



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 28, 1998

Ms. Elinor Hall, Administrator
Oregon Health Division
Department of Human Resources
800 NE Oregon Street, Suite 925
Portland, OR 97232

Dear Ms. Hall:

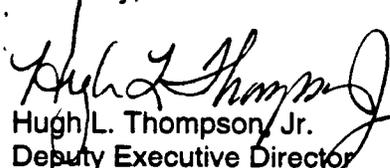
On October 13, 1998, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Oregon Agreement State Program. The MRB found the Oregon program adequate to assure public health and safety and compatible with NRC's program.

Section 5.0, page 13, of the enclosed final report presents the IMPEP team's recommendations and suggestions. We received Mr. Ray Paris' September 30, 1998 letter which described the actions taken in response to the team's recommendations. We request no additional information.

Based on the results of the current IMPEP review, the next full review will be in approximately 4 years.

I appreciate the courtesy and cooperation extended to the IMPEP team during the review and your support of the Radiation Control Program. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,


Hugh L. Thompson, Jr.
Deputy Executive Director
for Regulatory Programs

Enclosure:
As stated

cc: Ray D. Paris, Manager
Oregon Health Division

David Stewart-Smith
Oregon State Liaison Officer

Ms. Elinor Hall, Administrator
 Oregon Health Division
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DCD (SP01)
 PDR (YES NO)

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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

REVIEW OF OREGON AGREEMENT STATE PROGRAM

August 10-13, 1998

FINAL REPORT

U.S. Nuclear Regulatory Commission

1.0 INTRODUCTION

This report presents the results of the review of the Oregon radiation control program. The review was conducted during the period August 10-13, 1998 by a review team comprised of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of California. Review team members are identified in Appendix A. The review was conducted in accordance with the "Implementation of the Integrated Materials Performance Evaluation Program and Rescission of a Final General Statement of Policy," published in the Federal Register on October 16, 1997, and the November 25, 1997, revised NRC Management Directive 5.6, "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period July 11, 1996 to August 13, 1998, were discussed with Oregon management on August 13, 1998.

A draft of this report was issued to Oregon for factual comment on September 16, 1998. The State responded in a letter dated September 30, 1998 (Attachment 1). The Oregon's factual comments were considered by the team and accommodated in the report. The Management Review Board (MRB) met on October 13, 1998 to consider the proposed final report. The MRB found the Oregon radiation control program was adequate to protect public health and safety and compatible with NRC's program.

The Oregon Agreement State program is administered by the Radiation Protection Service (RPS) in the State Health Division of the Department of Human Resources. Organization charts for the Department of Human Resources are included as Appendix B.

At the time of the review, the Oregon RPS regulated 352 specific licenses, including limited and broad scope medical institutions, academic institutions, industrial radiography, fixed and portable gauge units, and nuclear pharmacy licensees.

The review focused on the materials program as it is carried out under the Section 274b. (of the Atomic Energy Act of 1954, as amended) Agreement between the NRC and the State of Oregon.

In preparation for the review, a questionnaire addressing the common and non-common performance indicators was sent to the State on June 4, 1998. The State provided a response to the questionnaire on June 26, 1998. During the review, discussions with State staff resulted in the responses being further developed. A copy of their final response is included in Appendix F to the draft report.

The review team's general approach for conduct of this review consisted of: (1) examination of Oregon's response to the questionnaire; (2) review of applicable Oregon statutes and regulations; (3) analysis of quantitative information from the RPS licensing and inspection data base; (4) technical review of selected licensing and inspection actions; (5) field accompaniments of two RPS inspectors; and (6) interviews with staff and management to answer questions or clarify issues. The review team evaluated the information that it gathered against the IMPEP criteria for each common and applicable non-common performance indicator and made a preliminary assessment of the RPS performance.

Section 2 below identifies that there were no recommendations resulting from the follow-up review conducted in 1996. The previous full program review conducted in 1995 found the Oregon program compatible, but withheld a finding of adequacy. The 1996 follow-up review closed all of the recommendations from the 1995 review, noted a delay in adoption of

regulations, and found the Oregon program adequate. 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 performance indicator, and Section 5 summarizes the review team's findings, recommendations, and suggestions. The review team identified two good practices in the RPS. Recommendations made by the review team are comments that relate directly to program performance by the State. A response is requested from the State to all recommendations in the final report. Suggestions are comments that the review team believes could enhance the State's RPS. The State is requested to consider suggestions, but no response is requested.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous follow-up review, which concluded on July 11, 1996, no recommendations were made although one open item, concerning delays in rulemaking activities, was noted in the report. This open item is discussed further in section 4.1.

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 are: (1) Status of Materials Inspection Program; (2) Technical Quality of Inspections; (3) Technical Staffing and Training; (4) Technical Quality of Licensing Actions; and (5) Response to Incidents and Allegations.

3.1 Status of Materials Inspection Program

The review team focused on four factors in reviewing this indicator: (1) inspection frequency, (2) overdue inspections of licenses, (3) initial inspections of new licenses, and (4) timely dispatch of inspection findings to the licensee and corrective action. The review team's evaluation is based on Oregon's questionnaire responses relative to this indicator, data gathered independently from the State's licensing and inspection data tracking system, the examination of completed inspection casework, and interviews with the RPS manager, the Radioactive Material Program (RMP) manager, and inspection and licensing staff.

The State's inspection frequencies are compatible with NRC program codes and inspection priorities. They are the same as NRC's, with the exception that portable gauge licenses are inspected more frequently than NRC, 4 years versus 5 years by NRC.

In their response to the questionnaire, Oregon indicated that as of June 26, 1998 no licensees, which were identified as requiring core inspections in IMC 2800, were overdue. Throughout the review period, less than 10 percent of the number of core licensees were inspected at frequencies exceeding the intervals in IMC 2800 by more than 25 percent.

The RPS policy, which adopts the guidance in IMC 2800, Section 04.03a, states that new licenses are inspected within six months of issuance of the license. The RPS does not normally extend the 6 month period in cases where the licensee does not receive material or initiate licensed activities. There were 43 initial inspections of in-state licensees due during the review period. Of those due, 24 (55%) were not inspected within the 6 month requirement. The team noted that 41 of the initial inspections were completed within 7 months and the remaining 2 inspections were completed within 8 months. The team recommends that Oregon continue to implement its policy for inspecting new licenses.

The RMP manager indicated that the RPS accelerated the inspection workload and eliminated the entire backlog by the end of July 1998. The accelerated workload resulted in 19 inspections being completed in June 1998 and 15 completed in July 1998. The team verified from the records that as of August 13, 1998 there were 352 active licenses and all inspections were current.

An internally generated monthly report to management tracks inspections that are completed and overdue. All licenses are entered into the RPS database and printouts allow an easy determination of the status of inspections at a given time period.

Reciprocity licensees are handled in the following manner:

1. Out-of-state licensees that frequently perform work in Oregon are provided the option of requesting an Oregon State license. When the license is issued they are listed in the database under their home state address. The company is not required to have an address in Oregon and the license application process simply consists of a review of their home State or NRC license. Each license includes a special condition that requires notification to the RPS before the licensee enters the State to do work using licensed material. Six months after the out-of-state license is issued, the licensee is mailed an "inspection by mail" form which is mailed back to the RPS and is considered an initial inspection. When the licensee notifies RPS that they are entering the State to do work, the RPS inspects them in the field if possible. The license is renewed annually by payment of a fee.
2. Out-of-state licensees that infrequently perform work in Oregon may choose not to apply for an Oregon State license. In these cases, the licensees are identified in the RPS database using license numbers that are coded to indicate that reciprocity is granted on each occasion work is to be performed in Oregon. When the licensee notifies RPS that they are entering the State to do work, the RPS inspects them in the field if possible. Seven of these licenses were listed on the August 1998 printout.

Two of the ten inspection reports of out-of-state licensees that were reviewed were inspected by mail. All others had an onsite inspection completed following their notification that they were entering the State to do work using sources. The State met the inspection percentage goals for conducting inspections of reciprocity licensees as outlined in Appendix III of NRC Inspection Manual Chapter 1220 (IMC 1220).

The review team did not consider the "inspection by mail" a valid inspection because the form only asks the make and model of devices used by the licensee and the names of their operators. The review team suggests that the RPS consider using another term such as "status report" rather than call the "inspection by mail" process for out-of-state licenses an inspection.

In 1984, the RPS instituted a program that tracks registered general license (GL) devices (i.e., gamma gauges and in-vitro test kits). Although other States track such devices, Oregon's implementation practices of the program are unique. In addition to requiring accountability of the devices, the State will also perform onsite inspections and request additional information (e.g., leak test results) from the general licensee. The program for registering these GL devices has been recognized by NRC which is considering adoption of a similar program nationwide. The

review team recommends that the Management Review Board recognize Oregon's GL device tracking program as a good practice.

The RPS uses Safety Inspection Form 591 for inspections to report the findings to the licensee at the conclusion of the inspection. The inspector indicates any violations found on the form and the licensee signs it acknowledging receipt and understanding of the nature of any violations. The form requires posting by the licensee. If an inspector is not certain of a finding, he will return to the RPS and discuss the matter with the RMP manager. In these cases, the licensee will be sent a letter outlining the violations and requiring a written response. The letter requires posting by the licensee. The issuance of inspection findings is timely with letters to the licensee being sent within two weeks of the inspection.

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

The team notes that one finding from the 1995 full program evaluation was the development of a significant number of overdue inspections. However, at the time of the 1996 follow-up review visit, all overdue inspections had been eliminated.

3.2 Technical Quality of Inspections

The team reviewed inspection reports, enforcement documentation, inspection field notes, and interviewed inspectors for 16 materials inspections conducted during the review period. The casework included all of the State's materials inspectors, including the RMP manager, and covered: medical (5), medical (HDR) (1), mobile medical (1), industrial broad scope (1), portable gauge (4), radiography (2), academic broad scope A (1), and pharmacy (1) inspections. A review team member performed accompaniments of two State inspectors on three separate inspections of licensed facilities. Appendix C lists the completed inspections reviewed with case-specific comments as well as the results of the accompaniments.

Inspection findings appear to lead to appropriate regulatory action. Although the RPS does not have administrative penalties, they can pursue penalties through the Attorney General's office. The RPS also uses Office Hearings to achieve escalated enforcement. One escalated enforcement case that used an Office Hearing was reviewed. The licensee had several serious violations on their initial inspection and eventually requested termination of their license due to increased enforcement activities of the RPS. The review team noted that the participation of the RPS manager in the Office Hearing was not documented. The review team suggests that all attendees, including senior managers, be documented in future enforcement activities involving meetings or hearings with licensees.

All enforcement letters reviewed were written in the appropriate regulatory language and directed the licensee to post the enforcement letter as the State does not use a Notice of Violation form. Follow up to enforcement letters was evident and complete. All enforcement cases were resolved promptly.

There were 229 inspections performed during the review period. Through 1998 to date, 89 inspections have been completed. The RPS uses NRC inspection guides and checklists. The team reviewed the inspection field notes and, with the exceptions noted below and in Appendix C, found them to be comparable with the types of information and data collected under NRC Inspection Procedure (IP) 87100 and thorough with all items checked and written comments where necessary. The inspection field notes provided documentation of the licensee's program including: posting; storage and use of radioactive material; receipt, transfer, and disposal of radioactive material; inventory; leak tests; radiation protection program; personnel monitoring; training; independent measurements; and inspection findings. The review team also noted the inspectors observed licensed operations or had operations demonstrated whenever possible. The review team noted that the inspector used NRC's checklist for Nuclear Medicine operations to perform a high dose rate (HDR) inspection. It was also noted that the inspection reports did not use the most recent version of NRC checklists and, therefore, there was no section to document the scope of the operation. The review team suggests that the RPS obtain and use the HDR inspection checklist and the latest version of inspection checklists found in IMC 87100. The RPS management policy is to conduct unannounced inspections whenever possible. Announced inspections usually involve initial inspections or inspections at licensees in geographically-distant locations from Portland. Inspection reports were signed by management. The RMP manager was aware of inspection findings through de-briefing by the inspector. In response to the questionnaire and through discussions with the RMP manager, the State reported the number and type of supervisory accompaniments performed during the review period. All inspectors were accompanied annually. The RPS manager accompanied the RMP manager during various licensee management meetings throughout the review period.

The RPS uses a rating system to score the licensee after an inspection. A low score can lead to the shortening of the inspection frequency down to 75% of the actual due date or, if the score is extremely low, then the licensee is subject to escalated enforcement or a follow up review within 6 months.

The RPS employs a unique method for educating the licensee of Oregon's regulations as they pertain to the licensees' operation. At the conclusion of each inspection, the inspector provides a checklist to the licensee that specifies Oregon's administrative rule requirements applicable to the licensee. The licensee can use this checklist to facilitate the annual review of their radiation safety program. Additionally, the inspectors routinely utilize a form to document their "vertical slice" approach to their inspections where several types of radioactive sources are tracked from their receipt on through to disposal. The review team recommends that use of the checklist and the form and the resulting discussions with licensees during the inspection, be recognized as a good practice by the Management Review Board.

The RPS has an adequate supply of survey instruments to support the inspection program. Each inspector and the supervisor have a kit with Ludlum meters and probes to monitor all isotopes. All survey equipment is calibrated annually by Oregon State University under a calibration license issued by Oregon. In addition, the RPS operates a small laboratory to count wipes and analyze samples obtained during inspections, follow-up actions, or licensing terminations. The laboratory participates in the routine Environmental Protection Agency (EPA) - Environmental Monitoring

and Safety Laboratory (EMSL) cross-check program and is used routinely by inspectors taking wipe samples. Gamma spectroscopy quality assurance (QA)/quality control (QC) appears adequate with routine use of a National Institute for Standards and Technology (NIST)-traceable mixed gamma standard. The RPS has a liquid scintillation counter and germanium detector system for gamma spectroscopy and a portable multichannel analyzer. Samples are also sent out to contract labs for analysis as necessary.

Two inspectors were accompanied by a review team member during the period of June 23-24, 1998. One inspector was accompanied during an unannounced inspection of an institutional nuclear medicine facility with brachytherapy on June 23, 1998. The other inspector was accompanied on June 24, 1998 during unannounced inspections of a research and development facility using americium-241, and another facility that manufactures iodine-125 test kits. These accompaniments are listed in Appendix C.

During the accompaniments, the State inspectors demonstrated appropriate inspection techniques and knowledge of the regulations. The inspectors were equipped with, and used, appropriate and calibrated survey and safety equipment. The inspectors were well prepared and thorough in their reviews of the licensees' radiation safety programs. Overall, the technical performance of the inspectors was excellent, and their inspections were adequate to assess radiological health and safety at the licensed facilities.

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

3.3 Technical Staffing and Training

Issues central to the evaluation of this indicator include the radioactive materials program staffing level and staff turnover, as well as the technical qualifications and training histories of the staff. To evaluate these issues, the review team examined the State's questionnaire responses relative to this indicator, and interviewed RPS management and staff, and considered any possible workload backlogs.

At the time of the review, Oregon's radioactive materials program was staffed by the RPS manager, RMP manager, three full time technical staff, and one full time administrative staff member. All staff have been with the RPS for the entire review period. One staff member each from the Electronics Products Program and the Emergency Response Program also provide partial support in rulemaking and event response activities, respectively. In general, the team found that the current staffing level is adequate, except the team noted that there was minimal staff time devoted to rulemaking efforts due to licensing and inspection needs. The State also identified this area as a weakness in the IMPEP questionnaire. Given the status of rulemaking actions as discussed in Section 4.1.2, the review team recommends that the RPS management assess whether additional staffing is warranted to complete overdue rulemaking actions and to ensure timely completion of upcoming rulemaking actions.

Based on the response to the IMPEP questionnaire and discussions with the RPS and RMP managers, the review team noted that during the review period one technical staff member retired from the radioactive materials program in March 1998. This vacancy was recently filled by an individual who is expected to receive a Master's Degree in Health Physics in December 1998. The review team also noted that the individual exceeds the minimum requirements for the position.

There are currently no vacancies in the radioactive materials program, however, the team was advised that the RMP manager will retire in December 1998. The RPS manager stated that he intends to fill the upcoming vacancy by making a nationwide announcement. Discussions with staff indicate that a significant loss of program history and knowledge of current procedural practices will be experienced. The review team suggests timely filling of the impending RMP manager vacancy with a well qualified individual and that revisions to written procedures to reflect current operations continue to be developed.

A written and RPS management approved training policy implements the guidelines in the October 1997 NRC/OAS Training Working Group Recommendations for Agreement State Training Programs. The RPS manager requires each staff member to successfully complete the basic courses identified for materials inspectors and license reviewers. Waivers from specific courses may be granted, at the manager's discretion, for individuals with extensive work experience and education in a specific topic area. The RPS manager indicated that funding for basic training is available. A review of Oregon's training records and interviews with the staff identified two staff members, a member of the technical staff and an administrative assistant who performs licensing assistant duties, that should attend the Licensing Practices and Procedures course or its equivalent to fully address their training needs. The technical staff member is currently registered for the September 1998 presentation of the course. The review team suggests that the administrative assistant attend the Licensing Practices and Procedures course or its equivalent to enhance effectiveness in performance of licensing assistant duties.

The review team also noted that the documentation of staff training is not up to date and does not have management sign-off when a course is completed or waived for an individual. The review team suggests that the RPS training form be updated to reflect the completion of the Teletherapy and Brachytherapy course by an inspection staff member and that the training form be modified to allow for management sign-off of completed and waived courses.

In discussions with the RPS, the team found that there are no radiation oversight boards and, therefore, the team determined that there is no potential for conflict of interest issues.

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

3.4 Technical Quality of Licensing Actions

The review team interviewed the RMP manager, evaluated the licensing process, and examined licensing casework for 32 specific licenses. Licensing actions were reviewed for completeness, consistency, proper radioisotopes 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 its conditions, and overall technical quality. The 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, supervisory review as indicated, and proper signature authorities. The files were checked for retention of necessary documents and supporting data including terminated licenses.

The licensing casework was selected to provide a representative sample of licensing actions which had been completed during the review period and included all amendments to the selected casework since the previous review. The cross-section sampling focused on the State's core licenses in priorities 1, 2, and 3; new licenses issued; renewals; and licenses terminated during the review period. The sample included the following licensing types: broadscope academic; broadscope medical; research and development; source material; industrial radiography; portable gauges, institutional nuclear medicine; private clinics, mobile nuclear medicine; therapy; and nuclear pharmacy. Licensing actions reviewed included 3 new, 7 renewals, 38 amendments, and 4 terminations. A listing of the casework licenses with case specific comments can be found in Appendix D.

Licenses are renewed on a 5 year frequency. Licenses that are under timely renewal are amended as necessary to assure that public health and safety issues are addressed during the period that the license is undergoing the renewal process. Each licensing action receives an initial review by one individual, then a second technical review by a senior health physicist. All licenses are signed by the RPS manager or his designee.

The review team found that the licensing actions were generally very thorough, complete, of high quality, and with health and safety issues properly addressed. The licensee's compliance history is taken into account when reviewing renewal applications and amendments as determined from documentation in the license files and discussions with the license reviewers and inspectors. Some comments were made on files as identified in Appendix D. Following the team's discussion of these comments, the RMP manager initiated actions to resolve the comments. The review team suggests that the comments in Appendix D be reviewed for actions as appropriate.

The casework review also confirmed that, with one exception, the materials staff follows the State's licensing guides which have been patterned after the NRC guides. The State has one license for a HDR brachytherapy device (Appendix D, casework number 11), in which two license conditions do not contain the same information as similar conditions utilized as standard practice by NRC and other Agreement States. A copy of a model NRC license with standard practice license conditions for an HDR unit was provided to the State during the review. The review team recommends that the State adopt the NRC standard practice license conditions for HDR units for the casework #11 license and future HDR licenses.

All licensing actions were signed by management. Deficiencies are addressed by letters and documented telephone inquiries which use appropriate regulatory language.

The State provided a listing of 58 licenses that have been terminated since the last review. A review of termination actions over the period showed that most of the terminations were for licensees possessing only sealed sources and/or for uses of radiopharmaceuticals with short half lives. Four termination files were selected for review based upon the potential for residual contamination, and to confirm the State's termination procedures. The review team found that terminated licensing actions were well documented, showing appropriate transfer records or appropriate disposal methods and records, confirmatory surveys, and survey records.

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

3.5 Response to Incidents and Allegations

In evaluating the effectiveness of the State's actions in responding to incidents, the review team examined the State's response to the questionnaire regarding this indicator, reviewed selected incidents reported for Oregon in the "Nuclear Material Events Database" (NMED) against those contained in the Oregon files, and reviewed the casework and supporting documentation for 11 material incidents and 10 allegations. There were no medical related events during the review period that met the definition of a misadministration. A list of selected incident files examined along with case specific comments is contained in Appendix E.

The review team interviewed the RPS Manager, the RMP manager, and the individual responsible for Emergency Response tracking. The subject areas discussed with staff included the State's incident and allegation process, tracking system, file documentation, Freedom of Information Act, NMED, and notification of incidents to the NRC Emergency Operations Center. The staff was familiar with NRC's "Handbook on Nuclear Event Reporting in the Agreement States" and Procedure Number: SA-300, "Reporting Material Events," dated February 1998. Reports have been submitted appropriately for NMED entry. The review team noted to management the Commission's position that, under the Policy Statement on Adequacy and Compatibility of Agreement State Programs, it is mandatory for Agreement States to report events to the NRC.

The State has consistently reported incidents, that require immediate or 24-hour reporting by the State licensee, to the NRC Operations Center. However, there were multiple written policies and procedures for incident response dated from 1984 to the present within the State's policy and procedure manual. The review team suggests that the policies and procedures for responding to incidents be consolidated into one policy or procedure.

When notification of an incident or an allegation is received, the individual receiving the report sends an electronic message to the staff providing information of the incident or allegation. The RMP manager usually directs the initial response and evaluates the need for an on-site investigation. An Incident Report Checklist and Summary form is used to document and track the staff's response to an incident or allegation.

The review team found that the State's actions were appropriate. Initial responses were prompt and well-coordinated, and the level of effort was commensurate with the health and safety significance. Inspectors were dispatched for onsite investigations in 7 of the 11 incidents reviewed. Of those 7 onsite investigations, 6 were conducted on the same day of the notification, and 1 was conducted within 2 days of the notification. When appropriate, the State took suitable enforcement action that required corrective measures by the licensee.

During the review period, there were 2 allegations referred to the State by NRC and there were 11 allegations that the State handled directly. The State promptly contacts the allogger, conducts an inspection when appropriate, and informs the allogger of the outcome of the investigation. Although the State's responses to allegations were satisfactory, the review team found that the State had no written policy or procedures for responding to allegations. The RPS advises alloggers that they can provide reasonable assurance that any information they provide

will be kept confidential but are not able to guarantee confidentiality unless all of the five criteria specified in State statute 192.502(4) are met. The review team recommends that the State develop a written policy with procedures for responding to allegations.

Based on the IMPEP evaluation criteria, the review team recommends that Oregon'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 Agreement State programs: (1) Legislation and Program Elements Required for Compatibility; (2) Sealed Source and Device Evaluation Program; (3) Low-Level Radioactive Waste Disposal Program; and (4) Uranium Recovery Program. Oregon recently turned back the sealed source and device evaluation program portion of their Agreement and Oregon's Agreement does not include uranium recovery program authority.

4.1 Legislation and Program Elements Required for Compatibility

4.1.1 Legislation

Along with their response to the questionnaire, the State provided the review team with the opportunity to review copies of legislation that affects the radiation control program. The currently effective statutory authority for the RPS is contained in Oregon Statute 453.625. The Radiation Protection Service is designated as the State's radiation control agency. The review team noted that no legislation affecting the radiation control program was passed during the review period.

4.1.2 Program Elements Required for Compatibility

The Oregon Regulations for Control of Radiation, found in Oregon Administrative Rules 453.605-453.755, apply to all ionizing radiation, whether emitted from radionuclides or devices. Oregon requires a license for possession and use of all radioactive material including naturally occurring materials, such as radium, and accelerator-produced radionuclides. Oregon also requires registration of all equipment designed to produce x-rays or other ionizing radiation.

The review team examined the State's administrative rulemaking process and found that the process takes up to six months after filing the draft administrative rule with the Secretary of State. Prior to filing with the Secretary of State, the draft administrative rule is reviewed by management and legal counsel (for fiscal impact issues) within the Department of Human Resources Office of the Administrator. When an acceptable draft proposed revision to a rule has been prepared, it is sent to the Secretary of State, all potentially impacted licensees and registrants, and the NRC for comment. The Secretary of State announces a public comment/hearing period for the proposed revision to the rule. After responding to comments, the RPS forwards the proposed revision to the rule with the addressed comments to the Office of the Administrator for final approval. Comments are considered and incorporated as appropriate before the regulations are finalized. The State has the authority to issue legally binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective.

The team evaluated Oregon's responses to the questionnaire and reviewed the status of regulations required to be adopted by the State during the review period. No regulations were adopted by the State during the review period. The review team noted that Oregon prepared initial drafts of the NRC regulation amendments required to be adopted, however, they have not been finalized and, therefore, they have not been adopted. As stated in Section 3.3, the State identified this area as a weakness. Discussions with management indicate that they believe the requirements in the revised NRC regulations are covered by license conditions and/or through incorporation by reference in their current administrative rules. No legal position has been made to this effect. The review team recommends that management obtain a State legal view on their interpretation that existing administrative rules require the implementation of all new requirements in the revised NRC regulations where required for compatibility purposes.

The State has not adopted the following regulations; however, they anticipated adoption by late 1999.

- "Licensing and Radiation Safety Requirements for Irradiators," 10 CFR Part 36 amendment (58 FR 7715) that became effective July 1, 1993.
- "Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use," 10 CFR Parts 30, 32, and 35 amendments (59 FR 61767 and 65243) that became effective January 1, 1995.
- "Frequency of Medical Examinations for Use of Respiratory Protection Equipment," 10 CFR Part 20 amendment (60 FR 7900) that became effective March 13, 1995.
- "Low-Level Waste Shipment Manifest Information and Reporting," 10 CFR Parts 20 and 61 amendments (60 FR 15649 and 25983) that became effective March 1, 1998. The Agreement States are to promulgate their regulations no later than March 1, 1998 so that NRC and the State would require this national system to be effective at the same time.
- "Radiation Protection Requirements: Amended Definitions and Criteria," 10 CFR Parts 19 and 20 amendments (60 FR 36038) that became effective August 14, 1995.
- "Clarification of Decommissioning Funding Requirements," 10 CFR Parts 30, 40, and 70 amendments (60 FR 38235) that became effective November 24, 1995.
- "Compatibility with the International Atomic Energy Agency," 10 CFR Part 71 amendment (60 FR 50248) that became effective April 1, 1996.
- "Medical Administration of Radiation and Radioactive Materials," 10 CFR Parts 20 and 35 amendments (60 FR 48623) that became effective October 20, 1995.
- "Termination or Transfer of Licensed Activities: Record Keeping Requirements," 10 CFR Parts 20, 30, 40, 61, 70 amendments (61 FR 24669) that became effective June 17, 1996.
- "Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act," 10 CFR Part 20 amendment (61 FR 65119) that became effective January 9, 1997.

- “Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State,” 10 CFR Part 150 amendment (62 FR 1662) that became effective February 27, 1997.
- “Criteria for the Release of Individuals Administered Radioactive Material,” 10 CFR Parts 20 and 35 amendments (62 FR 4120) that became effective May 29, 1997.
- “Licenses for Industrial Radiography and Radiation Safety - Requirements for Industrial Radiography Operations,” 10 CFR Parts 30, 34, 71, 150 amendments (62 FR 28947) that became effective June 27, 1997.
- “Radiological Criteria for License Termination,” 10 CFR Parts 20, 30, 40, 70 amendments (62 FR 39057) that became effective August 20, 1997.

The State indicated they anticipate adoption of the overdue regulations and the regulations which require adoption through 2000, by late 1999. A recommendation that Oregon examine the rule procedures and adopt compatible regulations within the 3 year time frame was made during the July 29, 1995 full review. A delay in regulation adoption was also noted during the July 11, 1996 follow-up review. The review team recommends that RPS management evaluate rulemaking activities to ensure that NRC rule changes are adopted within the specified 3 year time period.

It is noted that Management Directive 5.9, Handbook, Part V, paragraph (1)(c)(iii), provides that the above regulations should be adopted by the State as expeditiously as possible, but not later than three years after the effective date of the new Commission Policy Statement on Adequacy and Compatibility, i.e., September 3, 2000.

Based on the IMPEP evaluation criteria, the review team recommends that Oregon’s performance with respect to the indicator, Legislation and Program Elements Required for Compatibility, be found satisfactory.

4.2 Sealed Source and Device (SS&D) Evaluation Program

In April of 1998, the Commission approved the turnback of the SS&D Program to NRC. There were two sealed source device actions completed by the State during the review period. One action involved the administrative reactivation of a terminated registry that formerly was registered by NRC, and the other action was a custom evaluation that is authorized for use only in the State of Oregon. The State has discussed these actions with NMSS and committed to forwarding these files to NRC at the conclusion of the review. The associated licensing actions were reviewed under the Technical Quality of Licensing Actions (Common Indicator 3.4). Therefore, this indicator was not reviewed.

4.3 Low-Level Radioactive Waste (LLW) Disposal Program

In 1981, the NRC amended its Policy Statement, "Criteria for Guidance of States and NRC in Discontinuance of NRC Authority and Assumption Thereof by States Through Agreement" to allow a State to seek an amendment for the regulation of LLRW as a separate category. Those States with existing Agreements prior to 1981 were determined to have continued LLRW disposal authority without the need of an amendment. Although Oregon has LLRW disposal authority, NRC has not required States to have a program for licensing a LLRW disposal facility until such time as the State has been designated as a host State for a LLRW disposal facility. When an Agreement State has been notified or becomes aware of the need to regulate a LLRW disposal facility, they are expected to put in place a regulatory program which will meet the criteria for an adequate and compatible LLRW disposal program. There are no plans for a LLRW disposal facility in Oregon. Accordingly, the review team did not review this indicator.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team found Oregon's performance for the common and non-common performance indicators to be satisfactory. Accordingly, the review team recommended and the MRB concurred in finding the Oregon Agreement State Program to be adequate to protect public health and safety and compatible with NRC's program.

Below is a summary list of recommendations and suggestions, as mentioned in earlier sections of the report, for implementation and evaluation, as appropriate, by the State.

RECOMMENDATIONS:

1. The team recommends that Oregon continue to implement its policy for inspecting new licences (Section 3.1).
2. The review team recommends that the RPS management assess whether additional staffing is warranted to complete overdue rulemaking actions and to ensure timely completion of upcoming rulemaking actions (Section 3.3).
3. The review team recommends that the State adopt the NRC standard practice license conditions for HDR units for the casework #11 license and future HDR licenses (Section 3.4).
4. The review team recommends that the State develop a written policy with procedures for responding to allegations (Section 3.5).
5. The review team recommends that management obtain a State legal view on their interpretation that existing administrative rules require the implementation of all new requirements in the revised NRC regulations where required for compatibility purposes (Section 4.1.2).
6. The review team recommends that RPS management initiate rulemaking activities to ensure that NRC rule changes are adopted within the specified 3 year time period (Section 4.1.2).

SUGGESTIONS:

1. The review team suggests that the RPS consider using another term such as “status report” rather than call the “inspection by mail” process for out-of-state licenses an inspection (Section 3.1).
2. The review team suggests that all attendees, including senior managers, be documented in future enforcement activities involving meetings or hearings with licensees (Section 3.2).
3. The review team suggests that the RPS obtain and use the HDR inspection checklist and the latest version of inspection checklists found in IMC 87100 (Section 3.2).
4. The review team suggests timely filling of the impending RMP manager vacancy with a well qualified individual and that revisions to written procedures to reflect current operations continue to be developed (Section 3.3).
5. The review team suggests that the administrative assistant attend the Licensing Practices and Procedures course or its equivalent to enhance effectiveness in performance of licensing assistant duties.
6. The review team suggests the RPS training form be updated to reflect the completion of the Teletherapy and Brachytherapy course by an inspection staff member and that the training form be modified to allow for management sign-off of completed and waived courses (Section 3.3).
7. The review team suggests that the comments on Appendix D be reviewed for actions as appropriate (Section 3.4).
8. The review team suggests that policies and procedures for responding to incidents be consolidated into one policy or procedure (Section 3.5).

GOOD PRACTICES:

1. In 1984, the RPS instituted a program that tracks registered general license (GL) devices (i.e., gamma gauges and in-vitro test kits). Although other States track such devices, Oregon’s implementation practices of the program are unique. In addition to requiring accountability of the devices, the State will also perform onsite inspections and request additional information (e.g., leak test results) from the general licensee. The program for registering these GL devices has been recognized by NRC which is considering adoption of a similar system nationwide. The review team recommends that the Management Review Board recognize Oregon’s GL device tracking program as a good practice (Section 3.1).
2. The RPS employs a unique method for educating the licensee of Oregon’s regulations as they pertain to the licensees’ operation. At the conclusion of the inspection, the inspector provides a checklist to the licensee that specifies the Oregon’s administrative rule requirements applicable to the licensee. The licensee can use this checklist to facilitate the annual review of their radiation safety program. Additionally, the inspectors routinely utilize a form to document their “vertical slice” approach to their inspections where several types of radioactive sources are tracked from their receipt on through to disposal. The review team recommends that use of the checklist and the form, and the resulting discussions with

licensees during the inspection be recognized as a good practice by the Management Review Board (Section 3.2).

LIST OF APPENDICES AND ATTACHMENTS

Appendix A	IMPEP Review Team Members
Appendix B	Oregon Organization Charts
Appendix C	Inspection Casework Reviews
Appendix D	License Casework Reviews
Appendix E	Incident Casework Reviews
Attachment 1	State's Response to Proposed Final Report Dated September 30, 1998

APPENDIX A

IMPEP REVIEW TEAM MEMBERS

Name	Area of Responsibility
Tom O'Brien, OSP	Team Leader Technical Staffing and Training Legislation and Program Elements Required for Compatibility
Donald Bunn, California	Status of Materials Inspection Program Technical Quality of Inspections
Sally Merchant, NMSS	Response to Incidents and Allegations
Richard Woodruff, Region II	Technical Quality of Licensing Actions

APPENDIX B

State of Oregon

DEPARTMENT OF HUMAN RESOURCES
OREGON HEALTH DIVISION
RADIATION PROTECTION SERVICES

ORGANIZATION CHARTS

Department of Human Resources

GOVERNOR

**Jean I. Thome
Acting Director**

**Bob Mink
Deputy Director**

**Office of the Director
PROGRAM OFFICES
(Assistant Directors)**

**Hersh Crawford
(acting)
Office of Medical
Assistance Prog.**

**Chad Cheriell
Office of
Health Policy**

**Jeff Kushner
Alcohol & Drug
Abuse Programs**

**Peggy Timm
Volunteer
Program**

**DIVISIONS
(Assistant
Directors)**

**Steve Minnich
Adult & Family
Services Division**

**Elinor Hall
Health
Division**

**Joi Southwell
Vocational
Rehabilitation
Division**

**Kay Toran
Children's Services
Division**

**Jim Wilson
Senior and Disabled
Services Division**

**Barry Kast
Mental Health and
Developmental Disability
Services Division**

**Office of the Director
ADMINISTRATION
(Assistant Directors)**

**John Cuddy
Information
Systems**

**Ken Miller
Program and
Finance**

**John Heilman
Employee
Services**

**Clyde Saiki
Special Proj.
Coord.**

**Jim Sellers
Communications**

**Ken Johnson
Audit**

OFFICE OF THE ADMINISTRATOR
Elinor Hall, Administrator
Grant Higginson, Health Officer

CROSS AGENCY & SPECIAL PROGRAMS
(Within Office of the Administrator)

ADMINISTRATIVE & PROGRAM SERVICES
Claudia Bingham

CERTIFICATE OF NEED
Jana Fussel

COMMUNICATIONS & PLANNING
Bonnie Widerburg/Claudia Black

OFFICE OF MULTICULTURAL HEALTH
Suganya Sockalingam

COMMUNITY SERVICES
Carol Allen

PLANS REVIEW
Roscoe Lawless

HEALTH RELATED LICENSING PROGRAM
Sue Wilson

BUDGET SERVICES
Kent Copeland

PURCHASING
Karil Schaefer

FACILITIES/MAIL CENTER
Dick Herno

CENTER FOR CHILD & FAMILY HEALTH

MATERNAL & CHILD HEALTH SYSTEM
Lorraine Duncan

WOMEN/REPRODUCTIVE HEALTH
Anne Olson

CHILD/ADOLESCENT HEALTH
Jill Skrezyna

IMMUNIZATION
Lorraine Duncan/Betty Finewout

WIC
Donalda Dodson

CENTER FOR ENVIRONMENT & HEALTH SYSTEMS
Tom Johnson

DRINKING WATER
Dave Leland

EMERGENCY MEDICAL SERVICES & SYSTEMS
Gregg Lander

HEALTH CARE LICENSURE & CERTIFICATION
Kathleen Smail

RADIATION PROTECTIVE SERVICES
Ray Paris

ENVIRONMENTAL SERVICES & CONSULTATION
Ron Hall

CENTER FOR DISEASE PREVENTION & EPIDEMIOLOGY
Dave Fleming

ACUTE AND COMMUNICABLE DISEASE
Paul Cieslak

HIV/STD/TB
Mark Loveless

HEALTH PROMOTION & CHRONIC DISEASE PREVENTION
Jane Moore

ENVIRONMENTAL OCCUPATIONAL & INJURY EPIDEMIOLOGY
Narda Tolentino

CENTER FOR HEALTH STATISTICS
Edward Johnson

CENTER FOR PUBLIC HEALTH LABORATORIES
Mike Skeels

NEWBORN SCREENING
Richard Miyahira

VIROLOGY/IMMUNOLOGY
Christianne Biggs

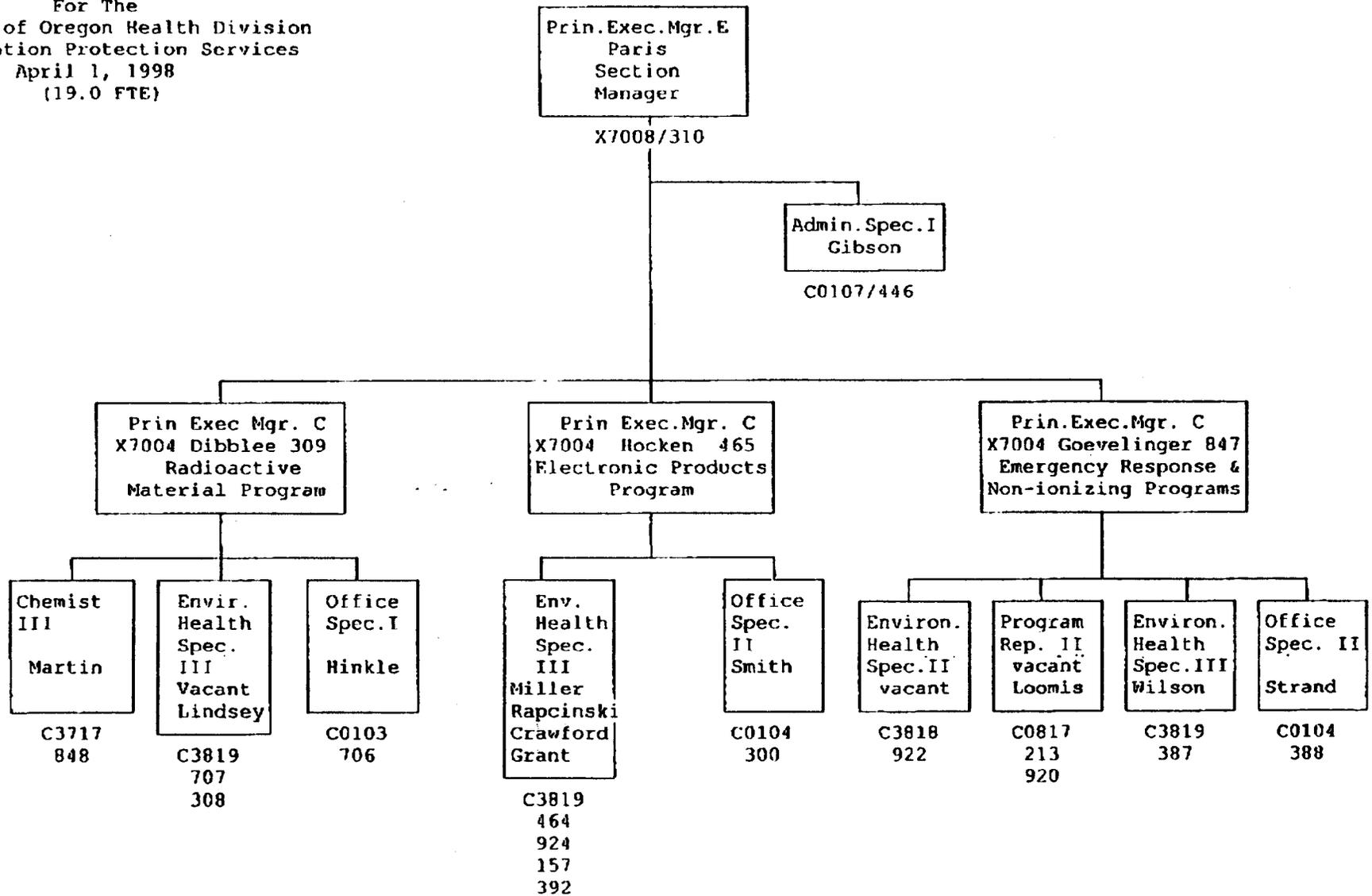
GENERAL MICROBIOLOGY
Robert Sokolov

LABORATORY LICENSURE & CERTIFICATION
Audrene Horton

QUALITY ASSURANCE & OPERATIONS
Wayne Jeffers

Organizational Chart

For The
 State of Oregon Health Division
 Radiation Protection Services
 April 1, 1998
 (19.0 FTE)



APPENDIX C

INSPECTION CASEWORK REVIEWS

NOTE: ALL INSPECTIONS LISTED WITHOUT COMMENT ARE INCLUDED FOR COMPLETENESS ONLY; NO SIGNIFICANT COMMENTS WERE IDENTIFIED BY THE IMPEP TEAM.

File No.: 1

Licensee: Good Samaritan Hospital
Location: Portland, OR
License Type: Healing Arts Diagnostic & Therapy
Inspection Date: 3/12/97

License No.: ORE-90008
Inspection Type: Routine, Unannounced
Priority: 3
Inspector: TL

File No.: 2

Licensee: Good Samaritan Hospital (HDR)
Location: Portland, OR
License Type: Medical HDR
Inspection Date: 1/16/98

License No.: ORE-90790
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: TL

Comment:

a) Inspector did not use HDR inspection form.

File No.: 3

Licensee: Precision Castparts Corporation
Location: Portland, OR
License Type: Broad scope A, Industrial
Inspection Date: 12/16/96

License No: ORE-90232
Inspection Type: Routine, Announced
Priority: 2
Inspector: TL

File No.: 4

Licensee: Willamette Engineering & Earth Sciences
Location: Dallas, OR
License Type: Portable Gauge
Inspection Date: 6/3/98

License No.: ORE-90843
Inspection Type: Initial, Unannounced
Priority: 4
Inspector: TL

File No.: 5

Licensee: Steelman-Duff, Inc.
Location: Clarkston, WA. (Out of State licensee)
License Type: Portable Gauge
Inspection Date: 5/20/98

License No.: ORE-90849
Inspection Type: Field, Unannounced
Priority: 4
Inspector: TL

Comment:

c) No supervisory review.

File No.: 6

Licensee: Commercial Testing & Engineering
Location: Lombard, IL.
License Type: Portable Gauge
Inspection Date: 5/18/98

License No.: 12-24674-02 NRC
Inspection Type: Field, Reciprocity
Priority: 5
Inspector: TL

File No.: 7

Licensee: Medical Imaging Consultants
Location: Windcrest, TX
License Type: Mobile Medical Imaging
Inspection Date: 3/24/98

License No.: ORE-90580
Inspection Type: Special, Unannounced
Priority: 2
Inspector: TL

File No.: 8

Licensee: Western Professional, Inc.
Location: Salem, OR
License Type: Radiography-Shielded Rm.
Inspection Date: 3/24/98

License No.: ORE-90344
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: TL

File No.: 9

Licensee: Oregon Health Sciences University
Location: Portland, OR
License Type: Academic R&D Broad Scope A
Inspection Date: 9/26/97 to 10/4/97

License No.: ORE-90731
Inspection Type: Routine, Announced
Priority: 2
Inspector: MD, TL

File No.: 10

Licensee: Oregon Central Pharmacy
Location: Eugene, OR
License Type: Radiopharmacy
Inspection Date: 7/24/97

License No.: ORE-90703
Inspection Type: Routine, Announced
Priority: 1
Inspector: TL

File No.: 11

Licensee: Bay Area Hospital
Location: Coos Bay, OR
License Type: Medical
Inspection Date: 7/23/98

License No.: ORE-90358
Inspection Type: Routine, Announced
Priority: 3
Inspector: TL

File No.: 12

Licensee: Professional Service Industries
Location: Portland, OR
License Type: Radiography/Field Sites
Inspection Date: 10/28/97

License No.: ORE-90056
Inspection Type: Routine, Announced
Priority: 1
Inspector: TL

File No.: 13

Licensee: St. Anthony Hospital
Location: Pendleton, OR
License Type: Medical
Inspection Date: 5/18/98

License No.: ORE-90353
Inspection Type: Routine, Unannounced
Priority: 3
Inspector: TL

File No.: 14

Licensee: Good Samaritan Hospital
Location: Corvallis, OR
License Type: Medical
Inspection Date: 12/17-18/98

License No.: ORE-90202
Inspection Type: Routine, Unannounced
Priority 3
Inspector: TL

Comment:

- a) Inspection resulted in nine violations, two of which were repeats, and six recommendations. There was no mention of a follow-up or subsequent inspection planned before the next scheduled inspections.

File No.: 15

Licensee: Earth Tech, Inc.
Location: Long Beach, CA
License Type: Lead Paint Analyzer
Inspection Date: 7/14/98

License No.: ORE-90840
Inspection Type: Mail Inspection
Priority: 4
Inspector: N/A

File No.: 16

Licensee: Nuclear Medical Imaging Consultants
Location: Albany, OR
License Type: Medical (Clinic)
Inspection Date: 2/10/98

License No. ORE-90771 (Terminated)
Inspection Type: Initial, Unannounced
Priority: 3
Inspector: TL

In addition, the following inspection accompaniments were made as part of the on-site IMPEP review:

Accompaniment No.: 1

Licensee: Providence Portland Medical Center
Location: Portland, OR
License Type: Institutional Nuclear Medicine
Inspection Date: 6/23/98

License No.: ORE-90053
Inspection Type: Routine, Unannounced
Priority: 3
Inspector: TL

Accompaniment No.: 2

Licensee: Sentrol, OR
Location: Tualatin, OR
License Type: Manufacturing/Research & Development
Inspection Date: 6/24/98

License No.: ORE-90637
Inspection Type: Routine, Unannounced
Priority 2
Inspector: MD

Accompaniment No.: 3

Licensee: Neogenesis, Inc.
Location: Portland, OR
License Type: Manufacturing/Compounding
Inspection Date: 6/24/98

License No.: ORE-90618
Type Inspection: Routine, Unannounced
Priority 3
Inspector: MD

APPENDIX D
LICENSE CASEWORK REVIEWS

NOTE: ALL INSPECTIONS LISTED WITHOUT COMMENT ARE INCLUDED FOR COMPLETENESS ONLY; NO SIGNIFICANT COMMENTS WERE IDENTIFIED BY THE IMPEP TEAM.

File No.: 1

Licensee: Sentrol, Inc.
Location: Tualatin, OR
License Type: Mfg/Research & Development
Date Issued: 9/26/97

License No.: ORE-90637
Amendment No.: 14
Type of Action: Renewal
License Reviewer: MD

File No.: 2

Licensee: Neogenesis, Inc.
Location: Portland, OR
License Type: Research and Development
Date Issued: 6/23/98

License No.: ORE-90618
Amendment No.: 4
Type of Action: Financial Assurance
License Reviewer: MD

File No.: 3

Licensee: Providence Portland Medical Center
Location: Portland, OR
License Type: Institutional Nuclear Medicine with Therapy
Date Issued: 10/29/97

License No.: ORE-90053
Amendment No.: 78
Type of Action: Entirety
License Reviewer: RC

File No.: 4

Licensee: Sulzer Bingham Pumps, Inc.
Location: Portland, OR 10247
License Type: Industrial Radiography, Fixed Facility
Dates Issued: 7/30/96, 11/13/96, 4/18/97, 10/2/97, and 1/27/98

License No.: ORE-90027
Amendment Nos.: 76 thru 80
Type of Action: Amendments
License Reviewer: TL

Comment:

- a) License condition 13.C. amendment 80, should be revised to reference the Oregon Administrative Rules (OAR) Chapter 33, Division 105, Section 330 (OAR 333-105-330).

File No.: 5

Licensee: Teledyne Wah Chang Albany
Location: Albany, OR
License Type: Industrial Radiography, fixed facility
Dates Issued: 10/25/96

License No.: ORE-90728
Amendment No.: 12
Type of Action: Amendment
License Reviewer: TL, MD

Comments:

- a) Temporary job site license condition should not be on the license.
- b) License inappropriately authorizes the receipt, possession, and use of iridium-192.

File No.: 6

Licensee: Edwards Pipeline Services, LLC
Location: Tulsa, OK
License Type: Industrial Radiography, temporary locations
Date Issued: 6/11/98

License No.: ORE-90860

Type of Action: New
License Reviewer: SM, MD

Comment:

a) License inappropriately authorizes the receipt, possession, and use of cobalt-60.

File No.: 7

Licensee: Oregon Central Pharmacy
Location: Eugene, OR
License Type: Nuclear Pharmacy
Date issued: 3/16/98

License No.: ORE-90703

Amendment No.: 8
Type of Action: Amendment
License Reviewer: SM, MD

File No.: 8

Licensee: Braun Intertec, Inc.
Location: Portland, OR
License Type: Industrial Radiography
Date Issued: 7/31/98

License No.: ORE-90634

Amendment No.: 16
Type of Action: Amendment
License Reviewer: SM, MD, TL

File No.: 9

Licensee: Mallinckrodt, Inc.
Location: Portland, OR
License Type: Nuclear Pharmacy
Dates Issued: 3/13/98

License No.: ORE-90702

Amendment No.: 7
Type of Action: Amendment
License Reviewer: SM, MD

File No.: 10

Licensee: Oregon Health Services University
Location: Portland, OR
License Type: Broad Medical (Scope A)
Dates Issued 1/16/97, 5/14/98

License No.: ORE-90013

Amendment Nos.: 80 and 81
Type of Action: Amendment
License Reviewer: MD, TL

File No.: 11

Licensee: Willamette Valley Cancer Center
Location: Eugene, OR
License Type: Brachytherapy, High Dose Rate (HDR)
Dates Issued: 6/11/98

License No.: ORE-90862

Type of Action: New
License Reviewer: SM, MD

Comment:

a) The license only designates the total curies allowed. The maximum possession limit condition should specify that two sources, one source not to exceed 12 curies, and one source not to exceed 10 curies, comprise the total activity. Additionally, the authorized use condition should specify that one source is to be used in a (name of afterloader) for interstitial, intraluminal, and intracavitary radiotherapy in humans, the source activity may not exceed 10 curies at the time of installation, and that the other source is to be stored in its shipping container for source replacement.

File No.: 12

Licensee: Syncor International Corporation
Location: Portland, OR
License Type: Nuclear Pharmacy
Dates Issued: 3/13/98

License No.: ORE-90509
Amendment No.: 23
Type of Action: Amendment
License Reviewer: SM, BC

Comment:

a) Documents missing from license.

File No.: 13

Licensee: Community Cancer Center
Location: Roseburg, OR
License Type: Medical Therapy
Dates Issued: 1/12/96, 1/16/97

License No.: ORE-90422
Amendment Nos.: 23 & 24
Type of Action: Renewal
License Reviewer: SM,MD,TL

File No.: 14

Licensee: Oncology Associates of Oregon
Location: Eugene, OR
License Type: Brachytherapy
Dates Issued: 9/10/96 (initial), 9/24/97, 9/24/97

License No.: ORE-90789
Amendment Nos.: 1, 2
Type of Action: New, Amendment
License Reviewer: SM,DB

File No.: 15

Licensee: ABCT, Inc.
Location: Roseburg, OR
License Type: Mobile Nuclear Medicine
Dates Issued: 12/24/96, 3/10/97, 7/9/98

License No.: ORE-90502
Amendment Nos.: 30, 31, & 32
Type of Action: Amendment
License Reviewer: SM,MD

File No.: 16

Licensee: Welenco, Inc.
Location: Bakersfield, CA
License Type: Well Logging
Dates Issued: 12/23/97

License No.: ORE-90762
Amendment No.: 2
Type of Action: Amendment
License Reviewer: SM,MD,BC

File No.: 17

Licensee: Oregon Medical Laboratories
Location: Eugene, OR
License Type: Self Shielded Irradiator
Dates Issued: 7/14/97, 10/23/97, 12/23/97, 06/12/98

License No.: ORE-90360
Amendment Nos.: 14, 15, 16, & 17
Type of Action: Amendment
License Reviewer: SM,MD

File No.: 18

Licensee: Health Physics Northwest, Inc.
Location: Tigard, OR
License Type: Leak Test Service
Dates Issued: 3/12/98

License No.: ORE-90361
Amendment No.: 18
Type of Action: Renewal
License Reviewer: SM, BC, MD

File No.: 19

Licensee: PCC Structural, Inc.
Location: Portland, OR
License Type: Broad Scope
Dates Issued: 8/8/96, 1/9/97, 5/22/97, 1/27/98, 3/18/98

License No.: ORE-90232
Amendment Nos.: 47, 48, 49, 50, & 51
Type of Action: Amendment
License Reviewer: SM, BC

File No.: 20

Licensee: University of Oregon
Location: Eugene, OR
License Type: Broad Scope Academic
Dates Issued: 3/24/98

License No.: ORE-90220
Amendment No.: 28
Type of Action: Renewal
License Reviewer: SM, MD, TL

File No.: 21

Licensee: Teledyne Industries, Inc.
Location: Albany, OR
License Type: Broad Scope
Dates Issued: 7/21/98

License No.: ORE-90001
Amendment No.: 45
Type of Action: Amendment
License Reviewer: SM,MD

File No.: 22

Licensee: Reed College
Location: Portland, OR
License Type: Broad Scope Academic
Dates Issued: 7/10/98

License No.: ORE-90010
Amendment No.: 43C
Type of Action: Renewal
License Reviewer: SM, MD

File No.: 23

Licensee: NDE Professionals
Location: Portland, OR
License Type: Industrial Radiography, temporary locations
Date Issued: 7/23/96

License No.: ORE-90641
Amendment No.: 8
Type of Action: Termination
License Reviewer: SM, MD

File No.: 24

Licensee: SIRAD, Inc.
Location: Portland, OR
License Type: Research and Development
Dates Issued: 4/30/96

License No.: ORE-90604
Amendment No.: 5
Type of Action: Termination
License Reviewer: MD, BC

File No.: 25

Licensee: Elm Street Nuclear Imaging
Location: Albany, OR
License Type: Private Medical, diagnostic and therapy uses
Date Issued: 7/23/96

License No.: ORE-90542
Amendment No.: 7
Type of Action: Termination
License Reviewer: SM, TL

File No.: 26

Licensee: Matsushita Electronic Material, Inc.
Location: Forest Grove, OR
License Type: Fixed Gauge, custom evaluation
Date Issued: 4/16/97, 10/3/97, 7/23/98

License No.: ORE-90683
Amendment Nos.: 3,4, & 5
Type of Action: Amendment
License Reviewer: SM, MD

File No.: 27

Licensee: Medite, Corp
Location: Medford, OR
License Type: Manufacturing & Distribution
Date Issued: 5/1/97, 8/14/97

License No.: ORE-90595
Amendment Nos.: 3,4
Type of Action: Termination
License Reviewer: SM,MD

File No.: 28

Licensee: GreCon

Location: Beaverton, OR

License Type: R & D, Service

Date Issued: 10/6/97, 11/13/97

License No.: ORE-90847

Amendment No.: 1

Type of Action: Renewal

License Reviewer: BC, MD

File No.: 29

Licensee: Thomas Gray and Associates, Inc.

Location: Orange, CA

License Type: Waste Packaging

Date Issued: 5/21/97

License No.: ORE-90794

Amendment No.: 1

Type of Action: Amendment

License Reviewer: SM,BC,MD

Comment:

- a) 10 CFR Part 61 requirements for uniform manifest have not been adopted by regulation or incorporated as a license condition.

File No.: 30

Licensee: Oregon Department of Transportation

Location: Milwaukee, OR

License Type: Portable Gauge

Date Issued: 8/7/98

License No.: ORE-90829

Amendment No.: 1

Type of Action: Amendment

License Reviewer: SM,MD

File No.: 31

Licensee: Century West Engineering Corp.

Location: Portland, OR

License Type: Portable Gauge

Date Issued: 3/19/98

License No.: ORE-90746

Amendment No.: 3

Type of Action: Amendment

License Reviewer: SM, MD

File No.: 32

Licensee: Century West Testing Corp.

Location: Bend, OR

License Type: Portable Gauge

Date Issued: 7/31/98

License No.: ORE-90382

Amendment No.: 24

Type of Action: Amendment

License Reviewer: SM, MD

APPENDIX E

INCIDENT CASEWORK REVIEWS

NOTE: ALL INSPECTIONS LISTED WITHOUT COMMENT ARE INCLUDED FOR COMPLETENESS ONLY; NO SIGNIFICANT COMMENTS WERE IDENTIFIED BY THE IMPEP TEAM.

File No.: 1

Licensee: Longview Inspection Co.

License No.: ORE-90621

Incident ID No.: 98-20

Location: Northwest Copper Co., Portland, Oregon

Date of Event: 3/30/98

Type of Event: Equipment and procedure failure

Investigation Date: 4/2/98

Investigation Type: Onsite

Summary of Incident and Final Disposition: The radiography source was cranked out and failed to completely retract when cranked back. The radiographer (unaware that source did not retract) approached the source without the survey meter; because of noise in the shop, he apparently did not hear his rate alarm. The radiography assistant alerted him to the exposed source. The radiographer's TLD read 730 mR. It was found that the source did not retract because of a sharp bend in the guide tube. The State issued an NOV for failure to follow procedure. The licensee performed satisfactory corrective actions.

File No.: 2

Licensee: Smurfit Newsprint Corporation

License No.: ORE-90266

Incident ID No.: 98-14

Location: Newbeg, Oregon

Date of Event: 2/24/98

Type of Event: Overexposure, damage to equipment

Investigation Date: 2/24/98

Investigation Type: Onsite

Summary of Incident and Final Disposition: The licensee reported a possible personnel exposure during maintenance when a fixed gauge was deliberately cut from its mounting while the shutter remained open. The RSO was not called. The gauge contained 3.7 GBq (100 mCi) of Cs-137. The State issued an NOV for lack of corporate attention to safety, and enforcement action was taken.

File No.: 3

Licensee: Braun Intertec Corporation

License No.: ORE-90634

Incident ID No.: 98-08

Location: Portland, Oregon

Date of Event: 1/24/98

Type of Event: Overexposure

Investigation Date: 1/24/98

Investigation Type: Onsite

Summary of Incident and Final Disposition: A State building inspector walked through a radiography barrier tape and warning signs while an exposure was in progress. The individual was warned away by the radiographer. The licensee provided a dose estimate for the exposed individual. The individual (a State employee) was alerted to the importance of observing roped boundaries and warning signs. A written report was sent to the exposed individual. No violations of State regulations were identified, and the case was closed.

File No.: 4

Licensee: Oregon Health Sciences University

License No.: ORE-90731

Incident ID No.: 97-82

Location: Portland, Oregon

Date of Event: 12/16/97

Type of Event: Contamination

Investigation Date: 12/16/97

Investigation Type: Telephone

Summary of Incident and Final Disposition: This broadscope licensee reported discovery of extensive C-14 contamination (estimated 5-10 mCi) in a cold room (walk-in cooler). The room had not be used for RAM in at least 10 years. Contamination was identified by a researcher while wipe testing the area after using RAM. The licensee's RSO supervised clean-up. Walls were stripped and repainted, and the concrete floor was replaced. A permanent metal wall plaque was installed in the contaminated area detailing the C-14 spill.

File No.: 5

Licensee: Legacy Emmanuel Hospital

License No.: ORE-90014

Incident ID No.: 97-74

Location: Portland, Oregon

Date of Event: 11/19/97

Type of Event: Medical Underdose

Investigation Date: 11/19/97

Investigation Type: Telephone

Summary of Incident and Final Disposition: After implanting Pd-103 seeds in 9 patients, the licensee discovered the activity of the seeds to have been up to 10% less than reported. The vendor was contacted. The FDA was notified. None of the administrations met the threshold for a misadministration. The licensee will set-up a QA program, based on the recommendation in the AAPM Task Group Report, TG-56, "Code of Practice for Brachytherapy Physics."

File No.: 6

Licensee: Geo Designs

License No.: ORE-90822

Incident ID No.: 97-61

Location: Lake Oswego, Oregon

Date of Event: 10/19/97

Type of Event: Damage to Equipment

Investigation Date: 10/10/97

Investigation Type: Onsite

Summary of Incident and Final Disposition: A portable moisture/density gauge run over by a dump truck wheel. Inspection showed that the sources were in place, and there was no contamination on the wipe. An NOV was issued for loss of control of RAM. Enforcement action was taken.

File No.: 7

Licensee: Longview Inspection Co

License No.: ORE-90621

Incident ID No.: 97-53

Location: Forest Grove Industrial Alloy, Forest Grove, Oregon

Date of Event: 8/29/97

Type of Event: Equipment failure

Investigation Date: 8/29/97

Investigation Type: Onsite

Summary of Incident and Final Disposition: During use, the drive cable of a radiography did not completely retract and a radiography source disconnect was the result. The radiographer pulled hard, and the tip of the drive cable broke off. The manufacturer (Amersham) concluded that the connector was pulled off due to unusually high force. State investigation showed that cable failure was not generic, but was caused by licensee abuse of the equipment. The licensee performed good corrective action. No violation of State regulations was identified.

File No.: 8

Licensee: Salem Hospital

License No.: ORE-90151

Incident ID No.: 97-40

Location: Brooks Incinerator, Portland, Oregon

Date of Event: 7/11/97

Type of Event: Contamination (Hospital waste)

Investigation Date: 7/11/97

Investigation Type: Telephone

Summary of Incident and Final Disposition: Hospital waste containers set off the radiation alarm at the Brooks Incinerator. The waste measured 43 μ R. There were at least 7 other incidents reported of Salem Hospital setting off the alarm at the incinerator. A State representative met with the licensee's Radiation Safety Committee to discuss compliance with hospital policies for disposing of radioactive waste. The hospital has significantly improved its handling of radioactive waste since the meeting with the State.

File No.: 9

Licensee: Smurfit Newsprint Corporation

License No.: ORE-90266

Incident ID No.: 96-28

Location: Newberg, Oregon

Date of Event: 10/1/96

Type of Event: Equipment failure

Investigation Date: 10/3/96

Investigation Type: Telephone, Next Inspection

Summary of Incident and Final Disposition: The licensee reported a fixed gauge with a shutter stuck in the open position. The gauge was on line, and the manufacturer was called to repair the gauge. No action by the State was needed. This was a required 24 hour report.

File No.: 10
Licensee: N/A
License No.: None
Incident ID No.: 96-20
Location: Brooks Incinerator, Portland, Oregon
Date of Event: 8/13/96
Type of Event: Contamination
Investigation Date: 8/13/96
Investigation Type: Telephone

Summary of Incident and Final Disposition: A radiation alarm was set off at the incinerator. The source of the trash was residential, and the substance that set off the alarm was I-131 contaminated "kitty litter." The State contacted a veterinarian who was licensed to treat cats, and reviewed his instructions to pet owners regarding release of the animals after treatment. The instructions were adequate. Since the origin of the waste could not be identified, the case was closed.

File No.: 11
Licensee: Private Citizen
License No.: None
Incident ID No.: 97-55
Location: Private Home
Date of Event: 9/29/97
Type of Event: Exposure of Member of the Public
Investigation Date: 9/29/97
Investigation Type: Onsite

Summary of Incident and Final Disposition: A private citizen had collected "grey powder" in a jar that he believed was radioactive. He believed this powder was causing paranormal activity at his home. The inspector surveyed the material in the jar, and other areas on the site. No radioactivity above back ground was detected. The findings were reported to the concerned individual.



Oregon

John A. Kitzhaber, M.D., Governor

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September 30, 1998

Richard L. Bangart, Director
Office State Programs
US Nuclear Regulatory Commission
Washington, D.C. 20555-0001



Dear Mr. Bangart:

This is in response to your September 16, 1998 letter requesting comments on the draft report of the Integrated Materials Performance Evaluation Program (IMPEP) review of Oregon's Radioactive Materials Program on August 10-13, 1998.

The draft report includes six (6) recommendations that relate directly to performance by the State. The report requested that the State respond to each recommendation. The following are our responses:

- 1) The team recommends that Oregon heighten its management oversight of the inspection due dates of new licenses to ensure inspections are performed in accordance with RPS policy.

Oregon has adopted the guidance in IMC 2800, Section 04.03a that states new licenses are inspected within six months of issuance of license. The IMPEP team found that 55% of the (i.e. 24 out of 43) new licenses were not inspected within the 6 month requirement. However, the team also found that 95% (i.e. 41 out of 43) of the new licenses were inspected within 7 months and all were completed within 8 months.

It is true that Oregon did not specifically meet the criteria in Section 04.03a of IMC 2800. However, it is important to keep in mind that "performance" is a key word under the new IMPEP criteria. Seventy two percent, 72%, (31 out of 43) of the new licensees inspected within the 6 month period had no items of noncompliance. There were no (zero) items of noncompliance among the other 28% that affected the health and safety of the public or those using the radioactive material. This reflects the outstanding work RPS staff does during the initial licensing process to educate new licensees on

*Assisting People to Become Independent, Healthy and Safe
An Equal Opportunity Employer*

health and safety issues relating to the radioactive material they are about to possess.

It should be noted that the team found all inspections current with the 352 licensees and that the state met the inspection percentage goals for conducting inspections of reciprocity licensees as outlined in IMC 1220. Therefore, Oregon does not agree with the IMPEP team finding that the Status of Materials Inspection Program, be found satisfactory with recommendation for improvement.

We fully recognize the importance of doing on-site inspections of new licensees and believe six (6) months to be a reasonable goal within which to have the first on-site inspection completed. The criteria in Management Directive 5.6 and Section 04.03a/2800 MC that requires material licensees to be inspected within 6 months should be reviewed against IMPEP performance guidelines. To strictly adhere to 6 months we feel is too prescriptive and reflects back to previous protocol NRC used to review Agreement State programs. There must be allowances for states to incorporate "performance" into their inspection protocol of new licensees. Oregon's emphasis on educating new licensees on health and safety issues during the licensure process has proven effective. We believe our initial inspection process is adequate to protect health and safety and feel the finding for this Common Performance Indicator should be "Satisfactory."

We recommend NRC seriously reevaluate IMC 2800, Section 04.03a and incorporate language to allow "performance" to be part of the determination of how soon new licensees need to be inspected. The "performance" would obviously not be based upon a particular licensee, but rather how new licensees generally perform within a state. Specifically, we feel it would be better to use the word "goal" rather than "shall" for inspecting new licensees within 6 months. We plan to change our own policy to reflect the same.

2) The review team recommends that the RPS management assess whether additional staffing is warranted to complete overdue rulemaking actions and to ensure timely completion of upcoming rulemaking actions.

RPS Management has assessed staffing and workload. Additional staffing

does not appear to be warranted at this time. Initial steps already have been taken to update applicable Administrative Rules relating to the Radioactive Materials Program, as well as our X-ray and Tanning Device Programs.

- 3) The review team recommends that the State adopt the NRC standard practice license conditions for HDR units for the casework #11 license and future HDR licenses:

RPS will adopt and incorporate in applicable licenses the above standard license condition for HDR units in the State.

- 4) The review team recommends that the State develop a written policy with procedures for responding to allegations.

The State has written the policy with procedures for responding to allegations.

- 5) The review team recommends that management obtain a State legal view on their interpretation that existing administrative rules require the implementation of all new requirements in the revised NRC regulations where required for compatibility purposes.

The State has already taken initial steps to update the Administrative Rules to adopt applicable language from the revised NRC regulations where required for compatibility purposes. The State has noted the NRC regulations identified by the IMPEP team as needing to be addressed.

Since the State will soon be adopting language from applicable NRC regulations and amending the Administrative Rules accordingly, it is not deemed necessary to obtain a State legal view on existing Administrative Rules. Prospectively, the State will seek a legal opinion to determine if existing Administrative Rules and/or appropriate license conditions meet the criteria for compatibility for new NRC regulations.

- 6) The review team recommends that RPS management initiate rulemaking activities to ensure that NRC rule changes are adopted within the specified 3 year time period.

RPS management is well aware of the three year time period of adopting NRC rule changes. Management discussed this issue with the IMPEP team. It is important to keep in mind that State Radiation Protection Agencies have many more Administrative Rules to maintain than just those applicable to the Radioactive Materials Program. The administrative rule revision process is time consuming. Therefore, prior to initiating the process all programs are evaluated to determine the need for amending applicable rules. If only a few changes are needed, it is not uncommon to distribute information and/or enforcement bulletins to registrants and/or licensees as an interim measure. Licenses may also be administratively changed as an interim measure in lieu of a full formal rule change. The State has the option of incorporating an emergency rule if a situation so warrants. Emergency rules become effective immediately. However, regular procedures of the Administrative Procedures Act must be completed later, (i.e. fiscal impact statements, public comment, etc.).

As mentioned above if in the future license conditions are to be used in lieu of Administrative Rules, the State will have a legal review to determine statutory authority as well as compatibility issues prior to implementation. RPS management will continually strive to initiate rule making activities to ensure that NRC rule changes are adopted within the specified 3 year time period.

Thank you for the opportunity to comment on the draft report. If you have any questions or need additional information please let me know.

Sincerely,



Ray D. Paris, Manager
Radiation Protection Services

c: Elinor Hall, MPH
Administrator Health Division

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

QUESTIONNAIRE

State of Oregon/Health Division/CEHS,RPS
Reporting Period: July 11, 1996 to August 10, 1998

A. COMMON PERFORMANCE INDICATORS

I. Status of Materials Inspection Program

1. Please prepare a table identifying the licenses with inspections that are overdue by more than 25% of the scheduled frequency set out in NRC Inspection Manual Chapter 2800. The list should include initial inspections that are overdue.

Oregon has no in-state licenses with overdue inspections. The state has two out-of-state licenses² that show overdue dates, but we do not consider out-of-state licenses to be overdue because they are inspected only when they notify us that they will be entering the state.

2. Do you currently have an action plan for completing overdue inspections? If so, please describe the plan or provide a written copy with your response to this questionnaire.

The state has no overdue inspections. Should there be overdue inspections, the state would prepare a plan to eliminate the backlog as it did in 1995.

¹ Estimated burden per response to comply with this voluntary collection request: 60 hours. Forward comments regarding burden estimate to the Information and Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0052), Office of Management and Budget, Washington, DC 20503. NRC may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

²*One licensee entered the state for one day but the time factor was too tight to inspect.*

3. Please identify individual licensees or groups of licensees the State/Region is inspecting more or less frequently than called for in NRC Inspection Manual Chapter 2800 and state the reason for the change.

The state inspects at least as frequently as required in Manual Chapter 2800 (see Attachment A). In June 1998 the state changed inspection priority of selected program codes from 7 to 5 or from 5 to 4, resulting in four gas chromatograph licenses showing due dates and one showing overdue date. Note: this change means that the state will inspect all specific license facilities within a five-year cycle. The state also assigned priority 7 to general licenses (gauges and in vitro general licenses). The current inspection docket includes inspection due dates for all licenses.

4. Please complete the following table for licensees granted reciprocity during the reporting period.

The state issues out-of-state (OOS) specific licenses to most persons who would be reciprocity licensees. The numbers below show how many OOS licensees notified the state of entry into Oregon (column a) and the number of OOS licensees that were inspected (column b). One licensee was granted a general license for reciprocity.

Priority	Number of Licensees Granted Reciprocity Permits Each Year(a) ¹	Number of Licensees Inspected Each Year (b)
<i>Service Licensees performing teletherapy and irradiator source installations or changes</i>	2	1
1	3 (one reciprocity license)	4 (one reciprocity license)
2	1	1
3	10	9
4	24	17
All Other	4	3

5. Other than reciprocity licensees, how many field inspections of radiographers were performed?

There were 3 field inspections of radiographers.

6. For NRC Regions, did you establish numerical goals for the number of inspections to be performed during this review period? If so, please describe your goals, the number of inspections actually performed, and the reasons for any differences between the goals and the actual number of inspections performed.

II. Technical Quality of Inspections

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

There were no revisions to the Compliance Inspection Procedures during the review period. However, there were several changes (updates) made to the inspection forms to make them compatible with NRC requirements and to incorporate new regulatory requirements or previously missing inspection criteria. The state uses procedures adapted from the NRC 2800 manual.

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

<u>Inspector</u>	<u>Supervisor</u>	<u>License Cat.</u>	<u>Date</u>
Crosby	Dibblee	gauge	2/25/98
Lindsey	Dibblee	all types	2/18-19/98 latest
Loomis	Dibblee	gauge	1997 several
Martin	Lindsey	various ³	1997-98
Martin	Dibblee	gauge	1997
Dibblee	Paris	major	various ⁴

9. Describe internal procedures for conducting supervisory accompaniments of inspectors in the field. If supervisory accompaniments were documented, please provide copies of the documentation for each accompaniment.

RPS Policy 50-11, Inspection Policy, states in part that "Any person who is assigned to conduct license inspections will be periodically accompanied by a supervisor. Accompaniments are documented using the Inspector Accompaniment Form. A senior inspector who accompanies a junior inspector should document the accompaniment using the form, but this does not take the place of the periodic supervisory accompaniment." A copy of Policy 50-11 will be available during the on-site review.

Except for the supervisor, who occasionally does inspections, all inspectors were accompanied by the materials supervisor. The materials supervisor was accompanied by the RPS manager during licensee management meetings, which are considered supervisory accompaniment, since the RPS manager supervises the materials supervisor. Supervisory accompaniments were documented with the form described in the Policy.

³*Martin does not perform inspections alone. Martin is a peer inspector, but primarily is a license reviewer.*

⁴*Paris accompanied Dibblee during various licensee management meetings, which are considered management accompaniments. Dibblee's role as an inspector has been either as a peer inspector or during supervisory accompaniment.*

The state keeps extensive documentation of accompaniments. The inspector completes the form (see exhibit B) "Inspector Debrief Form" after each inspection. This form documents findings so that when the inspection findings are discussed, issues that may have been forgotten during an extended inspection trip may easily be recalled for discussion with peer staff and/or the supervisor. Unresolved noncompliance, marginal compliance, assignment of points, etc. come to play in with this invaluable form. In this capacity, the Inspector Debrief Form becomes supervisory accompaniment in absentia. Notwithstanding, the primary inspector (who conducted about 70% of all inspections during the review period) was by default accompanied many times (15% of the time) by the supervisor because the supervisor was the other inspection team-member.

10. Describe or provide an update on your instrumentation and methods of calibration. Are all instruments properly calibrated at the present time?

All instruments available for use are properly calibrated at this time. The Division's instrumentation are calibrated annually by OSU calibration facility. All instruments are logged into a database that periodically brings up a few instruments at a time. The materials program has three instrument kits comprised of a Ludlum Model 12 body & at least 4 matched probes. Probes include ECGM, pancake GM, NaI(Tl) 1"x1", & alpha probe. One kit also has a beta scintillation probe and a thin NaI(Tl) probe for beta detection and low-energy gamma respectively. No more than one materials kit is out for calibration at a time. The section has a total of seven (7) kits, which also are used for emergency response, plus additional emergency response instruments.

III. Technical Staffing and Training

11. Please provide a staffing plan, or complete a listing using the suggested format below, of the professional (technical) person-years of effort applied to the agreement or radioactive material 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, LLW, U-mills, other. If these regulatory responsibilities are divided among 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:

Name	Position	Area of Effort	FTE%
<i>Robert Crosby (Retired 3/1/98)</i>	<i>Health Physicist</i>	<i>Administration</i>	<i>25</i>
		<i>Licensing/Compliance</i>	<i>70</i>
		<i>Emergency Response</i>	<i>5</i>
<i>Terry Lindsey</i>	<i>Health Physicist</i>	<i>Administration</i>	<i>5</i>
		<i>Licensing/Compliance</i>	<i>90</i>
		<i>Emergency Response</i>	<i>5</i>

Name	Position	Area of Effort	FTE%
Sylvia Martin	Health Physicist	Administration	5
		Licensing/Compliance	90
		Emergency Response	5
Dan Loomis	Emergency Response	Administration	5
		Licensing/Compliance	10
		Emergency Response	10
Chris Hinkle	Secretary Licensing Assistant	Administration	95
		Licensing/Compliance	0
		Emergency Response	5
Martha Dibblee	Health Physicist Supervisor RML	Administration	75
		Licensing/Compliance	20
		Emergency Response	5
Ray Paris	Health Physicist Manager RPS	Administration	90
		Licensing/Compliance	5
		Emergency Response	5

12. 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, if appropriate.

No new personnel were hired during the review period, although the state will open Crosby's position approximately 15 June and intends to fill this position by 30 September 1998.

13. Please list all professional staff who have not yet met the qualification requirements of license reviewer/materials inspection staff (for NRC, Inspection Manual Chapters 1246; for Agreement States, please describe your qualifications requirements for materials license reviewers and inspectors). For each, list the courses or equivalent training/experience they need to attend and a tentative schedule for completion of these requirements.

Qualification Requirements for Oregon

a. **Materials License Reviewers**

Work Experience: Health Physics experience and completion of the NRC core classes or previous documented licensing experience in another state or the NRC.

On-the-job training:

Formal Training Requirements

H-109 Applied Health Physics

**⁵S-301 RERO

G-108 Inspection Practices & Procedures

G-109 Licensing Practices & Procedures

H-304 Diagnostic & Therapeutic Medicine

H-305 Safety Aspects of Industrial Radiography

H-308 Transportation of Radioactive Materials

**H-314 Safety Aspects of Well Logging

b. **Materials License Inspectors**

Work Experience: Health Physics experience and completion of the NRC core classes or previous documented licensing experience in another state or the NRC.

On-the-job training.

Formal Training Requirements

H-109 Applied Health Physics

**S-301 RERO

G-108 Inspection Practices & Procedures

G-109 Licensing Practices & Procedures

H-304 Diagnostic & Therapeutic Medicine

H-305 Safety Aspects of Industrial Radiography

H-308 Transportation of Radioactive Materials

**H-314 Safety Aspects of Well Logging

c. **Professional Staff In Training:**

Sylvia Martin

Terry Lindsey

d. **Proposed Training Schedule**

Sylvia Martin: H-308 Transportation of Radioactive Materials
(June 22-26, 1998)

Terry Lindsey: G-109 Licensing Practices & Procedures
(September 1998)

^{5**} optional courses that are not part of the core courses.

14. Please identify the technical staff who left the RCP/Regional DNMS program during this period.

Mr Robert Crosby left the program 28 February 1998.

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

The only vacant position in the materials program is Crosby's position, which the state plans to fill by the end of September 1998.

IV. Technical Quality of Licensing Actions

16. Please identify any major, unusual, or complex licenses which were issued, received a major amendment, terminated, decommissioned, bankruptcy notification or renewed in this period. Also identify any new or amended licenses that now require emergency plans.

Major, Unusual, or Complex Licenses Issued During the Review Period (Program Code)	License Number
<i>University of Oregon (01100)</i>	<i>90220 (renewal)</i>
<i>Wah Chang (11700/Broad)</i>	<i>90001 (amendment only)</i>
<i>GreCon (03240)</i>	<i>90847 (device reactivation)</i>
<i>Medite (03240)</i>	<i>T-90578 (device inactivation)</i>
<i>Matsushita (03120)</i>	<i>90683 (custom device)</i>
<i>Reed College (01100)</i>	<i>90010 (renewal)</i>
<i>Precision Castparts Corp (11800)</i>	<i>90354 (renewal⁶)</i>

No Oregon Radioactive Material Licensee is required to have an Emergency Plan.

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

All medical licensees have a license condition that waives the requirement to follow package inserts if the patient's well being would be jeopardized⁷.

⁶The state expects that this license will have been issued by the time of the review.

⁷A. Notwithstanding the requirement to prepare and use drugs in accordance with the package insert, if, in the judgment of the physician authorized user, departures from the package insert, or use of unapproved drugs, is indicated, the physician may perform such procedures consistent with good professional medical practice as judged by the Oregon Board of Pharmacy, the Oregon Board of Medical Examiners, and/or the Oregon Radiation Advisory Board, as appropriate.

B. Procedures shall be done by, or under the supervision of, persons whose training meets the requirements in OAR 333-116 and shall be in accordance with safe radiation safety

A waiver for all users of Molybdenum-99/Technetium 99m generators was issued because of a potential disruption of the supply of these generators. The waiver allowed licensees to prepare reagent kits with the use of the generator for up to 21 days, and to use Technetium-99m eluants for up to 24 hours with certain conditions. This waiver is in effect now. A copy of the enforcement bulletin will be available during the on-site review.

The state issued an exemption from rules when NRC implemented the exempt distribution of C-14 urea for diagnosis of H. pylori in January 1998. This allows exempt distribution of this drug. The Oregon Board of Pharmacy was joint in this decision.

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

No substantive changes were made to licensing procedures. Policy 50-11 was updated to include inspection program codes.

19. For NRC Regions, identify by licensee name, license number and type, any renewal applications that have been pending for one year or more.

V. Responses to Incidents and Allegations

20. Please provide a list of the reportable incidents (i.e., medical misadministration, overexposures, lost and abandoned sources, incidents requiring 24 hour or less notification, etc. See Handbook on Nuclear Material Event Reporting in Agreement States for additional guidance.) that occurred in the Region/State during the review period. For Agreement States, information included in previous submittals to NRC need not be repeated (i.e., those submitted under OMB 3150-0178). The list should be in the following format:

During the review period, there were approximately 160 incidents that required response. There were about 60 incidents that were major involved licensee. Attachment C shows incidents during the reporting period.

21. 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?

There were incidents that involved both equipment or source failure and deficient procedures.

procedures and ALARA in OAR 333-120-020. Radiopharmaceuticals shall not be used in humans until their pharmaceutical quality and assay have been established. Records documenting radioactive material used described in A. of this condition shall be kept by the licensee until inspection by the Agency.

22. For incidents involving failure of equipment or sources, 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.

Information was adequate to determine if there were a generic problem. The following are summaries of those incidents:

1. *RCS No 96-28 (10/3/96): Fixed gauge licensee reported shutter that wouldn't close. RPS investigation showed that gauge may have been underengineered for the conditions to which it was subjected. Gauge was mounted to a hopper that was shaken periodically with a pneumatic blast. It appeared that gauge shutter disintegrated from vibration. Licensee discovered problem when handle to close shutter fell out because it no longer was attached to the shutter. AOR sent to NRC Region 5. Gauge was repaired & is back in service⁸.*
2. *RCS No 96-31 (10/22/96): Portable gauge licensee reported failed welds after agency sent bulletin notifying of possible defects. Dye penetrant studies were forwarded to NRC NMSS, which then were forwarded to NC for evaluation & followup. Four Oregon devices were returned to manufacturer. No capsules broke off.*
3. *RCS No 97-53 (8/29/97): A radiography licensee reported a source disconnect caused by the tip of the drive cable breaking off. RPS investigation showed that the cable failure likely was not generic but was caused by licensee abuse of the equipment. NRC, which also investigated this event, had documented similar problems with cables⁹. RPS concluded that 1) the cable didn't retract fully into the cable casing; 2) cables typically were stored in darkrooms on a floor where they were likely to contact corrosive developer chemicals; and 3) cable tip sticking out contacted corrosive chemicals causing the metal strength compromise. RPS received word-of-mouth report that the source/cable manufacturer modified the cable/sheath to include a permanent cap to protect the end of the cable. RPS contacted NRC Region V but did not send AOR because this problem already was being investigated and did not appear to meet the criteria of a generic defect. This case is not closed because the State still has received no written reports from the licensee, the manufacturer, or the NRC (except as noted below).*

23. In the period covered by this review, were there any cases involving possible wrongdoing that were reviewed or are presently undergoing review? If so, please describe the circumstances for each case.

⁸NMSS Bulletin 98-1 received June 15, 1998 described actions that NRC plans to take to alleviate this situation.

⁹NMSS Bulletin 98-1 received June 15, 1998 described actions that NRC plans to take to alleviate this situation.

One case may have met the criteria of wrongdoing, but did not involve a licensee (RCS No. 97-66, 10/23/97). During a plea bargain process, an individual made statement he had radioactive materials that were taken from the military. He allegedly had them in a glass mason jar located on BLM property. Federal authorities followed up because the individual allegedly was involved in drugs and the allegation of radioactive material theft was managed by the FBI.

24. Identify any changes to your procedures for handling allegations that occurred during the period of this review.
- a. For Agreement States, please identify any allegations referred to your program by the NRC that have not been closed.

There are no allegations referred by NRC in the reporting period that have not been closed. RCS No 96-37 (12/6/96) was an allegation reported from NRC and was closed. RCS No 97-41 (7/13/97) was reported from the National Response Center about a barrel that washed ashore on the coast. The barrel contained hydraulic fluid & the Coast Guard disposed of barrel & contents. The case is closed.

VI. General

25. 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 NRC review of the Oregon Agreement State Program concluded July 11, 1996 showed that all outstanding issues from the 1995 review were closed. Issues from the 1995 review included need for increased management oversight, overdue inspections, unclosed and incomplete cross-referenced incidents, inadequate inspector field evaluations, procedural inadequacies for enforcement, procedural inadequacies for inspections, and untimely implementation of rules required for compatibility. Of these issues, only one, the rulemaking issue, remains open at this time. Oregon has not revised rules since the 1995 NRC review. Comments made by Division Administrator Hall in letter dated February 14, 1996 to NRC about implementation of Part 36 rulemaking remain valid. Oregon has no large irradiators, and there are no proposed facilities subject to the rule. Should there be such an application before rules are implemented, the state would incorporate applicable portions of Part 36 as license conditions. The state plans to implement rules compatible with Part 36 in 1999 when a general rule revision is planned.

26. Provide a brief description of your program's strengths and weaknesses. These strengths and weaknesses should be supported by examples of successes, problems or difficulties that occurred during this review period.

Strengths:

1. *Licensing staff process actions efficiently and in a timely manner with maximum client service*
2. *Technical personnel are well credentialed and eager to do a good job*
3. *Revenues are adequate to support the materials program*

4. *Licensing support person is well trained and knowledgeable about materials actions*
5. *Salaries are adequate to retain personnel*
6. *Materials team includes a fraction of Emergency Response program staff*
7. *Materials staff are innovative, smart, and hard-working, and use a common-sense approach to problem solving; staff use available tools without added program costs.*
8. *Materials program staff compliment each other both in philosophy and dilligence of task completion.*

Weaknesses:

1. *Support staff often 'bogged down' resulting in 'bottleneck' for license wordprocessing & slow delivery of licensing actions*
2. *Extremely limited legal support (very costly and limited to special cases)*
3. *Limited financial support for continuing education (attendance at professional meetings or conferences).*
4. *Current staffing levels do not support tasks beyond routine licensing and compliance (staff does not include expert radiation safety support such as CHP or medical physicist for rulemaking or consultation).*
5. *Rulemaking efforts remove technical staff from essential licensing and inspection tasks*
6. *Complicated licensing actions or inspections or enforcement actions cannot be billed by the hour (statutes don't support hourly charges, only "licensing fees").*
7. *There is little cross-training among either technical or support staff within the RPS programs.*
8. *Formal policy/procedure revisions are seldom updated because these tasks remove technical staff from essential licensing and inspection tasks*

B. NON-COMMON PERFORMANCE INDICATORS

Legislation and Program Elements Required for Compatibility

27. Please list all currently effective legislation that affects the radiation control program (RCP).

Statutes: Oregon Revised Statutes ORS 453.605-453.755

28. Are your regulations subject to a "Sunset" or equivalent law? If so, explain and include the next expiration date for your regulations.

Oregon rules are not subject to any "sunset" law provisions.

29. Please complete the enclosed table based on NRC chronology of amendments. Identify those that have not been adopted by the State, explain why they were not adopted, and discuss any actions being taken to adopt them. Identify the regulations that the State has adopted through legally binding requirements other than regulations.

The State completed the attached table.

30. If you have not adopted all amendments within three years from the date of NRC rule promulgation, briefly describe your State's procedures for amending regulations in order to maintain compatibility with the NRC, showing the normal length of time anticipated to complete each step.

The state plans an aggressive rulemaking and will adopt all required regulations that have been designated as compatibility items through 2002.

II. Sealed Source and Device Program

31. Prepare a table listing new and revised SS&D registrations of sealed sources and devices issued during the review period. The table heading should be:

SS&D Registry Number	Manufacturer, Distributor or Custom User	Type of Device or Source	Date Issued
OR-1035-D-101-B	Fagus GreCon	Gauging Systems Source Holder	9/25/97
OR-8092-D-801-G	Medite	Industrial Gauging Device	7/7/97

32. What guides, standards and procedures are used to evaluate registry applications?

NRC SS&D guidance was used to evaluate the application for reissue (re-activation) and the inactivation of a device during license termination.¹⁰

33. Please include information on the following questions in Section A, as they apply to the Sealed Source and Device Program:

The state reactivated a NRC registration listed in Item 31. The reactivation process did not require the state to evaluate any engineering criteria. The state used existing NRC engineering data¹¹ to show that the device was identical to that which was registered by the NRC. The re-registration was administrative rather than technical in scope. The licensee's consultant, a Certified Health Physicist (CHP), prepared the application for registration and the State reviewed the pertinent documents. The registration was based only on one component of the former registration.

Technical Staffing and Training - A.III.11-15

¹⁰Commission review of Oregon's request to terminate the SS&D portion of the Oregon Agreement program was scheduled for Spring 1998. Email from NRC OSP dated 4/13/98 documented the FRN and Chairman's signed letter. The state will transfer the two SS&D registrations to NRC per NMSS procedures.

¹¹The state obtained copies from NMSS of all original registration supporting documents prior to review of the device registration reactivation, including engineering data.

Technical Quality of Licensing Actions - A.IV.16-18
Responses to Incidents and Allegations - A.V.20-23

III. Low-Level Waste Program

34. Please include information on the following questions in Section A, as they apply to the Low-level Waste Program: **NOT APPLICABLE**

Status of Materials Inspection Program - A.I.1-3, A.I.6
Technical Quality of Inspections - A.II.7-10
Technical Staffing and Training - A.III.11-15
Technical Quality of Licensing Actions - A.IV.16-18
Responses to Incidents and Allegations - A.V.20-23

IV. Uranium Mill Program

35. Please include information on the following questions in Section A, as they apply to the Uranium Mill Program: **NOT APPLICABLE**

Status of Materials Inspection Program - A.I.1-3, A.I.6
Technical Quality of Inspections - A.II.7-10
Technical Staffing and Training - A.III.11-15
Technical Quality of Licensing Actions - A.IV.16-18
Responses to Incidents and Allegations - A.V.20-23

TABLE FOR QUESTION 29.

10 CFR RULE	DATE DUE	DATE ADOPTED	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Any amendment due prior to 1991. Identify each regulation (refer to the Chronology of Amendments)		prior to 1995		
Decommissioning; Parts 30, 40, 70	7/27/91	1995		
Emergency Planning; Parts 30, 40, 70	4/7/93	1995		
Standards for Protection Against Radiation; Part 20	1/1/94	1995		
Safety Requirements for Radiographic Equipment; Part 34	1/10/94	1995		
Notification of Incidents; Parts 20, 30, 31, 34, 39, 40, 70	10/15/94	1995		
Quality Management Program and Misadministrations; Part 35	1/27/95	1995		
Licensing and Radiation Safety Requirements for Irradiators; Part 36	7/1/96		DRAFTED	1999
Definition of Land Disposal and Waste Site QA Program; Part 61	7/22/96	N/A	No land disposal allowed in oregon	
Decommissioning Recordkeeping: Documentation Additions; Parts 30, 40, 70	10/25/96	1995		
Self-Guarantee as an Additional Financial Mechanism; Parts 30, 40, 70	1/28/97		DRAFTED; Oregon AG has reworked to fit its requirements	1999
Uranium Mill Tailings: Conforming to EPA Standards; Part 40	7/1/97	N/A	No mill tailings under Agreement State authority	
Timeliness in Decommissioning Parts 30, 40, 70	8/15/97	1995		

10 CFR RULE	DATE DUE	DATE ADOPTED	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use; Parts 30, 32, 35	1/1/98		Drafted	1999
Frequency of Medical Examinations for Use of Respiratory Protection Equipment	3/13/98		Drafted	1999
Low-Level Waste Shipment Manifest Information and Reporting	3/1/98		Drafted	1999
Performance Requirements for Radiography Equipment	6/30/98		Drafted	1999
Radiation Protection Requirements: Amended Definitions and Criteria	8/14/98		Drafted	1999
Clarification of Decommissioning Funding Requirements	11/24/98		Drafted	1999
10 CFR Part 71: Compatibility with the International Atomic Energy Agency	4/1/99		To be drafted	1999
Medical Administration of Radiation and Radioactive Materials.	10/20/98		To be drafted	1999
Termination or Transfer of Licensed Activities: Recordkeeping Requirements.	6/16/99		To be drafted	1999
Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act	1/9/00		To be drafted	1999
Fissile Material Shipments and Exemptions	2/10/00		To be drafted	1999
Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State	2/27/00		To be drafted	1999
Criteria for the Release of Individuals Administered Radioactive Material	5/29/00		To be drafted	1999
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations; Final Rule	6/27/00		To be drafted	1999

10 CFR RULE	DATE DUE	DATE ADOPTED	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Radiological Criteria for License Termination	8/20/00		To be drafted	1999

MATERIALS REQUESTED TO BE AVAILABLE FOR THE ONSITE PORTION OF AN IMPEP REVIEW

ORGANIZATION CHARTS

Clean, sized 8½ X 11" including names and positions

- One showing positions from Governor down to Radiation Control Program Director (RCPD)
- One showing positions of current radiation control program with RCPD as Head
- Equivalent charts for LLRW and mills programs, if applicable

LICENSE LISTS

- Printouts of current licenses, showing total, as follows:

Name	License #	Location	License Type	Priority	Last Inspection	Due Date
------	-----------	----------	--------------	----------	-----------------	----------

Sort alphabetically

Also, sort by due date and by priority (if possible)

THE FOLLOWING LISTS

- List of open license cases, with date of original request, and dates of follow up actions
- List of licenses terminated during review period.
- Copy of current log or other document used to track licensing actions
- Copy of current log or other document used to track inspections
- List of Inspection frequency by license type
- Listing or log of all incidents and allegations occurring during the review period. Show whether incident is open or closed and whether it was reported to the NRC

THE FOLLOWING DOCUMENTS

- All State regulations
- Statutes affecting the regulatory authority of the state program
- Standard license conditions
- Technical procedures for licensing, model licenses, review guides
- SS&D review procedures
- Instrument calibration records
- Inspection procedures and guides
- Inspection report forms
- Records of results of supervisory accompaniments of inspectors
- Emergency plan and communications list
- Procedures for investigating allegations
- Enforcement procedures, including procedures for escalated enforcement, severity levels, civil penalties (as applicable)
- Copies of job descriptions

ATTACHMENT A

COMPARISON OF OREGON LICENSE TYPES, NRC PROGRAM CODES, & PRIORITIES

Fee-code	OHD/OAR License Type	NRC Program Code(s)	Inspection Frequency years
(a)	Analytical/Leak Test	03220	5
(b)	Basic License 2	03232 03225, 03800 03221, 03710, 11220, 11210, 22130, 22160, 22161	3 5
(c)	Brachytherapy	02120	3
(d)	Broad Scope A	01100, 03610 02110, 03211	2 1
(e)	Broad Scope B	01110, 03212, 03611	3
(f)	Broad Scope C	01120, 03213, 03612	5
(g)	Distribution	02511, 02513 03240, 03241, 03242, 03243, 03244, 11230, 22170	3 5
(h)	Fixed Gauge	03120	5
(i)	High dose rate brachytherapy	02230, 02231	1
(j)	Imaging and Localization	02121, 02201	4
(k)	In Vitro Laboratory	02410	5
(l)	Industrial Radiography	03310, 03320	1
(m)	Instrument Calibration	03222	3
(n)	Investigational New Drug	02121, 02201 02120, 02200	5 3
(o)	Irradiator Self-Shielded	03510 03511	5 3
(p)	Manufacturing/Compounding	03214	3
(q)	Mobile Nuclear Medicine	02220, 02240	2
(r)	NORM (no processing)	11200	5
(s)	Nuclear Pharmacy	02500	1
(t)	Other Measuring Device	03123 (GC), 03124 (xrf)	5
(u)	Portable Gauge	03121, 03122 (lead xrf)	4
(v)	Radiopharmaceutical Therapy	02120, 02200, 02400	3
(w)	RAM/NOS Facility	03112, 03113, 03520, 11700, 23300 03218, 03219 03233, 03235, 03521, 03613, 03900, 11900, 22162, 22200	3 2 1
(x)	Research & Development	03620	5
(y)	Sealed Sources for Diagnosis	02121, 02201	5
(z)	Source Material	11221, 11300, 11800	3
(aa)	Special Nuclear Material (sealed)	22120, 22140, 22150, 22151	5
(bb)	Special Nuclear Material (unsealed)	22110, 22111	2
(cc)	Teletherapy (external beam)	02300	3
(dd)	Unique	03710, 03620	5
(ee)	Uptake and Dilution 4	02121, 02201	
(ff)	Use of Xenon Gas	02121, 02201	4
(gg)	Waste Packaging	03234	1
(hh)	Well Logging	03111	3

**ATTACHMENT B
INSPECTOR DEBRIEF INTERVIEW**

Inspector _____ Date of Inspection _____

Licensee _____ License Number _____

License Type _____ Inspection Frequency _____

Expiration Date _____ RSO _____

I. License Review Adequate License deficiencies¹²

General comment on inspector's view of licensed program:

II. Inspection Overview (box checked means adequate)

- | | | | |
|---|---|---|---|
| <input type="checkbox"/> RAM (isotope) | <input type="checkbox"/> Inventory (x-check w/ copy of records) | | |
| <input type="checkbox"/> 6,7,8,9 of license | <input type="checkbox"/> Place of use, temporary jobsites | | |
| <input type="checkbox"/> Validation Cert | <input type="checkbox"/> RSO | <input type="checkbox"/> RSC | <input type="checkbox"/> Authorized users |
| <input type="checkbox"/> Dosimetry | <input type="checkbox"/> Training | <input type="checkbox"/> Incidents | <input type="checkbox"/> Security |
| <input type="checkbox"/> License Conditions | <input type="checkbox"/> Leak tests | <input type="checkbox"/> Radiation Measurements | |
| <input type="checkbox"/> Operating Procedures | <input type="checkbox"/> Emergency Procedures | <input type="checkbox"/> Waste Procedures | |
| <input type="checkbox"/> Posting Signs, Labels, Notices | <input type="checkbox"/> Transportation Requirements | | |

III. Inspector impressions

IV. Findings (Items of noncompliance):

SL1 _____ SL2 _____ SL3 _____

Rating _____ Points _____ Tracking form prepared

¹²If there are licensing deficiencies, use the form "Recommendations to the License Reviewer" to recommend changes or identify deficiencies in the license.

ATTACHMENT C

INCIDENTS REPORTED DURING THE REVIEW PERIOD

LICENSEE	LICNO	RCSNO	NOTIFY DATE	INCIDENT TYPE	CASE CLOSED	CLOSE DATE
		96-01	19960101	Other -- no RAM - Gas leak	yes	19960105
Longview Inspection-QC Group	90621	96-02	19960118	Other -- erroneous report of suspected leaking source	yes	19960123
St Elizabeth Hospital	90705	96-03	19960206	Other -- device damaged in transport	yes	19960228
		96-04	19960305	Other -- report of stolen anti-static devices	yes	19961030
St. Vincent Hospital	90104	96-05	19960305	Other -- medical error	yes	19960318
		96-06	19960328	Other -- GL source material (chemical waste)	yes	19960412
		96-07	19960409	Other -- contaminated metal scrap	yes	19960430
		96-08	19960418	Other -- contaminated metal scrap	yes	19960517
		96-09	19960429	Other -- contaminated metal scrap	yes	19960513
Professional Serv. Industries	90056	96-10	19960502	Other -- dosimetry badge artifact	yes	19960528
		96-11	19960506	Other -- no RAM	yes	19960513
Syncor International Corp.	90509	96-12	19960528	Other -- no RAM	yes	19960528
		96-13	19960605	Other -- contaminated metal scrap	yes	19960614
		96-13A	19960531	Other -- notification of theft of portable gauge	yes	19960531
Salem Hospital	90151	96-14	19960610	Other -- contaminated garbage	yes	19960611
		96-15	19960607	Other -- notification of lost gauges from Canada	yes	19970117
		96-16	19960612	Other -- contaminated garbage	yes	19961030
		96-17	19960619	Other -- contaminated metal scrap	yes	19960801
Professional Service Indust.	90056	96-18	19960710	Allegation -- radiation exposure during IR	yes	19960711
Precision Castparts Corp.	90354	96-19	19960710	Allegation -- RAM contamination in demolition area	yes	19960816
		96-19A	19960730	Other -- Notification by agreement state of theft	yes	19960730
Doug Evans, DVM	90562	96-20	19960813	Other -- contaminated garbage	yes	19960904
		96-21	19960816	Allegation -- theft of "enriched uranium"	yes	19961030
Gary J. Strait & Associates	90651	96-22	19960822	Allegation -- radiation exposure during IR	yes	19961015
Salem Hospital	90151	96-23	19960829	Other -- contaminated garbage	yes	19960906
		96-24	19960904	Other -- no RAM	yes	19960912
		96-25	19960904	Other -- Public inquiry	yes	19960906
Salem Hospital	90151	96-26	19960906	Other -- contaminated garbage	yes	19961015
		96-27	19960927	Other -- contaminated metal scrap	yes	19961030
Smurfit Newsprint Corporation	90266	96-28	19961003	Equipent failure -- shutter failure	yes	19961030
Salem Hospital	90151	96-29	19961008	Other -- medical error	yes	19961111
		96-30	19961017	Other -- contaminated metal scrap	yes	19961023

LICENSEE	LICNO	RCSNO	NOTIFY DATE	INCIDENT TYPE	CASE CLOSED	CLOSE DATE
Braun Intertec Northwest	90633	96-31	19961022	Equipment failure -- portable gauge cracked source rod welds	yes	19980502
		96-32	19961115	Other -- contaminated metal scrap	yes	19970117
Dave Notley and Assoc.	90770	96-33	19961115	Allegation -- unsafe use of RAM	yes	19970117
Oregon State University	90005	96-34	19961119	Loss of licensed material	yes	19961125
Dee Forest Productst	93164	96-35	19961120	Other -- Fire	yes	19961129
		96-36	19961210	Other -- contaminated metal scrap	yes	19970117
Longview Inspection-QC Group	90621	96-37	19961206	Allegation - contacted by NRC	yes	19970813
Precision Castparts Corp.	90232	96-38	19961211	Other -- contaminated garbage	yes	19961223
		96-39	19961213	Other -- contaminated metal scrap	yes	19970117
		96-40	19961212	Other -- contaminated garbage	yes	19970117
Kaiser Sunnyside Hospital	90464	96-41	19961213	Other -- contaminated garbage	yes	19961223
		96-42	19961220	Other -- NRC courtesy notification (NRC Misadmin in OR)	yes	19961223
Precision Castparts Corp.	90232	96-43	19961220	Other -- contaminated garbage	yes	19970110
Good Samaritan Hospital	90008	97-01	19970110	Other -- self-discovery of noncompliance	yes	19971105
Good Samaritan Hospital	90008	97-02	19970110	Loss of pkg effectiveness -- sealed calibration source in LSC	yes	19971031
Salem Hospital	90151	97-03	19970116	Loss of licensed material	yes	19970131
		97-04	19970117	Other -- contaminated garbage	yes	19970117
		97-05	19970127	Other -- beam Rx overdose	yes	19971106
Kaiser Sunnyside Hospital	90464	97-06	19970203	Other -- contaminated garbage	yes	19971104
		97-07	19970205	Other -- contaminated garbage	yes	19970224
Salem Hospital	90151	97-08	19970310	Other -- contaminated garbage	yes	19970319
		97-09	19970212	Other -- contaminated garbage	yes	19970303
		97-09	19970212	Other -- contaminated garbage	yes	19970303
		97-10	19970214	Other -- contaminated garbage	yes	19970303
		97-11	19970225	Other -- contaminated garbage	yes	19971106
		97-12	19970225	Other -- contaminated garbage	yes	19971105
		97-13	19970307	Other -- contaminated garbage	yes	19970321
		97-14	19970311	Other -- contaminated garbage	yes	19970321
		97-15	19970311	Other -- contaminated metal scrap	yes	19970321
PCC Structural	90232	97-16	19970319	Other -- contaminated garbage	yes	19970329
Portland Adventist Medical Ctr	90158	97-17	19970325	Other -- contaminated garbage	yes	19970409
		97-18	19970326	Other -- contaminated garbage	yes	19971118
Salem Hospital	90151	97-19	19970331	Other -- contaminated garbage	yes	19980605
Providence Milwaukie Hospital	90312	97-20	19970404	Other -- contaminated garbage	yes	19970421

LICENSEE	LICNO	RCSNO	NOTIFY DATE	INCIDENT TYPE	CASE CLOSED	CLOSE DATE
Smurfit Newsprint Corporation	90266	97-21	19970407	Other -- public exposure	yes	19970416
		97-22	19970415	Other -- contaminated metal scrap	yes	19971117
		97-23	19970421	Other -- contaminated metal scrap	yes	19971105
Good Samaritan Hospital	90008	97-24	19970417	Other -- beam Rx overdose	yes	19971105
		97-25	19970503	Other -- Nat'l Resp Center Transportation incident -- no RAM	yes	19970601
Willamette Industries	90141	97-26	19970505	Other -- damaged fixed gauge mounting track	yes	19971031
		97-27	19970515	Other -- Report of Chemical Fire & Explosion	yes	19971106
		97-28	19970521	Other -- contaminated metal scrap	yes	19971117
Oregon Health Sciences Univ.	90013	97-29	19970522	Other -- medical error	yes	19970527
		97-29A	19970530	Other -- Contaminated lead aprons	yes	19970701
		97-30	19970606	Other -- contaminated metal scrap	yes	19970818
Longview Inspection-QC Group	90621	97-32	19970610	Allegation -- radiation exposure during IR	yes	19971105
		97-33	19970618	Other -- contaminated metal scrap	yes	19971117
Willamette Falls Hospital	90294	97-34	19970618	Other -- contaminated garbage	yes	19970630
		97-35	19970619	Other -- contaminated garbage	yes	19971006
St. Vincent Hospital	90104	97-36	19970624	Other -- medical error	yes	19971105
		97-37	19970626	Other -- contaminated garbage	yes	19970701
		97-38	19970627	Other -- transportation/survey	yes	19970701
		97-39	19970707	Other -- contaminated garbage	yes	19970813
Salem Hospital	90151	97-40	19970711	Other -- contaminated garbage	yes	19970806
		97-41	19970713	Other -- Nat'l Resp Ctr reported Unusual event -- no RAM	yes	19970715
Meridian Park Hospital	90293	97-42	19970714	Other -- contaminated garbage	yes	19970818
		97-43	19970718	Other -- contaminated metal scrap	yes	19971117
		97-44	19970728	Other -- contaminated garbage	yes	19970801
		97-45	19970731	Other -- contaminated metal scrap	yes	19970806
		97-46	19970803	Other -- Prank	yes	19971105
Cornforth Consultants	90652	97-47	19970806	Other -- device incident -- Portable gauge accident	yes	19971006
		97-48	19970808	Other -- contaminated metal scrap	yes	19971105
		97-49	19970811	Other -- NORM - hazardous waste	yes	19971105
Emanuel Hospital	90014	97-50	19970814	Other -- delivery to wrong licensee address	yes	19970903
		97-51	19970819	Loss of licensed material	yes	19970903
Reed College	90010	97-52	19970827	Other -- Leaking Triga reactor fuel element	yes	19970903
Longview Inspection-QC Group	90621	97-53	19970829	Other -- IR disconnect		
		97-54	19970929	Other -- contaminated garbage	yes	19971001

LICENSEE	LICNO	RCSNO	NOTIFY DATE	INCIDENT TYPE	CASE CLOSED	CLOSE DATE
		97-55	19970929	Other -- no RAM	yes	19971001
		97-56	19970929	Other -- contaminated metal scrap	yes	19971006
		97-57	19971001	Other -- contaminated garbage	yes	19971117
		97-58	19971001	Other -- contaminated garbage	yes	19971117
		97-59	19971002	Other -- contaminated metal scrap	yes	19971006
		97-60	19971006	Other -- contaminated garbage	yes	19971027
GeoDesigns	90822	97-61	19971010	Other -- device incident -- Portable gauge accident	yes	19971117
Columbia Willam Valley Med Ctr	90712	97-62	19971008	Other -- medical error	yes	19980612
		97-63	19971017	Other -- contaminated metal scrap	yes	19980209
		97-64	19971013	Other -- contaminated metal scrap	yes	19971105
		97-65	19971016	Other -- contaminated garbage	yes	19971027
		97-66	19971023	Allegation -- plea bargain; drug issue; loss/theft of material	yes	19980520
		97-67	19971023	Other -- contaminated garbage	yes	19971027
Western Professional	90344	97-68	19971024	Other -- X-ray overexposure	yes	19980515
McKenzie-Willamette Hospital	90298	97-69	19971031	Other -- contaminated garbage	yes	19971117
		97-70	19971105	Other -- contaminated metal scrap	yes	19980209
		97-71	19971110	Other -- contaminated metal scrap	yes	19980209
		97-72	19971117	Other -- contaminated metal scrap	yes	19980209
		97-73	19971111	Other -- contaminated garbage	yes	19971209
Legacy Emanuel Hospital	90014	97-74	19971119	Misadministration caused by Rx seeds being undercalibrated	yes	19980319
		97-75	19971124	Other -- contaminated metal scrap	yes	19980209
Oregon State University	90005	97-76	19971125	Other -- Mixed waste spill	yes	19971209
		97-77	19971204	Other -- Chemical incident (Radiation levels from K-40)	yes	19971210
		97-78	19971201	Other -- contaminated garbage	yes	19971209
		97-79	19971208	Other -- contaminated metal scrap	yes	19971217
		97-80	19971210	Other -- RAM disposal problem	yes	19980123
Northwest Industries	90763	97-81	19971211	Allegation -- environmental contamination--S/M/SNM	yes	19980319
Oregon Health Sciences Univ.	90731	97-82	19971216	Other -- contamination incident	yes	19980319
International Paper Company	90012	97-83	19971219	Other -- Fire & Explosion	yes	19980109
Mission Medical Imaging	90583	97-84	19971231	Other -- contaminated garbage	yes	19980209
Dave Notley & Associates	90770	97-85	19971230	Other -- untimely death of licensee	yes	19980529
		98-01	19980105	Other -- contaminated metal scrap	yes	19980529
		98-02	19980113	Other -- contaminated metal scrap	yes	19980529

LICENSEE	LICNO	RCSNO	NOTIFY DATE	INCIDENT TYPE	CASE CLOSED	CLOSE DATE
		98-03	19980119	Other -- contaminated garbage	yes	19980120
		98-04	19980121	Other -- contaminated metal scrap	yes	19980209
		98-05	19980119	Other -- contaminated metal scrap	yes	19980209
Sacred Heart Medical Center	90270	98-06	19980123	Other -- medical error	yes	19980319
		98-07	19980122	Other -- notification of theft of RAM gauge	yes	19980529
Braun Intertec Corporation	90634	98-08	19980126	Allegation -- radiation exposure during IR	yes	19980223
		98-09	19980127	Other -- hazardous materials notification	yes	19980529
		98-10	19980203	Other -- contaminated garbage	yes	19980319
		98-12	19980220	Other -- contaminated garbage	yes	19980529
Oregon State University	90005	98-13	19980219	Other -- Reportable Event Reactor	yes	19980529
Smurfit Newsprint Corporation	90266	98-14	19980224	Other -- Gauge incident caused by not following procedures		
		98-15	19980305	Other -- Chemical incident	yes	19980306
		98-16	19980312	Other -- contaminated metal scrap	yes	19980529
		98-17	19980323	Other -- contaminated metal scrap	yes	19980529
		98-18	19980324	Other -- contaminated metal scrap	yes	19980529
		98-19	19980325	Other -- contaminated garbage	yes	19980529
Longview Inspection	90621	98-20	19980402	Other -- IR incident caused by not following procedures	yes	19980515
		98-21	19980409	Other -- contaminated metal scrap	yes	19980529
		98-22	19980410	Other -- contaminated metal scrap	yes	19980529
		98-23	19980420	Other -- contaminated metal scrap	yes	19980529
Columbia Memorial Hospital	90343	98-24	19980409	Other -- medical error	yes	19980529
Columbia Douglas Medical Ctr.	90374	98-25	19980416	Other -- medical error	yes	19980529
		98-25	19980416	Other -- medical error	yes	19980529
		98-26	19980417	Other -- contaminated metal scrap	yes	19980529
		98-27	19980421	Other -- contaminated metal scrap	yes	19980529
		98-27	19980421	Other -- contaminated metal scrap	yes	19980529
		98-28	19980513	Other -- contaminated metal scrap	yes	19980529
		98-29	19980515	Other -- contaminated metal scrap	yes	19980520
		98-29	19980513	Other -- contaminated metal scrap	yes	19980526
		98-30	19980527	Other -- contaminated metal scrap		
		98-31	19980527	Other -- contaminated metal scrap		
		98-32	19980605	Other -- report of Co-60 contaminated cookware	yes	19980605