the project.

Several inspections have been completed, all being coordinated with the Headquarters program office and the Ohio Department of Health. The licensee has completed decommissioning activities and the license is expected to be terminated by the end of September 2007.

#### Westinghouse - Hematite

In 2005, the Decommissioning Branch, in conjunction with staff from NMSS, conducted nuclear criticality safety inspections and various decommissioning inspections at Westinghouse-Hematite, a former fuel fabrication facility. The decontamination effort involved extensive reduction in special nuclear material source term and required thorough criticality safety reviews. Subsequent to the removal of special nuclear material, the licensee performed extensive remediation activities of the former production facilities through 2005. The former buildings are currently in SAFSTOR awaiting demolition.

#### St. Mary's University

In 2005, Materials Licensing Branch and the Decommissioning Branch staff, completed a confirmatory survey at St. Mary's University in Winona, Minnesota. The purpose of the survey was to evaluate the licensee's final status survey to support a request to terminate its NRC license. The NRC staff's surveys identified areas of residual contamination that required the licensee to perform further decontamination activities. The staff also identified deficiencies in the conduct of the licensee's surveys, mainly with the use of radioactively contaminated survey equipment, which interfered with the licensee's ability to identify the residual contamination. The license was ultimately terminated after final validation surveys were completed by DNMS inspectors.

### Big Rock Point Nuclear Power Plant

The Decommissioning Branch completed nine years of inspection activities leading to the demolition and green field status of the Big Rock Point Nuclear Power Plant. Consumers Energy Company's Big Rock Point Plant was the first commercial nuclear power plant constructed in Michigan and the fifth in the United States when it began operation in 1962. In 1997, the reactor was permanently shut down, ending 35 years of electric power generation as the nation's oldest and longest running nuclear plant. It was closed because its relatively small size (67 MWe) was likely to make it too expensive to operate in an increasingly competitive environment. The only remaining structure is an Interim Spent Fuel Storage Installation (ISFSI).

### La Crosse Boiling Water Reactor

The La Crosse Boiling Water Reactor was a 50 MWe reactor that went critical for the first time in 1967, and began commercial electrical output in 1968. In 1987, the plant ceased operations and was placed in a SAFSTOR mode and a possession only license was issued. The reactor is presently defueled with 333 irradiated fuel assemblies stored in the Fuel Element Storage Well. The licensee removed its reactor vessel in May 2007, which was placed into a steel canister and shipped by rail to Barnwell, South Carolina, for disposal. Decommissioning Branch inspectors conducted numerous inspections in preparation for the vessel removal, and were on-site to observe the removal activities. Other dismantlement activities have included removal of the steam piping system, steam jet air ejector, reactor feed water system, shutdown condenser, and condensate demineralizer system. The licensee is currently working on the dry fuel storage project for the spent fuel, as well as preparation of a license termination plan.

### Ford Research Reactor

The Ford Nuclear Reactor was operated by the Michigan Memorial Phoenix Project of the University of Michigan. The reactor began operating in 1957 and ceased operations in 2005. The reactor was a non-power generating reactor with an open pool, and was used for research, experiments, and classes. It was licensed to operate at a power level of 2 megawatts. The fuel and the reactor vessel have been shipped for disposal and the reactor pool has been drained and demolished. Significant demolition has already occurred, which has generated a large amount of concrete and debris that is being readied for disposal. Decommissioning Branch inspectors have conducted several inspections of the decommissioning activities, and expect to be on-site for the initial waste shipping activities.

### NASA Plum Brook

The Plum Brook Reactor Facility operated from 1961 to 1973. The facility consisted of two reactors and a complex of buildings on 27 acres. The reactors were a 60-megawatt research test reactor, constructed for testing materials for use in space program applications, and a 100 kilowatt swimming-pool type mock-up reactor. The reactors were defueled in 1973, and all special nuclear and source material was removed from the site and preliminary decontamination performed. The fuel assemblies were transferred and reprocessed offsite. In 1980, NASA requested authorization from the NRC to decommission the facilities and terminate the licenses. In 1981, NRC authorized the decommissioning, but budget constraints prevented NASA from proceeding. In 1997 and 1998, NASA renewed its decision to decontaminate and decommission the facilities and terminate the licenses. Physical decontamination and dismantlement began in 2002.

The decommissioning strategy is to remove all contaminated soils, materials and equipment, demolish buildings and structures to below grade level, and backfill with clean fill. As of July 2005, approximately 97% of the source term had been shipped from the site for disposal, which included over 8,000,000 pounds of low

level radioactive waste with a content of over 10,000 curies.

More recently, the Pentolite Ditch (which is on the NASA site) and the Plum Brook (which runs out to Sandusky Bay) were identified to contain cesium-137 contamination. Region III decommissioning inspectors have made several site inspections of decommissioning activities, including observing the collection of sediment samples from the Plum Brook.

#### Schofield Barracks and Ft. Hood

During November 2006, the Army contacted the Region III Office to report that the Army was investigating the discovery of depleted uranium (DU) contamination at a munitions test range located at Oahu, Hawaii. Region III was contacted because its staff had worked with the Army Project Manager on another project involving the cleanup of the DU munitions, which was authorized by an NRC Region III source material license. Since, neither NRC nor Army staff were sure whether a license would be necessary regarding this issue, or which NRC Region would be responsible for issuing the license, Regions III and IV agreed to work co-operatively on the issue.

To facilitate its coordination commitment, Region III developed a Coordination Plan to address interactions between the NRC, the Department of the Army, interested State governments, and public interest groups, regarding the radiological characterization activities to be conducted at the Army's Schofield Barracks Firing Range, and possibly 6 to 8 other similarly impacted sites located throughout the continental United States. The Army is currently working to determine the significance of DU contamination resulting from the testing of DU projectiles during the 1960s at the Army's artillery ranges located at Ft. Hood, Texas and Schofield Barracks, Hawaii. These projectiles were possessed and used under the authority of terminated Atomic Energy Commission licenses.

#### Mallinckrodt

The Mallinckrodt St. Louis site has been in operation since 1867 and has produced a wide range of products. In addition to the extraction of columbium and tantalum, various uranium compounds were extracted under contract to the Manhattan Engineering District and the former AEC. Decommissioning at the Mallinckrodt site will take place in two phases. Phase 1 covers the decommissioning of the buildings and equipment to the extent that whatever remains on-site will be released for unrestricted use. Phase 2 will complete the decommissioning of the building slabs and foundations, paved surfaces, and all subsurface materials to the extent that they can be released for unrestricted use.

During February 2007, NRC inspectors performed confirmatory surveys at Mallinckrodt to verify acceptability for unrestricted release of former production buildings. Final Status Surveys for these buildings had been sent to the NRC Program Office for review during calendar year 2004. Region III, in coordination with the program office, conducted independent confirmatory surveys and reviewed the final status surveys, ultimately making a determination that the buildings were adequate for unrestricted use.

#### Regional Initiative to Evaluate Broadscope Licensee Compliance with Decommissioning Requirements

In 2007, Decommissioning Branch staff commenced an initiative to review broadscope licensees' understanding and compliance with the decommissioning timeliness rule (10 CFR 30.36). The Decommissioning Branch, in coordination with the Materials Inspection Branch, began inspections to address the implementation of the timeliness rule. The inspection effort has focused on broadscope licensees,

since those licensees have the authority to approve and release buildings and areas without prior NRC approval. The specific issues under review involve: notification requirements, decommissioning record-keeping requirements, decommissioning surveys, and releases of buildings and areas for unrestricted use. The focus of our inspections has been to evaluate licensee compliance, and overall licensee knowledge and understanding of the NRC's guidance in these areas.

As of June 2007, four broadscope licensees (three Type A Medical licensees and one Type A Manufacturing and Distribution licensee) have been inspected. As a result of these inspections, seven cited violations and one non-cited violation have been identified that are associated with the NRC's decommissioning requirements. Broadly categorized, the violations involve failure to maintain adequate decommissioning records and failure to submit or follow a decommissioning plan in accordance with NRC regulations. At more than one licensee inspected, inspectors identified areas that were released for unrestricted use; however, based upon surveys made by the inspectors, contamination levels were above the unrestricted release limits.

The Decommissioning Branch plans to complete three more broadscope inspections by the end of 2007. At the conclusion of these inspections, the Decommissioning Branch will provide results of the inspections and identify any common themes regarding licensee knowledge and compliance with decommissioning regulations and provide recommendations for inspection program enhancements and modifications. This activity should be completed by March 2008. (See ML071630432)

20. Identify any licensees or groups of licensees that were issued increased controls during the review period. Those licensees that were initially identified during the initial implementation of increased controls need not be listed.

Other than those Region III licensees initially identified in November and December 2005 as requiring Increased Controls, Region III has not issued any new licenses that required implementation of Increased Controls since the implementation date of the Order (May 2006).

21. Discuss any variances in licensing policies and procedures or exemptions from the regulations granted during the review period.

As a result of the revised SUNSI guidance and the Increased Controls required for certain quantities of radioactive material, reviewers have been directed to obtain additional information for possession limits of sealed sources. Region III has not approved any exemptions to NRC regulations (beyond the routine exemptions outlined in Appendix K of Volume 20 "Guidance About Administrative Licensing Procedures" of NUREG-1556) during this review period. We have processed a limited number of amendment requests to deviate from the 35.1000 guidance posted on the NRC website. For those cases, a Technical Assistance Request was prepared and forwarded to FSME (formerly NMSS) for authorization to approve the request. Examples include:

Goshen General Hospital; 13-18845-01: License amendment to authorize deviation from the web-posted guidance for use of yttrium-90 microspheres (training and experience criteria for an authorized user).

Department of Veterans Affairs Master Materials License; 03-23853-01VA: License amendment to authorize deviation from the web-posted guidance for use of the Novoste intravascular brachytherapy device (training and

experience criteria for authorized users).

**Department of Veterans Affairs Master Materials License:**

**03-23853-01VA:** Request for clarification regarding how the requirements in 10 CFR Part 35, Section 35.26, “Radiation Protection Program Changes” and Section 35.1000, “Other Medical Uses of Byproduct Material or Radiation from Byproduct Material,” apply to master material licensees; and whether Section 35.26 may be used by Master Materials Licensee medical use permittees to make changes in their radiation safety programs for medical uses within the scope of 35.1000 uses.

22. What, if any, changes were made in your written licensing procedures (new procedures, updates, policy memoranda, etc.) during the reporting period?

License reviews were conducted in accordance with current NRC policy and the guidance provided in Volumes 1 through 20 of NUREG-1556. The following revisions to regulations and NRC licensing policies were implemented by the Materials Licensing Branch during this review period:

**Possession Only Licenses**

A memorandum dated January 19, 2005 to the regional Division Directors, from NMSS, provided guidance outlining the standardized language for the “authorized use” condition on materials licenses requesting a possession only license. The Office of the Chief Financial Officer requested that the regional licensing staff use standard language for License Condition 9 (Authorized Use) for “possession only licenses.” The standard language was integrated into the license process and the Materials Licensing Branch revised existing possession only licenses to reflect the new language.

**Part 30 Revision**

As a result of the revision to 10 CFR Part 30, Section 30.34(I), regarding the security provisions for portable gauges, a new license condition addressing security provisions was added to all portable gauge licenses issued on or after July 11, 2005.

**Part 35 Revision**

There was a significant revision to 10 CFR Part 35 specific to the training and experience (T&E) required for authorized users (AUs), authorized medical physicists (AMPs), and radiation safety officers (RSOs). The T&E criteria in Subpart J of Part 35 expired on October 24, 2005 (including recognition of specific accreditation Boards). The revised T&E regulations also require preceptor attestations for all individuals seeking “user” status (AU, AMP, RSO), including those individuals that have been certified by a specialty board recognized by the NRC.

**Sensitive, Unclassified, Non-Safeguards Information (SUNSI)**

The revised Screening Criteria in Attachment 2 to RIS 2005-31 “Control of Security-Related Sensitive Unclassified Non-Safeguards Information Handled by Individuals, Firms, and Entities Subject to NRC Regulation of the Use of Source, Byproduct, and Special Nuclear Material” to screen documents for Security-Related Sensitive Unclassified Non-Safeguards Information (Security-Related SUNSI) was integrated into the license process, including the required document markings.

**Pre-Licensing Guidance**

In May 2006, Region III “piloted” the pre-licensing guidance which is a three-step process. The steps consist of: Step 1, an initial screening completed for all applications (news, amendments, and renewals); Step 2, an in-depth screening

process to identify inconsistencies between safety-related information in the application and additional sources of information about the applicant that are already publicly available; and Step 3, notification to HQ for cases that require NRC to issue Security Orders, IC Orders, or request Technical Assistance for an application that has a potential security risk based on the results of the pre-licensing screening process. In November 2006, the guidance was finalized and in December 2006, the Materials Licensing Branch implemented the revised guidance.

**License Reviewer Guidance For Increased Controls Requirements**

A memorandum dated January 24, 2007 to the regional Division Directors, from FSME, provided guidance outlining the procedures to be followed by license reviewers during reviews of new, amendment, or renewal applications regarding the Order Imposing Increased Controls. The guidance required, in part, the addition of a license condition to impose the requirements of the Order.

**New License Site Visits**

In June 2007, Region III implemented the supplemental interim guidance for new license applications provided via email from FSME on June 12, 2007. DNMS is conducting on-site visits at the applicant's facility and the results will be documented in the most current version of the Pre-Licensing Visit Record (Version 3 dated July 5, 2007).

23. Identify, by licensee name and license number, any renewal applications that have been pending for one year or more. Please indicate why these reviews have been delayed and describe your action plan to reduce the backlog.

**We do not have any renewal applications that have been pending for one year or more, as of August 1, 2007.**

V. Technical Quality of Incident and Allegation Activities

24. For Agreement States, please provide a list of any reportable incidents not previously submitted to NRC (See Procedure SA-300, *Reporting Material Events*, for additional guidance, OMB clearance number 3150-0178). The list should be in the following format:

Licensee Name License #      Date of Incident/Report Type of Incident

**Not applicable. All reportable incidents submitted to the Headquarters Operations Center.**

25. During this review period, did any incidents occur that involved equipment or source failure or approved operating procedures that were deficient? If so, how and when were other State/NRC licensees who might be affected notified? For States, was timely notification made to NRC? For Regions, was an appropriate and timely PN generated? For Agreement States, was information on the incident provided to the agency responsible for evaluation of the device for an assessment of possible generic design deficiency? Please provide details for each case.

**DNMS identified 24 incidents which involved equipment failures or deficient operating procedures during the review period. Incident specifics are available for IMPEP team evaluation. Current policy allows the use of an Event Notification (EN) rather than the issuance of a PN, unless the EN lacks sufficient detail.**

Date	Licensee	Event	Method of Notification of States/NRC Licensees		Classification	
			Insp. Rpt.	Ltr.	Proc.	Equip.
4/2/03	Univ. of Michigan, Ann Arbor, MI	Underdose to patient from I-131 therapy treatment. Iodine adhered to vial resulting in patient receiving less than prescribed dose	X			X
4/28/03	Univ. of Michigan, Ann Arbor, MI	Leaking 8 mCi Ni-63 ECD source		X		X
5/13/03	Univ. of Wisconsin, Madison, WI	Failure to deliver prescribed dose to a patient using brachytherapy afterloader for microsphere implantation	X			X
7/9/03	Washington Univ. Med. Center, St. Louis, MO	Patient received only 3.2 % of intended Sm-153 dose	X			X
7/21/03	St. Vincent Hospital & Health Care, Indianapolis, IN	Overdose to treatment site	X			X
8/7/03	St. Vincent Hospital & Health Care, Indianapolis, IN	Overdose to proximal portion of treatment site; underdose to distal portion of treatment site	X			X
11/10/03	Lakeland Medical Center, St. Joseph, MI	Underdose to patient because of lack of procedure for assaying Sm-153 doses	X			X
12/29/03	V. A. Dept. of, North Little Rock, AR	Patient administered Sr-89 when written directive specified Sr-90	X			X

11/10/03	Lakeland Medical Center, St. Joseph, MI	Underdose to patient because of lack of procedure for assaying Sm-153 doses	X	X
1/19/04	Doe Run Co., Viburnum, MO	Manufacturer failed to properly weld section of gauge	X	X
1/26/04	St. Joseph Medical Center, South Bend, IN	Five patients received doses to unintended site	X Abnormal Occurrence (AO) 05/03	X
3/11/04	St. Vincent Hospital & Health Care, Indianapolis, IN	Dose to wrong location during HDR treatment	X	X
6/8/04	William Beaumont Hospital, Royal Oak, MI	Patient received 915 $\mu$ Ci of I-131 instead of intended dose of 10 $\mu$ Ci	X AO 04/04	X
7/19/04	Univ of Michigan, Ann Arbor, MI	Irradiator cable drive mechanism failure	X	X
10/11/04	St. Vincent Hospital & Health Care, Indianapolis, IN	Underdose to patient due to entry of wrong indexer length into treatment computer	X	X
1/24/05	Univ. of Minnesota, Minneapolis, MN	Patient undergoing brachytherapy treatment received unintended dose	X AO 05/01	X
2/16/05	Porter Valparaiso Hospital, Valparaiso, IN	Patient implanted with I-125 seeds having incorrect activity per seed	X	X
3/9/05	St. Johns Mercy Medical Center, St. Louis, MO	Infant administered adult dose of Tc-99m	X AO 05/02	X

11/10/03	Lakeland Medical Center, St. Joseph, MI	Underdose to patient because of lack of procedure for assaying Sm-153 doses	X	X
5/2/05	Union Hospital, Terre Haute, IN	Underdose during brachytherapy procedure	X	X
6/9/05	Edward Sparrow Hospital, Lansing, MI	Failure to deliver second iodine capsule to patient	X	X
2/10/06	Army, Dept of, Warren, MI	Defective locking device on CPN portable moisture/ density gauge	X	X
6/28/06	St. Joseph Health Center, St. Charles, MO	Patient received 25 times prescribed dose for thyroid scan	X	X
6/28/06	West Branch Reg. Med. Center, West Branch, MI	Patient administered 1000 times dose prescribed by written directive	X	X
10/23/06	St. Luke's Hospital of Kansas City, Kansas City, MO	Licensee administered dose to unintended site	X	X
1/8/07	Hackley Hospital, Muskegon, MI	Seed implant error resulting in underdose to treatment site and overdose to unintended site	X	X

The following synopses provide additional details of significant events:

- Saint Joseph Medical Center, South Bend, Indiana:**  
Five patients undergoing brachytherapy treatment for endometrial cancer received radiation doses to the wrong location. Licensee used incorrectly sized cesium-137 sources in a Wang vaginal applicator (Mick radio-Nuclear Instruments model 8524) which had the ability to slide out of the intended treatment position when the patient moved to a more up-right position. The manufacturer had recommended 3M brachytherapy sources and the

licensee used Amersham sources. With the sources out of position, the patients' inner thighs were irradiated. Patients One and Two received unintended doses of less than 300 cGy (rad). Patients Three, Four and Five received unintended doses of approximately 2000, 1500, and 2000 cGy (rad), respectively, to a small area of skin on the upper thighs. Patients Three, Four and Five developed areas of moist desquamation of the skin of the inner thighs. The cause of this event was determined to be improper source selection, inadequate manufacturer instructions, inadequate management oversight, and inadequate procedures.

- **Saint Luke's Hospital of Kansas City, Kansas City, Missouri:**  
The licensee administered an unplanned dose to tissue proximal to a mammosite treatment location. The patient was scheduled to undergo treatment using a Varian HDR model VariSource, which contained approximately 144.3 Gbq (3.9 Ci) of iridium-192. A physicist verifying the source positions and dwell times prior to treatment number eight of ten noted that the first (most distal) source position was different from the previous treatments. A subsequent investigation by the licensee determined that the usable catheter length entered into the treatment planning computer was 93 cm rather than the correct value of 95 cm. The error caused the patient to receive 700 to 1000 cGy (rad) to the intended site rather than the prescribed 2,380 cGy (rad) and 10,000 cGy (rad) to the unintended site. The cause of the event was determined to be inadequate procedures.
- **Hackley Hospital, Muskegon, Michigan:**  
An error occurred during a brachytherapy seed implant procedure, resulting in a dose less than prescribed to the intended site and doses greater than prescribed to unintended sites. The patient was prescribed a total dose of 12,000 cGy (rad) to the prostate using 41 iodine-125 seeds with each seed containing 11.84 Mbq (0.32 mCi). Post procedure radiographs revealed that 34 of the 41 seeds were inadvertently deposited 4 cm inferior to the prostate. As a result, the prostate received a dose of 1,300 cGy (rad). This event was caused by the failure to have adequate procedures and a lack of communication.
- **DOE RUN Co., Viburnum, Missouri:**  
A TN Technology density gauge (model SG-5191) became detached from its connection plate and fell to the floor. The gauge contained 18.5 Gbq (500 mCi) of cesium-137. The area was isolated and the manufacturer was contacted. The manufacturer determined the event was caused by the failure to properly weld the connection plates.

26. Identify any changes to your procedures for responding to incidents and allegations that occurred during the period of this review.

**We did not make any changes to incident and allegation response procedures during the review period.**