

December 22, 2003

Mr. Bill White
Acting Deputy Secretary
Washington Department of Health
1112 SE Quince Street
Olympia, WA 98504-7890

Dear Mr. White:

On December 10, 2003, the Management Review Board (MRB) met to consider the proposed final Integrated Materials Performance Evaluation Program (IMPEP) report on the Washington Agreement State Program. The MRB found the Washington program adequate to protect public health and safety and compatible with the Nuclear Regulatory Commission's program.

Section 5.0, page 19, of the enclosed final report presents the IMPEP team's recommendation for the State of Washington. At the MRB meeting, Terry Frazee, Western Regional Director, presented a letter that detailed the State's actions in response to this recommendation. We request no additional information at this time.

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

I appreciate the courtesy and cooperation extended to the IMPEP team during the review. I also wish to acknowledge your continued support for the Radiation Control Program and the excellence in program administration demonstrated by your staff as reflected in the team's findings. I look forward to our agencies continuing to work cooperatively in the future.

Sincerely,

/RA Paul H. Lohaus Acting For/

Carl J. Paperiello
Deputy Executive Director
for Materials, Research and State Programs

Enclosure:
As stated

cc: Gary L. Robertson, Director
Division of Radiation Protection

Bob Nichols, State Liaison Officer
Executive Policy Division

Steve Collins, IL
OAS Liaison to the MRB

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cc: Gary L. Robertson, Director
Division of Radiation Protection

bcc: Chairman Diaz
Commissioner McGaffigan
Commissioner Merrifield

Bob Nichols, State Liaison Officer
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INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM
REVIEW OF WASHINGTON AGREEMENT STATE PROGRAM

September 8 - 12, 2003

FINAL REPORT

U.S. Nuclear Regulatory Commission

1.0 INTRODUCTION

This report presents the results of the review of the Washington Agreement State program. The review was conducted during the period September 8 - 12, 2003, by a review team consisting of technical staff members from the Nuclear Regulatory Commission (NRC) and the Agreement State of Texas. 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 5, 1999, NRC [Management Directive 5.6](#), "Integrated Materials Performance Evaluation Program (IMPEP)." Preliminary results of the review, which covered the period of September 4, 1999 to September 12, 2003, were discussed with Washington management on September 12, 2003.

A draft of this report was issued to Washington for factual comment on October 9, 2003. The State responded by letter dated October 30, 2003. The Management Review Board (MRB) met on December 10, 2003 to consider the proposed final report. The MRB found the Washington radiation control program adequate to protect public health and safety and compatible with NRC's program.

The Washington Agreement State program is administered by the Office of Radiation Protection (the Office) in the Division of Environmental Health, Department of Health (the Department). Management in the Office consists of the Office Director, the Western Regional Director, and the Eastern Regional Director. The Regional Directors report to the Office Director. The Western Regional Director is located in the Olympia office and is responsible for operations in three technical sections: the Radioactive Materials Section, the X-ray Section, and the Waste Management Section. The Eastern Regional Director is located at the Richland office and is primarily responsible for oversight of activities on the Hanford Nuclear Reservation, and three technical sections: the Air Emissions and Defense Waste Section, the Environmental Radiation Section, and the Nuclear Safety Section. Organization charts are included in Appendix B.

At the time of the review, the Washington Agreement State program regulated approximately 410 specific licenses authorizing Agreement materials. 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 Washington.

In preparation for the review, a questionnaire addressing the common and non-common performance indicators was sent to the Office on May 21, 2003. The Office provided a response to the questionnaire on August 20, 2003. A copy of the questionnaire response can be found on NRC's Agencywide Document Access and Management System using the Accession Number ML032671064.

The review team's general approach for conduct of this review consisted of: (1) examination of Washington's response to the questionnaire; (2) review of applicable Washington statutes and regulations; (3) analysis of quantitative information from the radiation control program licensing and inspection data base; (4) technical review of selected licensing and inspection actions; (5) field accompaniments of six Office 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 performance criteria for each common and non-common performance indicator and made a preliminary assessment of the Washington Agreement State program's performance.

Section 2 below discusses the State's actions in response to the recommendation made following the previous IMPEP review and the team's conclusions regarding closeout of the recommendation. 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 indicators, and Section 5 summarizes the review team's findings. Recommendations made by the review team are comments that relate directly to performance by the State. A response is requested from the State to the recommendation in the final report.

2.0 STATUS OF ITEMS IDENTIFIED IN PREVIOUS REVIEWS

During the previous IMPEP review, which concluded on September 3, 1999, one recommendation was made and transmitted to Mary C. Selecky, Secretary, Washington Department of Health on December 3, 1999. The team's review of the current status of the recommendation is as follows:

1. The review team recommends that the State develop additional specialized inspection procedures for the uranium recovery program. (Section 4.4.2)

Current Status: The Waste Management Section developed and implemented a specific written procedure, Inspection Procedures for Uranium Mill Reclamation and Construction Project, for geotechnical construction which addresses onsite construction reviews and placement of erosion protection. This recommendation is closed.

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

3.1 Technical Staffing and Training

Issues central to the evaluation of this indicator include the Office's 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 Office's questionnaire response relative to this indicator, interviewed Office management and staff, reviewed job descriptions and training records, and considered any possible workload backlogs.

The Office underwent several organizational changes in fiscal years 2001 and 2002. A new Office Director was appointed in June 2002. In December 2002, two new management positions, Regional Directors, were created. These positions were created partially to focus a higher level of management on activities on the Hanford Nuclear Reservation and partially for succession planning.

At the time of the review, the Radioactive Materials Section was staffed by the Section Supervisor, seven full time technical staff members, and two administrative support staff. Three staff members act as program managers for three major licensee groups: medical, industrial, and laboratories. The remaining staff are assigned to assist the program managers. The technical staff are classified as Radiation Health Physicists and perform both inspection and licensing functions.

The Radioactive Materials Section had a total of five staff turnovers during the review period. Of the five turnovers, two staff members were promoted and three retired or resigned. The Office has been able to fill the vacancies in an expedient manner. Four of the vacancies were filled with staff who transferred from other groups within the Office. At the time of the review, the Section was fully staffed.

The Radioactive Materials Section has a documented training and qualification program for staff who perform licensing and inspection duties and investigate incidents that is based on the NRC/OAS Joint Working Group report. Adequate qualification is determined through a combination of education and experience, formal classroom training, and on-the-job training. Staff members are required to have a bachelor's degree or equivalent experience in physical science, engineering or biological science. Training records and management authorization for licensing and inspection of each license category, and management authorization for investigation of incidents, are maintained for each staff member. The team noted that the Section encourages and supports training based on program needs and funding. At the time of the IMPEP review, six technical staff had interim qualifications for inspection and licensing of specific categories of licensees and needed some additional formal training courses before becoming fully qualified. However, this has not affected the Section's ability to complete all duties and responsibilities associated with the program. The review team concluded that the Section has a well-balanced staff, and a sufficient number of trained personnel to carry out regulatory duties.

The team noted that the Radioactive Materials Section has experienced stable funding during the review period. However, the Office Director stated that beginning in fiscal year (FY) 2003 (July 1, 2003), the Governor directed State offices to reduce full time equivalent staff (FTE) over the next two fiscal years. For the six sections in the Office, this would require a reduction in FTE of 0.8 in FY 2003 and 0.5 in FY 2004. The Office Director believes that these reductions can be met without affecting the performance of the program. The Section has been progressing towards full fee recovery of program costs since 1982 and is currently at 100 percent fee supported for direct and indirect program costs. Licensees are assessed an annual fee to cover the costs associated with amendments, routine inspections, and investigations. New license applicants are assessed a small fee to cover the initial pre-licensing inspection costs. In addition, the Office receives a small apportionment from the State general fund to cover costs associated with incident response for the entire program.

The State of Washington does not have an established State radiation oversight board. However, if the Office determines that advice is needed on a particular subject, a group of licensee representatives is convened to act in an advisory role to the Office.

During team interviews with the Office Director and the Western Regional Director, the Office Director discussed the outreach program for providing emergency response training to first responders, hospital staff, and local government health agencies for response to radiological events including incidents resulting from terrorist activities. The genesis of this program was the result of lessons learned from the Office's training of National Guard, hospitals, local health departments and first responders for the TOPOFF2 radiological terrorism emergency preparedness exercise. The Office goal is for each Section to provide two FTE days per month to support this training initiative. At the time of the review, the Office had conducted two training sessions. The scenario for one of the sessions was focused on a realistic terrorist activity and involved the use of radiation sources in various forms. As a result of this exercise, first responders discovered that although they had high-tech detection equipment, they did not use the equipment's alpha or beta detection capability, but relied on the gamma analyzers. The Office believes that the use of actual radiation sources and a realistic scenario proved to be effective tools for exercising and training the capability of first responders. The review team recommends this outreach training approach as a good practice.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Technical Staffing and Training, was satisfactory.

3.2 Status of Materials Inspection Program

The review team focused on five factors in reviewing the status of the material inspection program: inspection frequency, overdue inspections, initial inspections of new licensees, timely dispatch of inspection findings to licensees, and the performance of reciprocity inspections. The review team's evaluation is based on the Office's questionnaire response relative to this indicator, data gathered independently from the Office's licensing and inspection data tracking system, the examination of complete licensing and inspection casework, and interviews with managers and staff.

The team's review of the Office's inspection priorities verified that inspection frequencies for all types of Washington material licenses are at least the same frequency as those listed in NRC Inspection Manual Chapter (IMC) 2800. Some categories of licenses were assigned inspection priority codes that prescribe a more frequent inspection schedule than those currently prescribed in NRC IMC 2800.

In their response to the questionnaire, the Office indicated that there were currently no inspections of core licensees overdue by more than 25 percent of the NRC frequency. This information was verified during the inspection casework reviews and the review of the database provided to the team. The program conducted approximately 400 core licensee inspections during the review period. During the review period, there were three overdue core inspections. These inspections were conducted one, three, and five months late.

The review team also evaluated the Office's timeliness for conducting initial inspections. All new licenses are delivered by the reviewer. Each licensee is subject to an onsite review of their radiation safety programs to ensure that each licensee is prepared to accept licensed material. The team noted that the Office conducted approximately 90 initial inspections during the review period. All but one new licensee was inspected in accordance with NRC IMC 2800 guidelines. This one licensee did receive an initial visit in accordance with Office policy, but the initial inspection was not performed since the licensee has not yet been awarded a contract requiring the use of licensed material. An inspection has been scheduled for 2004.

The timeliness of the issuance of inspection findings was also evaluated during the inspection file review. The Office has an effective and efficient process which ensures that inspection findings are communicated to licensees in a timely manner. Inspection findings are communicated to the licensee using a form similar to NRC's Form 591 (DOH 322-015, Revision 7/2000). These forms are generally used for infractions or deficiencies. A completed form is typically issued onsite upon the completion of an inspection or included in a notice of correction letter. The team determined that, if not issued at the conclusion of the onsite inspection, these forms were issued within 30 days of the inspection. Depending on the findings, the licensee may be required to respond to the Office in writing regarding their corrective actions. Of the 25 inspection files reviewed by the review team, only one inspection summary was issued beyond the 30-day goal.

During the review period, the Office granted 40 core reciprocity licenses. The Office exceeded the 20 percent criteria prescribed in NRC IMC 1220 for each year and inspected a total of 21 licensees.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Status of the Materials Inspection Program, was satisfactory.

3.3 Technical Quality of Inspections

The team evaluated the inspection reports, enforcement documentation, and inspection field notes and interviewed inspectors for a total of 20 materials inspections conducted during the review period. The casework included all of the Office's materials inspectors, and covered inspections of various types as follows: waste processing, research and development, portable gauge, medical broad scope, veterinary, gamma stereotactic radiosurgery, manufacturing and distribution, service (source exchange), well logging, industrial radiography, research and development broad scope, medical institution, and nuclear pharmacy. Appendix C lists the inspection casework files reviewed for completeness and adequacy with case-specific comments.

Based on the casework file reviews, the review team found that routine inspections covered all aspects of the licensee's radiation protection program. The inspection reports were thorough, complete, consistent, and of high quality, with sufficient documentation to ensure that licensee's performance with respect to health and safety was acceptable. The documentation adequately supported the cited violations. Exit interviews were held with appropriate licensee personnel. Team inspections were performed when appropriate and for training purposes.

The review team found that violations are categorized into severity levels which can later be used for escalated enforcement, if necessary. All inspections are peer reviewed by another staff member of the Radioactive Materials Section. In addition, 10 percent of the inspection reports are also reviewed by the Section Supervisor. The team found that the Radioactive Materials Section has a good process for reviewing inspection documentation, making any needed changes, and providing the inspector with feedback regarding the quality of the document.

The Radioactive Materials Supervisor conducts supervisory accompaniments of each materials inspector at least once a year. Inspectors are provided with feedback regarding their performance after the accompaniment and the results are documented.

The review team accompanied four Radioactive Materials Section inspectors from August 4 through 7, 2003 during inspections at a medical institution, a research and development facility, and two portable gauge licensees which are identified in Appendix C. During the accompaniments, the inspectors demonstrated appropriate performance-based inspection techniques and knowledge of the regulations. The inspectors were well prepared and thorough in their review of the licensee's radiation safety program. The inspections were adequate to assess radiological health and safety at the licensed facility.

As noted in the questionnaire, the Radioactive Materials Section has an adequate number and variety of portable survey instruments to support the current inspection program, as well as for responding to incidents and emergency conditions. Appropriate documentation of calibrated survey instruments is maintained and tracked in a database. Instruments requiring calibration are delivered to the Northwest Radiation Instrument Calibration Facility at the University of Washington. The Office utilizes the Department's laboratory for a variety of analytical analyses including liquid scintillation, gamma spectroscopy, and low background beta/gamma counting. The Office has a staff member in the Environmental Radiation Section who is the liaison with the laboratory to coordinate the appropriate analyses and ensure timely feedback of results.

The team also reviewed the Office's oversight of the Allied Technology Group Inc. (ATG) facility in Richland, Washington. The Waste Management Section is responsible for the inspection and licensing oversight of this facility. The licensee has a number of complex waste treatment operations, provides

decontamination and demolition services and other environmental and cleanup activities associated with radiological materials. The facility holds two licenses involving treatment of radioactive waste and mixed waste. ATG went through some financial difficulties and announced bankruptcy in December 2001. Subsequently, ATG's operations were substantially reduced during the bankruptcy period. Currently, ATG is finalizing its negotiation to transfer its ownership to Pacific EcoSolutions, LLC.

On July 29, 2003, members of the review team visited the ATG facility and observed licensee operation, as well as the Office's surveillance of the facility. Inspectors are at the facility several times a month and have intimate knowledge of the operations and status of the site. The team also reviewed inspection and ALARA reports regarding this facility and determined that the Waste Management Section's findings were well documented and supported. The Waste Management Section took appropriate action to resolve health and safety issues including those involving legacy waste and occupational doses which were above administrative limits, but lower than regulatory limits, during calendar year 2000.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Technical Quality of Inspections, was satisfactory.

3.4 Technical Quality of Licensing Actions

The review team examined completed licenses and casework for 24 materials licensing actions representing the work of seven license reviewers. The license reviewers were interviewed to supply additional information regarding licensing decisions or file contents. Licensing actions were evaluated for completeness, consistency, proper isotopes and quantities used, qualifications of authorized users, adequate facilities and equipment, and operating and emergency procedures sufficient to establish the basis for licensing actions. Licenses were reviewed for accuracy, appropriateness of the license and of its conditions and tie-down conditions, and overall technical quality. Casework was evaluated for adherence to good health physics practices, reference to appropriate regulations, supporting documents, peer or supervisory review and proper signature authorities. The files were checked for retention of necessary documents and supporting data.

The licensing actions reviewed included the following types of license: waste processing, academic, medical broad scope, industrial broad scope, industrial radiography, radiopharmacy, commercial services, portable gauges, gamma knife, high dose rate remote afterloader, manufacturing and distribution, and research and development. Licensing actions included four new licenses, nine renewals, one termination, and ten amendments. A list of these licenses with case-specific comments can be found in Appendix D.

All licensing actions in the Radioactive Materials Section are assigned a tracking number, logged into a computer tracking system, and given to a license reviewer. If needed, the reviewer generates a deficiency letter and produces a draft licensing action upon final resolution of all deficiency items. The draft licensing action receives a quality assurance (QA) review by peer license reviewers. Corrections are made as needed and the licensing action is issued. The license reviewers in the Radioactive Materials Section have signature authority and sign their own licensing actions. The QA reviewer initials each final licensing action. Each license reviewer uses boilerplate licenses for their type of licensing actions (i.e., industrial, medical, or laboratory) to ensure consistency in standard licenses.

The review team found that the licensing actions were thorough, complete, consistent, and of high quality, with health and safety issues properly addressed. Tie-down conditions are generally backed by information contained in the license or sealed source and device registry files and are inspectable. Deficiency letters state regulatory positions, are used at the proper time, and identify deficiencies in the

licensee's documents. Terminated licensing actions are well documented, showing appropriate transfer and survey records. License files are complete and organized. The Radioactive Materials Section uses a combination of NRC and Office application and regulatory guides. In general, checklists for each type of license are used and kept with the license file. These documents are mostly complete, well organized, available to reviewers, and appear to be followed.

The Radioactive Materials Section is currently operating with a backlog of only a few licensing actions. By policy, the Radioactive Materials Section does not grant variances from licensing policy or procedure or exemptions to the regulations. As such, no exemptions or variances were granted during the review period. No changes were made in written licensing procedures during the review period.

The review team determined that the Radioactive Materials Section had not fully implemented the financial assurance for decommissioning requirements of the regulations. Examinations of licenses reveal that several licenses authorize radioactive material in types and quantities requiring financial assurance commitments. The team noted that of the nine licenses of this type reviewed, seven did not address those requirements. The matter was discussed with Radioactive Materials Section license reviewers and management. They agreed that not enough emphasis had been placed on verifying that licensees had complied with those portions of the regulations dealing with financial assurance for decommissioning. The review team recommends that the Office develop and implement a plan to adequately and consistently address the financial assurance for decommissioning portions of material license regulations.

At the December 10, 2003 MRB meeting, Office management presented a plan to address this recommendation. The plan described the steps the Office plans to take in response to the recommendation, as well as a timeline for completion. The MRB noted the Office's quick and thorough response to the recommendation.

The team reviewed the Waste Management Section's licensing oversight of the ATG facility (see Section 3.3). The Section issued a mixed waste license to ATG in November 1999 which initially authorized limited operations and quantities of licensed materials. As the licensee successfully demonstrated various operations, the license was amended on numerous occasions to expand operations and authorized quantities of licensed material. The Office has been actively addressing bankruptcy and financial assurance issues, particularly those related to the transfer of the license and the legal implications regarding financial surety. The Office currently holds adequate funds for radioactive waste financial surety and mixed waste financial surety. The team also reviewed a selection of license amendments for both licenses as indicated in Appendix D. The team determined that the Office's handling of the ATG licensing issues was appropriate and in accordance with State regulations.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Technical Quality of Licensing Actions, was satisfactory.

3.5 Response to Incidents and Allegations

In evaluating the effectiveness of the Radioactive Materials Section's actions in responding to incidents, the review team examined the Office's response to the questionnaire regarding this indicator, evaluated selected incidents reported to the "Nuclear Material Events Database" (NMED) against those contained in the Office files, and evaluated the casework and supporting documentation for 19 material incidents. A list of incident casework examined is contained in

Appendix E. The team also evaluated the Radioactive Materials Section's response to eight materials allegations, three of which were referred to the Office by NRC during the review period.

The review team discussed the Office's incident and allegation process, file documentation, the State's equivalent to the Freedom of Information Act, NMED, and notification of incidents to the NRC Operations Center by Radioactive Materials Section and Waste Management Section management and staff.

When notification of an incident or an allegation is received, the Radioactive Materials Section Supervisor and staff discuss the initial response and the need for an onsite investigation. The safety significance of the incident/allegation is evaluated to determine the type of response that the Radioactive Materials Section will take. After the investigation is completed, the pertinent incident information is forwarded to the NRC, as appropriate.

The nineteen incidents selected for review included, four losses or theft of gauges, three overexposures, four damaged or failed equipment problems, four damaged or leaking sources, two releases of licensed material, one transportation problem, and one potential release. The review team found that the Radioactive Materials Section's responses to incidents were complete and comprehensive. Initial responses were prompt, well-coordinated, and the level of effort was commensurate with the health and safety significance. Inspectors were dispatched for onsite investigations when appropriate and the Radioactive Materials Section took appropriate enforcement actions when appropriate. The review team found the documentation of the response and follow up to incidents consistent and that incidents were followed up at the next inspection or in a timely fashion.

The Department has two relevant policies on the disclosure of information. Department policy 17-005 addresses Employee Responsibilities with Confidential Information and policy 17-003 addresses Public Disclosure. All requests for public information must be sent to the Department Public Disclosure Coordinator for a determination whether the information can be disclosed or is exempt from disclosure. The policies specify the information that is exempt from disclosure, including the protection of an allegeder's identity, and direct all offices to have procedures and train employees in those procedures. Within the Office, both the Radioactive Materials Section and the Waste Management Section have developed separate, but equivalent, incident and allegation procedures. Waste Management Section procedures are discussed in Section 4.3.5. The Radioactive Materials Section has written guidance on Investigations, dated August 20, 1999; RMS-41, Handling Allegations, dated August 23, 1999; RMS-42, Concerned Citizen Calls, dated August 24, 1999; and RMS-43, Incident Notification, dated August 22, 1999 for handling incidents and allegations. The Radioactive Materials Section also maintains a computer listing for tracking the status of all incidents and allegations. After a review of the incidents and discussions with staff, the review team determined that all reportable materials events during the review period were appropriately reported to the NRC Operations Center and the NMED database contractor.

During the review period, there were three materials allegations referred to the Office by the NRC and ten allegations reported directly to the program. The review team noted that allegations are maintained in a locked file. The review of the Office's allegation files indicated that the Office took prompt and appropriate action in response to the concerns raised. All of the allegations reviewed were closed and information provided to NRC as requested on specific cases. Written response to allegeders is part of the allegation close out procedure and was noted in all of the allegation files.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Response to Incidents and Allegations, was 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. Washington's Agreement includes all of the non-common performance indicators.

4.1 Legislation and Program Elements Required for Compatibility

4.1.1 Legislation

Washington became an Agreement State in 1966. Along with their response to the questionnaire, the Office provided the review team with the opportunity to review copies of legislation that effect the radiation control program. The effective statutory authority is contained in the Revised Code of Washington (RCW), Nuclear Energy and Radiation (RCW 70.98) and Mill Tailings, Licensing and Perpetual Care (RCW 70.121). The program also is affected by RCW 70.94, Washington Clean Air Act. The Department is designated as the State's radiation control agency and implements the radiation control program. There were no changes to the legislation that affect the radiation control program during the review period.

4.1.2 Program Elements Required for Compatibility

RCW applies to all ionizing radiation and provides the statutory authority for radioactive materials, the low-level radioactive waste, and the uranium mill programs. Regulations are provided in the Washington Administrative Code. Washington requires a license for possession and use of all radioactive material including naturally occurring materials, such as radium, and accelerator-produced radionuclides. The State 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 approximately six to eight months from the development stage to the final adoption by the Secretary and filing with the Code Reviser, after which the rules become effective in 31 days. The public, the NRC, other agencies, and all potentially affected licensees and registrants are offered an opportunity to comment during the process. Comments are considered and incorporated, as appropriate, before the regulations are finalized, approved, and filed. The Office also has the authority to issue legally binding requirements (e.g., license conditions) in lieu of regulations until compatible regulations become effective.

The team evaluated the Office's response to the questionnaire, reviewed the status of regulations required to be adopted by the State during the review period, and verified the adoption of regulations with data obtained from the Office of State and Tribal Programs' State Regulation Status Data Sheet. The review team noted that since the September 1999 review, the State adopted 10 NRC amendments through four rulemaking packages.

Current NRC policy requires that Agreement States adopt certain equivalent regulations or legally binding requirements no later than three years after they become effective. The review team found that the Office currently has no overdue NRC amendments.

The Office will need to address the following three regulations in upcoming rulemakings or by adopting alternate legally binding requirements:

- “Requirements for Certain Generally Licensed Industrial Devices Containing Byproduct Material” 10 CFR Parts 30, 31, 32 amendments (65 FR 79162) that became effective on February 16, 2001. 10 CFR 32.52 (a) and (b) amendments were to be implemented by States within six months, August 16, 2001. The team determined that section 246-233-020(4)(c)(vii) of the State’s regulations contains the reporting requirement that meets the compatibility requirements of 10 CFR 32.52 (a) and (b).
- “Revision of the Skin Dose Limit” 10 CFR Part 20 amendment (67 FR 16298) that became effective on April 5, 2002.
- “Medical Use of Byproduct Material” 10 CFR Parts 20, 32, and 35 amendments (67 FR 20249) that became effective on April 24, 2002.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington’s performance with respect to the indicator, Legislation and Program Elements Required for Compatibility, was satisfactory.

4.2 Sealed Source and Device Evaluation Program

In conducting this review, three sub-indicators were used to evaluate the Office’s performance regarding their Sealed Source & Device (SS&D) Evaluation Program. These sub-indicators include: (1) Technical Staffing and Training; (2) Technical Quality of the Product Evaluation; and (3) Evaluation of Defects and Incidents Regarding SS&Ds.

In assessing the Radioactive Materials Section’s SS&D evaluation program, the review team examined information provided in the response to the IMPEP questionnaire on this indicator. A review of all new and amended SS&D evaluations, addressing NRC regulated radioactive materials, and supporting documents covering the review period was conducted. The team observed the Radioactive Materials Section’s use of guidance documents and procedures, and interviewed the Radioactive Materials Section Supervisor and the other SS&D reviewers, and verified the use of regulations, conditions, and inspections to enforce commitments made in the applications.

4.2.1 Technical Staffing and Training

The Radioactive Materials Section Supervisor and the lead license reviewer for medical licensing conduct the SS&D reviews. Dependent upon whether a product’s intended use is industrial or medical, one serves as primary reviewer while the other serves as concurrence reviewer. Both individuals sign the registry sheet and both have attended the SS&D workshops sponsored by NRC. Both individuals have several years experience reviewing radioactive materials license and SS&D applications. The Radioactive Materials Section Supervisor is committed to maintaining a high degree of quality in their SS&D reviews and related that two more staff members will be attending the next SS&D workshop scheduled for September 22 - 26, 2003. If issues require review pertaining to engineering principles, the SS&D reviewers refer their questions to the staff professional engineer. The team determined that the reviewers have sufficient technical training required for SS&D reviews.

4.2.2 Technical Quality of the Product Evaluation Program

During the review period, 10 SS&D certificates were issued by the Office. Three new and two amended certificates, completed by both SS&D reviewers, addressing byproduct radioactive material were evaluated

for this review. The remaining certificates authorized the use of naturally occurring or accelerator produced radioactive materials (NARM) sources and devices. The SS&D certificates evaluated by the review team are listed with case-specific comments in Appendix F.

Analyses of the files and interviews with staff confirmed that the Office follows the recommended guidance from the NRC SS&D training workshops and NUREG-1556, Volume 3, issued in July 1998. The appropriate review checklist from NUREG-1556, Volume 3, Appendix C, were used to assure that relevant materials had been submitted and reviewed. The checklists were retained in the registration files. All pertinent American National Standards Institute/Health Physics Society standards, Regulatory Guides, and applicable references were confirmed to be available and were used when performing SS&D reviews.

Registrations clearly summarized the product evaluations to provide license reviewers with adequate information to license the possession and use of the products. Deficiency letters clearly stated regulatory positions and all health and safety issues were properly addressed. The review team determined that the product evaluations were thorough, complete, consistent, of acceptable technical quality, and adequately addressed the integrity of the products during use and in the event of an accident.

Of the registration files reviewed, all were found to contain all correspondence, photographs, engineering drawings, radiation profiles, and results of tests conducted by the applicant. As previously noted, the Office has the ability to refer engineering issues to a staff professional engineer to verify product integrity and design parameters. Several of the registration files include memorandums from the staff professional engineer documenting detailed engineering examinations.

4.2.3 Evaluation of Defects and Incidents Regarding SS&Ds

Although not reported in the questionnaire, one incident involving a device related to an SS&D registration issued by the Office was found in NMED by the review team, as indicated in Appendix E. The team determined that the incident was handled appropriately, and that the root cause was properly determined. No revision to the SS&D's safety evaluation sheet was necessary.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Sealed Source and Device Evaluation Program, was satisfactory.

4.3 Low-Level Radioactive Waste Disposal Program

In conducting the IMPEP review, the team used five sub-indicators to evaluate the Office's performance regarding its low-level radioactive waste (LLRW) disposal program. These indicators include: (1) Technical Staffing and Training; (2) Status of the Low-Level Radioactive Waste Disposal Inspection Program; (3) Technical Quality of Inspections; (4) Technical Quality of Licensing Actions; and (5) Response to Incidents and Allegations. The results of the LLRW disposal program review will be discussed under each of these sub-indicators.

The Waste Management Section currently licenses US Ecology, Inc. (USE) to receive, handle, process, store, and dispose of LLRW at the Hanford site.

4.3.1 Technical Staffing and Training

The Waste Management Section currently has nine full-time and/or part-time staff members with a total staffing level of 4.65 FTE. The LLRW program is also supported by other Sections within the Office and by U.S. Department of Energy (DOE) contractors. The staff currently supporting the LLRW program include the Waste Management Section Supervisor, an administrative assistant, and staff with diversified backgrounds in health physics, nuclear engineering, hydrogeology, geochemistry, geotechnical engineering, mechanical engineering, and civil engineering. Since the last review in 1999, four staff associated with LLRW program left the Waste Management Section and have been reassigned to support other activities within the Office. An experienced staff member was promoted to Section Supervisor. The Section hired a new full staff member to conduct LLRW inspections. The review team noted that the current staffing level is approximately two FTE lower than at the previous review. The staff reduction is related to completion of the work associated with the Environmental Impact Statement (EIS) development activities. The team determined that the current staffing level is adequate to maintain the quality and performance of the LLRW program.

The Waste Management Section has a documented training and qualification program for staff to perform licensing, inspection, and investigation for LLRW activities. The Section has an established procedure for staff training consistent with the NRC/OAS Joint Working Group Report and NRC IMC 1246. The Waste Management Section Supervisor has established plans for new staff training and for staff assigned to carry out new duties.

The review team reviewed the training and qualification records of the staff and found them up-to-date and complete. The review team determined that most of the staff attended the required training and recommended training courses in accordance with Office requirements and consistent with NRC IMC 1246. Based on interviews with the professional and administrative staff and an examination of staff qualifications, duties, and functions, the review team concluded that the LLRW staff was highly qualified with sufficient training to carry out regulatory duties regarding licensed operations at the USE facility.

4.3.2 Status of Low-Level Radioactive Waste Disposal Inspection Program

The disposal site is inspected annually as prescribed in NRC IMC 2800. Annual inspections are completed over the course of the year using partial inspections, with each partial inspection focusing on a different area. In addition to the annual inspections, the Waste Management Section onsite representative performs routine (e.g., monthly) inspections of the site looking at a shorter list of site requirements. The review team confirmed the frequency of inspections through a review of inspection report files, accompanying Waste Management Section inspectors on July 29, 2003 at the Hanford facility (see Appendix C), and interviews with the inspectors.

The review team evaluated the Office's capability for maintaining and retrieving data on the status of inspections. The Waste Management Section Supervisor uses a spreadsheet to track the status of inspections. This spreadsheet lists the portion of the annual inspection, the date of last inspection, and the inspector assigned to each portion of the annual inspection. A copy of this spreadsheet was placed in the annual inspection files for 2000, 2001, and 2002. The review team also reviewed the Section Supervisor's working copy of the spreadsheet and concluded that this tool was appropriate for tracking the status of LLRW inspections.

The review team found that inspection findings are communicated to the licensee in a timely manner. As indicated in Section 3.2 above, the Waste Management Section issues inspection findings to the licensee

using a form similar to NRC's Form 591, which is typically issued onsite upon completion of an inspection, or included in a notice of correction letter. The review team determined that these forms were issued by the Waste Management Section within 30 days of the inspection and in many cases at the conclusion of the onsite inspection.

4.3.3 Technical Quality of Inspections

The Waste Management Section inspection procedures detail the frequency of inspections, inspection preparation requirements, and inspection reporting requirements, as well as contain the checklist of licensing requirements. The procedures also include appropriate forms and sample letters for documenting findings. The onsite inspector maintains a set of more specific inspection procedures.

The findings from the inspector accompaniments conducted by the review team, as well as staff interviews and a review of inspection files, indicate that Office inspection findings were well documented and supported. The review team found that the Waste Management Section monthly and annual inspections were thorough, technically accurate, complete, consistent, and of high quality with sufficient documentation to ensure that the licensee's performance with respect to protecting health and safety was acceptable. A review of the completed inspection reports show that inspections are complete and reviewed promptly by the Waste Management Section Supervisor. The review team found that follow-up inspections addressed previously identified open items and past violations. An annual summary is provided in each file identifying open items for the year and whether or not they were closed. The files contain the inspection checklist, field notes, notices to the licensee, and some digital photographs of the site. Onsite files include information on waste generators, weekly summary of shipments, fence-line surveys performed by the inspector, and waste container inspections. The review team also determined that supervisory accompaniments of each onsite inspector were completed annually.

On July 28, 2003, review team members accompanied two Waste Management Section inspectors at USE's facility as indicated in Appendix C. During the accompaniments, the inspectors demonstrated appropriate performance-based inspection techniques and knowledge of the regulations. The inspectors were well prepared and thorough in their review of the licensee's radiation safety program. The inspections were adequate to assess radiological health and safety at the licensed facility.

4.3.4 Technical Quality of Licensing Actions

The USE license establishes regulatory conditions and procedures that must be complied with regarding waste acceptance, site operation, and environmental monitoring. The USE license has been in timely renewal since January 1997. The Waste Management Section has completed its review of the site closure plan. However, a decision on the license renewal is pending completion of an EIS that will consider various options for closure of the site. The EIS was initiated under the provisions of the State Environmental Policy Act (SEPA) and is tentatively scheduled for completion by the end of 2003.

SEPA requires an environmental review for actions potentially having a significant adverse environmental impact. A significance determination was issued by the State on February 14, 1997. As a result, the Department of Health and the Department of Ecology jointly decided to prepare an EIS. Consequently, the Waste Management Section decided to forego renewal of the operating license until completion of the EIS. The State initiated the EIS process by conducting public scoping meetings in Seattle, Spokane, and Richland, Washington, during the spring of 1997. The State issued a draft EIS on September 13, 2000. The State received significant comments and concerns from the public and stakeholders on the draft EIS. These comments and concerns are being addressed in preparing the final EIS.

The review team reviewed the draft EIS, environmental monitoring data, facility closure and stabilization plan, and technical evaluation reports and interviewed most of the staff involved in the preparation of these documents. The team found that these documents were thorough, complete, consistent, and of acceptable technical quality.

The team and the Waste Management Section staff discussed performance assessment approaches and methodologies used in demonstration of compliance with State dose criteria. The review team noted NRC staff's recommended performance assessment methodology and approaches documented in NUREG-1573, "Performance Assessment Methodology for LLRW Disposal Facilities - Recommendations of NRC's Performance Assessment Working Group," and provided a copy to the Office for reference.

The review team reviewed the four license amendments to the USE license issued by the Waste Management Section during the review period as indicated in Appendix D. These amendments involved revisions to facility standard manual, Hanford site operation procedures, action levels, and frequency of audits for vendors, as well as administrative changes. The review team found that the licensing actions were thorough, complete, consistent, and of high quality, with health and safety issues properly addressed.

4.3.5 Response to Incidents and Allegations

The review team found that the Waste Management Section has procedures in place for handling incidents and allegations. The procedures for handling incidents include information on what constitutes an incident, appropriate documentation of the incident, reference to NRC abnormal occurrences criteria for States, and tracking the incident by management. The procedures for handling allegations include information on protecting the identity of the allegor, documentation of the allegation, and tracking the allegation by management.

During the review period, there were no incidents and one allegation pertaining to the LLRW program. The team found that actions taken by the Waste Management Section in response to the allegation were appropriate, well coordinated, timely, and the level of effort commensurate with concerns raised.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Low-Level Radioactive Waste Disposal Program, was satisfactory.

4.4 Uranium Recovery Program

In conducting this IMPEP review, five sub-indicators were used to evaluate the Waste Management Section's performance regarding its uranium recovery program. These indicators include: (1) Technical Staffing and Training; (2) Status of Uranium Recovery Inspection Program; (3) Technical Quality of Inspections; (4) Technical Quality of Licensing Actions; and (5) Response to Incidents and Allegations. The results of the uranium recovery program review will be discussed under each of these sub-indicators.

The Western Nuclear, Inc., Sherwood Project, completed remediation at the end of the last review period in 1999, and the license was terminated in March 2000. The NRC reviewed the Office's license termination process for the Sherwood site pursuant to 10 CFR 150.15a(a) and Section 274(c) of the Atomic Energy Act of 1954, as amended. By letter dated December 27, 2000, the NRC concurred with the Office's Sherwood Project license termination. Consequently, the team did not review the Sherwood Project during this review.

At the time of this review, the Waste Management Section had one licensed conventional mill site, Dawn Mining Company (Dawn). This site was placed in shutdown and initiated reclamation and decommissioning activities in 2001.

4.4.1 Technical Staffing and Training

In reviewing this sub-indicator, the review team evaluated the uranium recovery staffing level, the technical qualifications of the staff, staff training, and staff turnover. This evaluation included a general examination of staff training records and qualifications of the reviewers assigned to perform reviews of the surface water hydrology and erosion protection aspects of site closure.

During the review period, there was no staff turnover in the uranium recovery program. Based on discussions with management, no turnover was expected in the immediate future. Various members of the Waste Management Section staff participated in inspections and licensing activities at the Dawn site. The level of participation of each staff member varied based on individual qualifications and workload. Currently, the Waste Management Section is training a new staff member who had extensive radiation safety expertise at an uranium mill.

The review team found that staff had adequate health physics and engineering backgrounds. Much of the staff's expertise was gained through oversight of the Dawn and Sherwood facilities. The expertise of Waste Management Section staff was further supplemented by the use of professional engineers and technical experts from other Federal and State agencies in the areas of health physics and engineering. The review team concluded that the qualifications of the inspectors and reviewers were sufficient to regulate the Dawn site.

4.4.2 Status of the Uranium Recovery Inspection Program

The review team focused on several factors in evaluating the Waste Management Section's performance for this sub-indicator, including inspection frequency, overdue inspections, and timely issuance of inspection reports. The review team's evaluation was based on a review of the questionnaire response, the uranium recovery inspection schedule, inspection casework files, and interviews with inspection staff and management.

During Dawn's demolition stage, partial inspections were performed approximately every week, with each inspection focusing on a different inspection area. The review team determined that all inspection areas were covered at least once per year and included construction, decommissioning, and environmental reviews. Additional inspections were conducted in areas where repetitive deficiencies were identified. During the last three years, Waste Management Section staff conducted 23 mill inspections of the Dawn site in three specific areas: (1) mill site compliance, (2) mill demolition, and (3) water treatment facility operations.

Based on the team's review of inspection files, it was determined that the Waste Management Section's inspection frequency was more frequent than the recommendations in NRC IMC 2801, "Uranium Mill and 11e.(2) Byproduct Material Disposal Site and Facility Inspection Program." As a result of frequent inspections, the review team concluded that there were no overdue inspections, and Waste Management Section's inspection practices were adequate.

The team reviewed inspection casework files and noted that inspection reports were issued within 30 days of the inspection. Appropriate follow-up actions were conducted when items of noncompliance were

identified. Inspection casework files were easily retrieved and accessible. The inspection reports were reviewed by management and received appropriate attention.

4.4.3 Technical Quality of Inspections

In reviewing this sub-indicator, the review team examined inspection files, inspection reports, and enforcement documentation for the Dawn site as identified in Appendix C. The review included most of the inspections conducted at Dawn during the review period. The review team noted that inspections covered a range of uranium recovery inspection activities associated with reclamation operations at Dawn. Inspectors and management were interviewed to assess the adequacy of their preparation for the inspections, the depth and content of the inspections, and the appropriateness of inspection findings.

The team noted that the Waste Management Section's inspection program and procedures were consistent with NRC Inspection Procedure 87654, "Uranium Mill, In-Situ Leach Uranium Recovery, 11e.(2) Byproduct Material Disposal Site Decommissioning Inspection." Inspectors typically and appropriately observed licensee operations and made independent measurements during inspections, as appropriate. Inspectors used relevant procedures with mill-specific checklists, previous inspection reports, and other background information for implementing their inspections. Inspections covered an appropriate number of functional areas. The review team found that the inspection reports provided appropriate depth of coverage, addressed license conditions and the regulations, and demonstrated that the inspectors pursued corrective actions for items of noncompliance that were identified.

During the review period, the uranium recovery inspectors were accompanied by their supervisors annually. These accompaniments were adequately documented. The review team found that the Waste Management Section Supervisor routinely met with the uranium recovery inspectors to review inspection findings and to plan follow-up strategy regarding corrective actions.

4.4.4 Technical Quality of Licensing

The Waste Management Section uses a team approach to review various aspects of a reclamation plan and other licensing actions. Any expertise that is not available in the Waste Management Section is supplemented through the use of other State agencies or various engineer and professional consultants.

The team evaluated one license amendment that was issued to Dawn in April 2001, identified in Appendix D. Through review of the Dawn licensing files and discussions with the Waste Management Section staff and the Section Supervisor, the review team determined that this licensing action was adequately evaluated and documented and that the license conditions were clear and well-written.

In addition to the one amendment, the team noted that a number of changes to procedures tied to the Dawn license were reviewed and approved in writing by the Waste Management Section in accordance with the license. Based on a review of a sampling of these changes, the review team determined that these actions were adequately reviewed and documented. The team also noted that the Waste Management Section updated their inspection checklists to reflect the approved procedural changes.

During the team's review of the Dawn license, it was noted that Condition No. 18 requires, in part, that the licensee notify the Department in writing 30 days prior to any change in their business structure. This license condition provides the Department with the opportunity to evaluate if changes in the licensee's business structure could adversely affect the licensee's ability to continue to provide adequate

decommissioning funding. Normally, a licensee is required to obtain regulatory approval for changes in ownership. However, a licensee could restructure their corporate structures and/or subsidiaries under the same ownership without knowledge of the regulatory agency. This license condition gives the Office the enhanced ability to monitor changes in business structure for potential adverse impacts on its financial and regulatory responsibilities. The review team recommends that the Department's use of this license condition be found a good practice.

4.4.5 Response to Incidents and Allegations

For this sub-indicator, the review team examined the Waste Management Section's procedure for handling uranium recovery incidents and allegations and found them acceptable.

During the review period, Waste Management Section responded to one allegation in the uranium recovery area. Based on a review of the casework file, the team determined that the Waste Management Section promptly responded to the allegation. There were no reportable incidents during the review period.

Based on the IMPEP evaluation criteria, the review team recommended and the MRB agreed that Washington's performance with respect to the indicator, Uranium Recovery Program, was satisfactory.

5.0 SUMMARY

As noted in Sections 3 and 4 above, the review team and the MRB found Washington's performance to be satisfactory for all nine performance indicators. Accordingly, the review team recommended and the MRB concurred in finding the Washington Agreement State program to be adequate to protect public health and safety and compatible with NRC's program. Based on the results of the current IMPEP review, it was agreed that the next full review should be in approximately four years.

Below is the recommendation, as mentioned earlier in the report, for evaluation and implementation, as appropriate, by the State.

RECOMMENDATION:

The review team recommends that the Office develop and implement a plan to adequately and consistently address the financial assurance for decommissioning portions of material license regulations. (Section 3.4)

GOOD PRACTICES:

1. The Office has an outreach program for providing emergency response training to first responders, hospital staff, and local government health agencies for response to radiological events including incidents resulting from terrorist activities. The training includes the use of actual radiation sources and realistic scenarios, and has proved to be an effective tool for augmenting the capability of first responders. (Section 3.1)
2. During the team's review of the Dawn license, it was noted that Condition No. 18 requires, in part, that the licensee notify the Department in writing 30 days prior to any change in their business structure. This license condition provides the Department with the opportunity to evaluate if changes in the licensee's business structure could adversely affect the licensee's ability to continue to provide adequate decommissioning funding. This license condition gives the Office the

enhanced ability to monitor changes in business structure for potential adverse impacts on its financial and regulatory responsibilities. (Section 4.4.4)

LIST OF APPENDICES AND ATTACHMENTS

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Appendix F	Sealed Source and Device Casework Reviews
Attachment	October 30, 2003 Letter from Janice Adair, Acting Assistant Secretary, Washington Department of Health

APPENDIX A

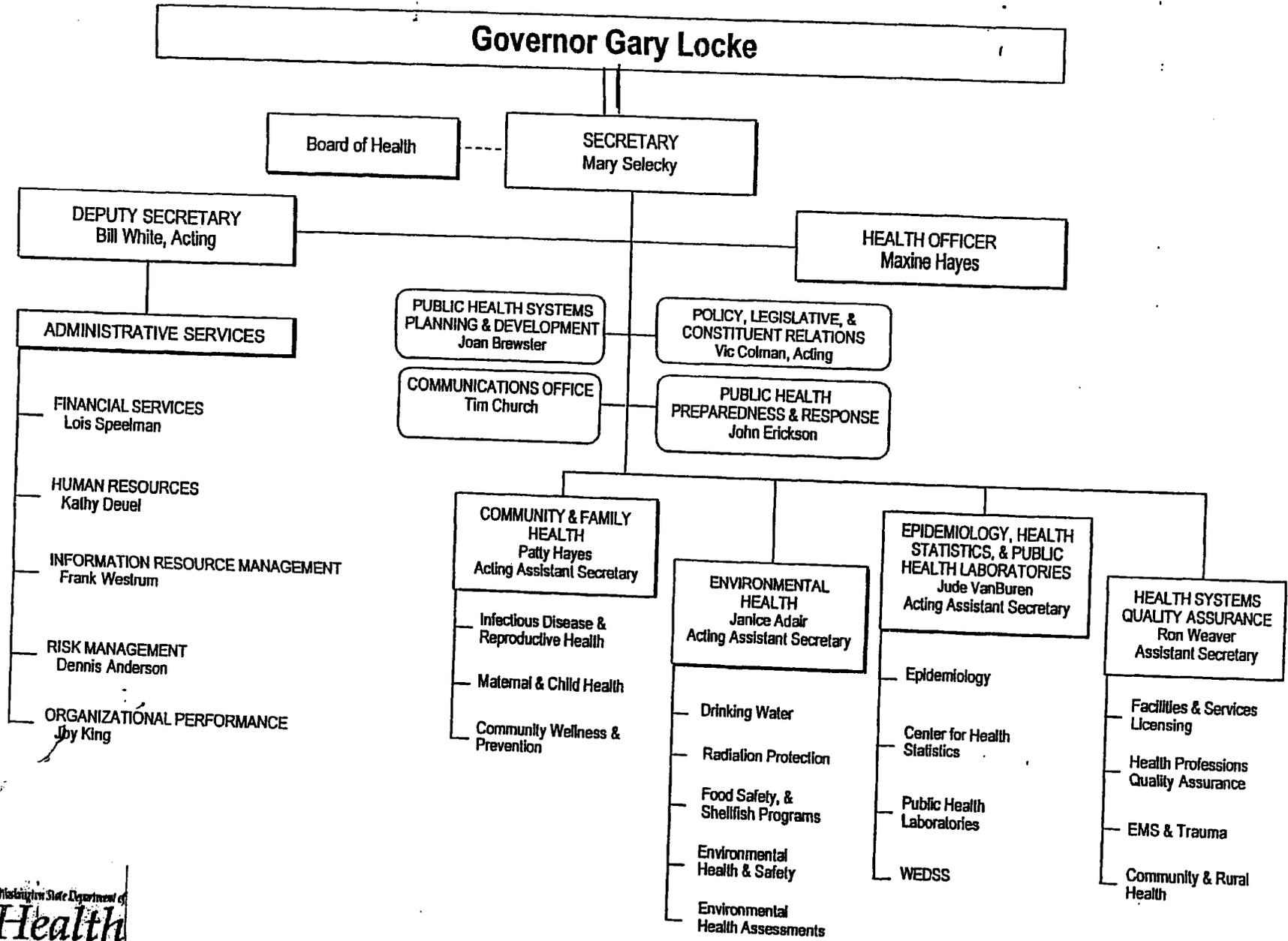
IMPEP REVIEW TEAM MEMBERS

Name	Area of Responsibility
Duncan White, Region I	Team Leader Status of Materials Inspection Program Technical Quality of Inspections
Vivian Campbell, Region IV	Technical Staffing and Training Technical Quality of Licensing Actions
John Zabko, STP	Response to Incidents and Allegations Legislation and Program Elements Required for Compatibility
Boby Abu-Eid, NMSS Robert Johnson, NMSS	Low-Level Radioactive Waste Disposal Program
Louis Carson, Region IV	Uranium Recovery Program
David Fogle, State of Texas	Technical Quality of Licensing Actions Sealed Source and Device Evaluation Program

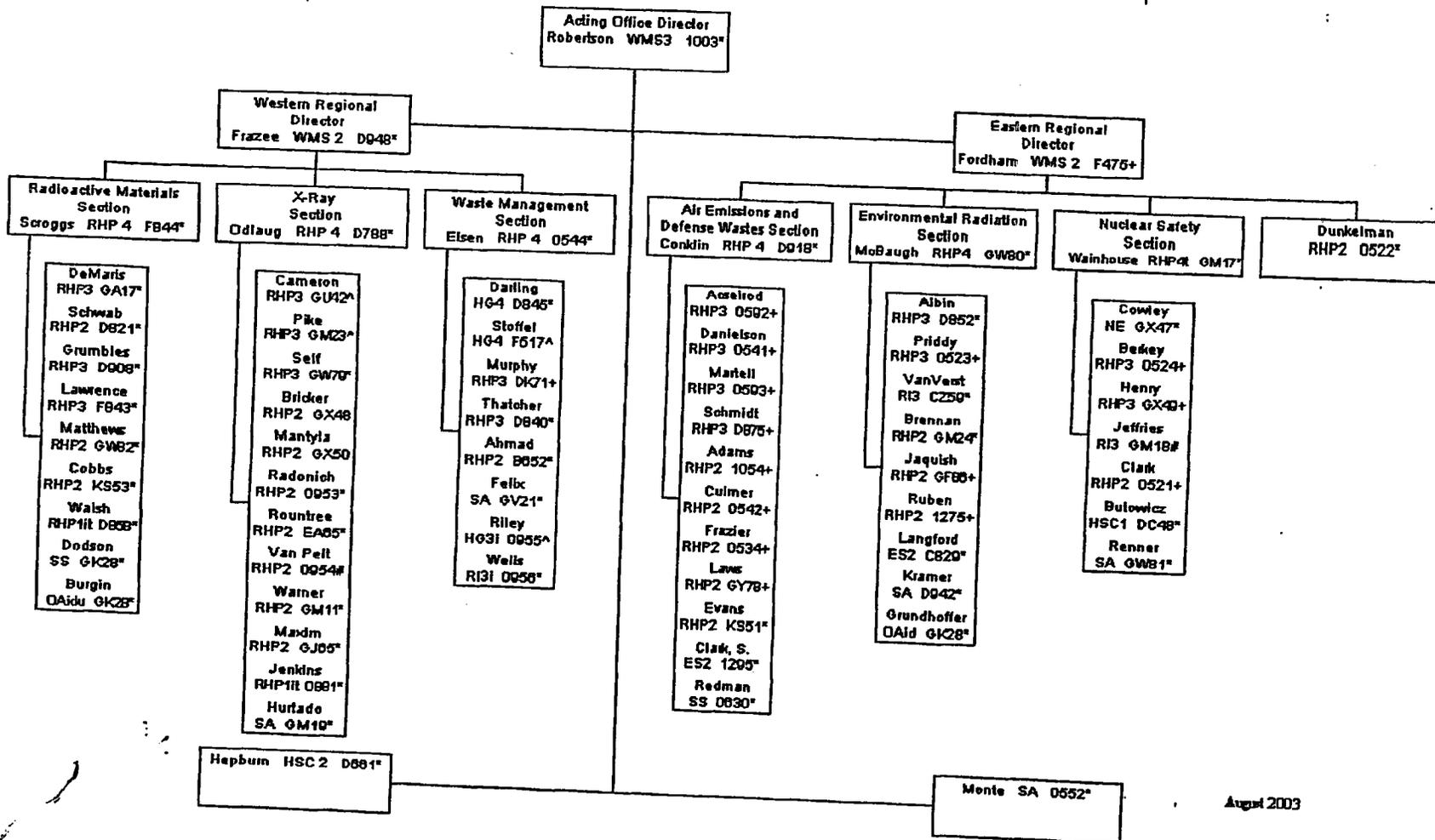
APPENDIX B

WASHINGTON ORGANIZATION CHARTS

ML032750719



OFFICE OF RADIATION PROTECTION



August 2003

APPENDIX C

INSPECTION CASEWORK REVIEWS

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

File No.: 1

Licensee: International Inspection
Location: Seattle, WA
License Type: Industrial Radiography
Inspection Date: 7/24/00

License No.: WN-IR066
Inspection Type: Initial, Unannounced
Priority: 1
Inspector: AS

File No.: 2

Licensee: Boeing Company
Location: Seattle, WA
License Type: Research and Development Broad Scope
Inspection Date: 12/10/02

License No.: WN-I005-1
Inspection Type: Routine, Announced
Priority: 2
Inspector: AG

File No.: 3

Licensee: University of Washington
Location: Seattle, WA
License Type: Medical Broad Scope
Inspection Dates: 11/13-16/00

License No.: WN-C001
Inspection Type: Routine, Unannounced
Priority: 1
Inspectors: RV, MR, LW

Comment:

The inspection report was issued 80 days after completion of inspection.

File No.: 4

Licensee: River Basin Diagnostics
Location: Kennewick, WA
License Type: Nuclear Pharmacy
Inspection Date: 10/29/01

License No.: WN-NP006-01
Inspection Type: Routine, Announced
Priority: 1
Inspector: MR

File No.: 5

Licensee: Mason General Hospital
Location: Shelton, WA
License Type: Medical Institution
Inspection Date: 3/27/03

License No.: WN-M0214-01
Inspection Type: Routine, Unannounced
Priority: 5
Inspectors: SM, MR

File No.: 6

Licensee: Genelex Corporation
Location: Redmond, WA
License Type: Manufacturing and Distribution
Inspection Date: 1/30/01

License No.: WN-L0130
Inspection Type: Routine, Announced
Priority: 3
Inspector: LW

File No.: 7

Licensee: Cardinal Health 414, Inc.
Location: Seattle, WA
License Type: Nuclear Pharmacy
Inspection Date: 4/18/02

License No.: WN-NP003-01
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: CD

Comment:

No reply from licensee to Notice of Violation in the docket file.

File No.: 8

Licensee: Century Geophysical Corporation
Location: Centralia, WA
License Type: Well Logging
Inspection Date: 9/12/02

NRC License No.: 35-04017-04
Inspection Type: Reciprocity, Announced
Priority: 3
Inspector: AS

Comment:

No inspection correspondence issued to licensee.

File No.: 9

Licensee: Nucletron Corporation
Location: Seattle, WA
License Type: Service (Source Exchange)
Inspection Date: 1/11/01

MD License No.: 27-035-01
Inspection Type: Reciprocity, Announced
Priority: 1
Inspector: AG

File No.: 10

Licensee: Lakeside Industries
Location: Issaquan, WA
License Type: Portable Gauge
Inspection Date: 7/7-15/03

License No.: WN-I0233-01
Inspection Type: Routine, Unannounced
Priority: 5
Inspectors: KS, CL

File No.: 11

Licensee: ICOS Corporation
Location: Bothell, WA
License Type: Research and Development
Inspection Date: 5/20/03

License No.: WN-L0142-1
Inspection Type: Routine, Announced
Priority: 5
Inspector: KS

File No.: 12

Licensee: Zipper Zeman Associates
Location: Lynnwood, WA
License Type: Portable Gauge
Inspection Date: 5/1/00

License No.: WN-I0507-1
Inspection Type: Routine, Unannounced
Priority: 5
Inspector: PW

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File No.: 13

Licensee: Deaconess Medical Center
Location: Spokane, WA
License Type: Gamma Stereotactic Radiosurgery
Inspection Date: 10/2/02

License No.: WN-M0237-1
Inspection Type: Initial, Unannounced
Priority: 1
Inspector: CD

File No.: 14

Licensee: Cats Exclusive Veterinary Hospital
Location: Shoreline, WA
License Type: Veterinary
Inspection Date: 1/8/03

License No.: WN-L0158-1
Inspection Type: Routine, Unannounced
Priority: 5
Inspector: MR

File No.: 15

Licensee: Swedish Medical Center
Location: Seattle, WA
License Type: Medical Broad Scope
Inspection Date: 9/24/01

License No.: WN-M008-1
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: MR

File No.: 16

Licensee: Geotechnical Testing Laboratory
Location: Olympia, WA
License Type: Portable Gauge
Inspection Date: 5/1/03

License No.: WN-I0271-1
Inspection Type: Follow-up, Unannounced
Priority: 5
Inspector: SM

File No.: 17

Licensee: Evergreen State College
Location: Olympia, WA
License Type: Research and Development
Inspection Date: 5/7/03

License No.: WN-C-019-1
Inspection Type: Routine, Announced
Priority: 5
Inspector: SM

File No.: 18

Licensee: Prolinx, Inc.
Location: Bothell, WA
License Type: Research and Development
Inspection Date: 2/13/03

License No.: WN-L0171-1
Inspection Type: Special, Announced
Priority: 5
Inspector: AG

File No.: 19

Licensee: ATG Richland Corporation
Location: Richland, WA
License Type: Waste Processing
Inspection Date: CY2000

License No.: WN-I0393-1
Inspection Type: Routine, Unannounced
Priority: 1
Inspector: EF

File No.: 20

Licensee: ATG Richland Corporation
Location: Richland, WA
License Type: Mixed Waste Processing
Inspection Date: 12/99-6/00

License No.: WN-I0508-1
Inspection Type: Initial, Announced
Priority: 1
Inspector: EF

File No.: 21

Licensee: Dawn Mining Company
Location: Ford, WA
License Type: Source Material
Inspection Dates: Various (3/00 - 8/03)

License No.: WN-IO43-2
Inspection Type: Routine, Announced
Priority: 1
Inspectors: EF, DS, ME

File No.: 22

Licensee: U.S. Ecology
Location: Hanford, WA
License Type: Waste Disposal
Inspection Dates: Various (1/00 - 6/03)

License No.: WN-I019-2
Inspection Type: Routine, Announced
Priority: 1
Inspectors: Waste Management Section

INSPECTOR ACCOMPANIMENTS

The following inspection accompaniments were made as part of the onsite IMPEP review:

Accompaniment No.: 1

Licensee: Geo Group Northwest
Location: Bellevue, WA
License Type: Portable Gauge
Inspection Date: 8/4/03

License No.: WN-I0366-1
Inspection Type: Routine, Unannounced
Priority: 5
Inspector: PW

Accompaniment No.: 2

Licensee: Anawah Corporation
Location: Seattle, WA
License Type: Research and Development
Inspection Date: 8/5/03

License No.: WN-L0200-1
Inspection Type: Routine, Announced
Priority: 5
Inspector: KS

Accompaniment No.: 3

Licensee: Harrison Memorial Hospital
Location: Bremerton, WA
License Type: Medical Institution, QMP required
Inspection Date: 8/6/03

License No.: WN-M0168-1
Inspection Type: Routine, Unannounced
Priority: 3
Inspector: SM

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Accompaniment No.: 4
Licensee: ICON Materials
Location: Auburn, WA
License Type: Portable Gauge
Inspection Date: 8/7/03

License No.: WN-I0207-1
Inspection Type: Routine, Announced
Priority: 5
Inspector: CL

Comment:
Inspector did not interview authorized users.

Accompaniment No.: 5
Licensee: U.S. Ecology
Location: Hanford, WA
License Type: Waste Disposal
Inspection Date: 7/28/03

License No.: WN-I019-2
Inspection Type: Routine, Announced
Priority: 1
Inspectors: SM, ME

APPENDIX D

LICENSE CASEWORK REVIEWS

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

File No.: 1

Licensee: Cats Exclusive Veterinary Hospital, Inc.

Location: Shoreline, WA

License Type: Veterinary

Date Issued: 6/26/00

License No.: WN-L0158-1

Amendment No.: 3

Type of Action: Amendment

License Reviewer: LW

Comment:

Unreviewed correspondence, dated July 2000, detailing changes to the ventilation system was found by review team. The license reviewer stated that the change in facilities was significant enough to warrant a license amendment.

File No.: 2

Licensee: Deaconess Medical Center Gamma Knife

Location: Spokane, WA

License Type: Gamma Knife

Date Issued: 4/24/02

License No.: WN-M0237-1

Amendment No.: NA

Type of Action: New

License Reviewer: CD

Comment:

License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.

File No.: 3

Licensee: Fred Hutchinson Cancer Research Center

Location: Seattle, WA

License Type: Broad Scope Medical

Date Issued: 12/11/00

License No.: WN-L042-1

Amendment No.: 39

Type of Action: Renewal

License Reviewer: LW

File No.: 4

Licensee: James Eisenhart

Location: Battle Ground, WA

License Type: Service

Date Issued: 11/6/02

License No.: WN-L0144-1

Amendment No.: 3

Type of Action: Termination

License Reviewer: AS

File No.: 5

Licensee: Keymaster Technologies, Inc.

Location: Kennewick, WA

License Type: Manufacturing and Distribution

Date Issued: 5/11/00

License No.: WN-I0282-1

Amendment No.: 27

Type of Action: Renewal

License Reviewer: AS

File No.: 6

Licensee: Mediquest Therapeutics, Inc.
Location: Seattle, WA
License Type: Research and Development
Date Issued: 9/8/03

License No.: WN-L0181-1
Amendment No.: 3
Type of Action: Renewal
License Reviewer: KS

File No.: 7

Licensee: Professional Service Industries, Inc.
Location: Seattle, WA
License Type: Industrial Radiography
Date Issued: 9/13/02

License No.: WN-IR021-1
Amendment No.: 44
Type of Action: Amendment
License Reviewer: AS

Comments:

- a) License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.
- b) State regulations allow the use of optically stimulated luminescence (OSL) dosimetry. However, a standard license condition contained in this license limits the licensee to only film or thermoluminescent dosimetry.

File No.: 8

Licensee: University of Washington - Harborview Gamma Knife
Location: Seattle, WA
License Type: Gamma Knife
Date Issued: 2/17/00

License No.: WN-M0219-1
Amendment No.: NA
Type of Action: New
License Reviewer: LW

File No.: 9

Licensee: Construction Testing
Location: Tacoma, WA
License Type: Portable Gauge
Date Issued: 8/10/01

License No.: WN-L092-1
Amendment No.: 14
Type of Action: Renewal
License Reviewer: AS

Comment:

License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.

File No.: 10

Licensee: University of Washington
Location: Seattle, WA
License Type: Medical Broad Scope
Date Issued: 8/26/99

License No.: WN-C001-1
Amendment No.: 47
Type of Action: Renewal
License Reviewer: LW

Comment:

The licensee submitted a decommissioning funding plan. However, the plan does not contain cost estimates on which to base funding amounts for closure. The licensee has also not supplied the Office with a Statement of Intent.

File No.: 11

Licensee: University of Washington
Location: Seattle, WA
License Type: Medical Broad Scope
Date Issued: 1/6/03

License No.: WN-C001-1
Amendment No.: 50
Type of Action: Amendment
License Reviewer: LW

File No.: 12

Licensee: Longview Inspection
Location: Everett, WA
License Type: Industrial Radiography
Date Issued: 4/29/02

License No.: WN-IR067-1
Amendment No.: NA
Type of Action: New
License Reviewer: AS

Comment:

License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.

File No.: 13

Licensee: Swedish Medical Center
Location: Seattle, WA
License Type: Medical Broad Scope
Date Issued: 3/6/00

License No.: WN-M008-1
Amendment No.: 47
Type of Action: Renewal
License Reviewer: CD

Comment:

License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.

File No.: 14

Licensee: Cardiovascular Consultants, Inc.
Location: Federal Way, WA
License Type: Nuclear Cardiology
Date Issued: 12/27/01

License No.: WN-M0211-1
Amendment No.: 3
Type of Action: Amendment
License Reviewer: CD

File No.: 15

Licensee: Washington State University
Location: Pullman, WA
License Type: Academic Broad Scope
Date Issued: 6/21/02

License No.: WN-C003-1
Amendment No.: 56
Type of Action: Renewal
License Reviewer: LW

File No.: 16

Licensee: Washington State University
Location: Pullman, WA
License Type: Academic Broad Scope
Date Issued: 2/10/03

License No.: WN-C002-1
Amendment No.: 57
Type of Action: Amendment
License Reviewer: AG

Comment:

Statement of Intent may be invalid based on improper signatory authority.

File No.: 17

Licensee: River Basin Diagnostics
Location: Kennewick, WA
License Type: Nuclear Pharmacy
Date Issued: 10/30/01

License No.: WN-NP006-1
Amendment No.: 5
Type of Action: Renewal
License Reviewer: CD

Comment:

License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.

File No.: 18

Licensee: Cardinal Health 412, Inc.
Location: Spokane, WA
License Type: Nuclear Pharmacy
Date Issued: 4/14/03

License No.: WN-NP008-1
Amendment No.: 9
Type of Action: Amendment
License Reviewer: CD

Comment:

License authorizes radioactive material in form and quantity that exceeds limitations for requiring financial assurance for decommissioning. However, the licensee did not submit a decommissioning funding plan or posted the required surety.

File No.: 19

Licensee: Northwest Hospital
Location: Seattle, WA
License Type: Medical Institution
Date Issued: 1/28/02

License No.: WN-M004-1
Amendment No.: 52
Type of Action: Amendment
License Reviewer: CD

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File No.: 20
Licensee: STL Richland
Location: Richland, WA
License Type: Research and Development
Date Issued: 8/4/03

License No.: WN-L0146-1
Amendment No.: 9
Type of Action: Amendment
License Reviewer: AG

File No.: 21
Licensee: The Boeing Company
Location: Seattle, WA
License Type: Industrial Broad Scope
Date Issued: 4/17/01

License No.: WN-I005-1
Amendment No.: 28
Type of Action: Renewal
License Reviewer: AS

File No.: 22
Licensee: ATC Associates, Inc.
Location: Wenatchee, WA
License Type: X-Ray Fluorescence
Date Issued: 5/28/02

License No.: WN-I0532-1
Amendment No.: NA
Type of Action: New
License Reviewer: PW

File No.: 23
Licensee: ATG Richland Corporation
Location: Richland, WA
License Type: Waste Processing
Date Issued: 6/13/02

License No.: WN-I0393-1
Amendment No.: 19
Type of Action: Amendment
License Reviewer: EF

File No.: 24
Licensee: ATG Richland Corporation
Location: Richland, WA
License Type: Mixed Waste Processing
Date Issued: 10/12/01

License No.: WN-I0508-1
Amendment No.: 16
Type of Action: Amendment
License Reviewer: EF

File No.: 25
Licensee: Dawn Mining Co.
Location: Ford, WA
License Type: Source Material
Date Issued: 4/11/01

License No.: WN-I043-2
Amendment No.: 23
Type of Action: Amendment
License Reviewers: Waste Management Section

File No.: 26
Licensee: U.S. Ecology
Location: Hanford, WA
License Type: Waste Disposal
Date Issued: Various

License No.: WN-I019-2
Amendment Nos.: 26 through 29
Type of Actions: Amendments
License Reviewers: Waste Management Section

APPENDIX E

INCIDENT CASEWORK REVIEWS

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

File No.: 1

Licensee: Swedish Medical Center
Location: Seattle, WA
Date of Incident: 5/17/01
Investigation Date: 5/17 - 24/01

Incident ID No.: NMED 010492
License No.: WN-M008-1
Type of Incident: Damaged Source
Investigation Type: Telephone, Onsite

File No.: 2

Licensee: PM Testing
Location: East Tacoma, WA
Date of Incident: 3/4/03
Investigation Dates: 3/4/03 - 7/25/03

Incident ID No.: NMED 030196
License No.: WN-IR047-1
Type of Incident: Overexposure
Investigation Type: Onsite

File No.: 3

Licensee: Transalta Centralia Mining LLC
Location: Centralia, WA
Date of Incident: 11/21/00
Investigation Date: 11/21/00 - 2/6/01

Incident ID No.: NMED 000919
License No.: WN-I0241-1
Type of Incident: Equipment Failure
Investigation Type: Telephone, Onsite

File No.: 4

Licensee: Washington Department of Transportation
Location: Yakima, WA
Date of Incident: 6/30/03
Investigation Date: 6/30/03

Incident ID No.: NMED 030650
License No.: WN-L065-1
Type of Incident: Equipment Damage
Investigation Type: Onsite

File No.: 5

Licensee: Earth Consultants Inc.
Location: Bellevue, WA
Date of Incident: 11/27/02
Investigation Date: 11/27/02 - 5/12/03

Incident ID No.: NMED 021132
License No.: WN-L061-1
Type of Incident: Stolen Material
Investigation Type: Telephone

File No.: 6

Licensee: Pacific Northwest Research Institute
Location: Yakima, WA
Date of Incident: 5/08/02
Investigation Date: 5/8/02 - 5/21/02

Incident ID No.: NMED 20506
License No.: WN-L0134-1
Type of Incident: Radioactive Material Release
Investigation Type: Onsite

File No.: 7

Licensee: Washington State University
Location: Pullman, WA
Date of Incident: 1/31/02
Investigation Date: 1/31/02 - 6/4/03

Incident ID No.: NMED 020164
License No.: WN-C003-1
Type of Incident: Leaking Source
Investigation Type: Telephone

File No.: 8

Licensee: Weyerhaeuser Technology Center
Location: Federal Way, WA
Date of Incident: 11/29/01
Investigation Date: 11/29/01 - 12/12/01

Incident ID No.: NMED 011092
License No.: WN-L083-1
Type of Incident: Leaking Source
Investigation Type: Onsite

File No.: 9

Licensee: Zipper Zeman Associates
Location: Lynnwood, WA
Date of Incident: 10/19/00
Investigation Date: 10/19/00 - 12/12/00

Incident ID No.: NMED 000875
License No.: WN-I0507-1
Type of Incident: Stolen Material
Investigation Type: Telephone

File No.: 10

Licensee: Transalta Centralia Mining LLC
Location: Centralia, WA
Date of Incident: 9/13/00
Investigation Date: 9/13/00 - 10/6/00

Incident ID No.: NMED 000697
License No.: WN-I0241-1
Type of Incident: Equipment Failure
Investigation Type: Telephone, Onsite

File No.: 11

Licensee: Pacific Technical Industries
Location: Bellevue, WA
Date of Incident: 9/27/00
Investigation Date: 9/27/00 - 12/7/00

Incident ID No.: NMED 000912
License No.: WN-IR053-1
Type of Incident: Overexposure
Investigation Type: Telephone

File No.: 12

Licensee: Professional Service Industries, Inc.
Location: Spokane, WA
Date of Incident: 9/6/00
Investigation Date: 9/6/00 - 9/8/00

Incident ID No.: NMED 020712
License No.: WN-NP008-1
Type of Incident: Transportation
Investigation Type: Telephone

File No.: 13

Licensee: Northwest Inspection, INC.
Location: Richland, WA
Date of Incident: 12/15/00
Investigation Date: 12/15/00 - 12/18/00

Incident ID No.: NMED 000936
License No.: WN-IR065-1
Type of Incident: Potential Release
Investigation Type: Telephone

File No.: 14

Licensee: Neorx Corporation

Location: Seattle, WA

Date of Incident: 5/2/00

Investigation Date: 5/2/00 - 8/09/00

Incident ID No.: NMED 000295

License No.: WN-L0114-1

Type of Incident: Overexposure

Investigation Type: Onsite

File No.: 15

Licensee: Virginia Mason Medical Center

Location: Seattle, WA

Date of Incident: 5/5/00

Investigation Date: 5/5 - 6/00

Incident ID No.: NMED 010004

License No.: WN-M048-1

Type of Incident: Radioactive Material Release

Investigation Type: Telephone

File No.: 16

Licensee: Professional Services, Inc.

Location: Spokane, WA

Date of Incident: 1/7/00

Investigation Date: 1/7/00 - 2/7/00

Incident ID No.: NMED 000022

License No.: WN-IR021-1

Type of Incident: Lost or Stolen Material

Investigation Type: Telephone

File No.: 17

Licensee: Geoengineers, Inc.

Location: Redmond, WA

Date of Incident: 10/19/99

Investigation Date: 10/19/99

Incident ID No.: NMED 990750

License No.: WN-I0204-1

Type of Incident: Damaged Source

Investigation Type: Telephone

File No.: 18

Licensee: Inspection Service, Inc.

Location: Kennewick, WA

Date of Incident: 12/19/99

Investigation Date: 12/19/99 - 6/26/00

Incident ID No.: NMED 000008

License No.: WN-IR064-1

Type of Incident: Lost Source

Investigation Type: Onsite

File No.: 19

Licensee: Transalta Centralia Mining LLC

Location: Centralia, WA

Date of Incident: 10/5/00

Investigation Date: 10/5/00 - 2/6/01

Incident ID No.: NMED 000788

License No.: WN-I0241-1

Type of Incident: Failed Equipment

Investigation Type: Onsite

File No.: 20

Licensee: EDAX, Inc. (Keymaster)

Location: Kennewick, WA

Date of Incident: 6/22/00

Investigation Date: 7/10/00

Incident ID No.: NMED 000488

License No.: WN-I0282-01

Type of Incident: Defective Equipment

Investigation Type: Telephone

APPENDIX F

SEALED SOURCE AND DEVICE CASEWORK REVIEWS

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

File No.: 1

Registry No.: WA-0653-D-106-B

Manufacturer: EDAX Portable Products Division (now Keymaster)

Date Issued: 7/24/00

SS&D Type: X-Ray Fluorescence

Model No.: MAP-4 Series

Type of Action: Amendment

Comment:

The diagram in the certificate was not updated to include the design change from a forward rubber boot to the new forward aluminum boot.

File No.: 2

Registry No.: WA-0653-D-106-B

Manufacturer: EDAX Portable Products Division (now Keymaster)

Date Issued: 10/10/00

SS&D Type: X-Ray Fluorescence

Model No.: MAP-4 Series

Type of Action: Amendment

File No.: 3

Registry No.: WA-0653-D-107-B

Manufacturer: EDAX Portable Products Division (now Keymaster)

Date Issued: 4/28/00

SS&D Type: X-Ray Fluorescence

Model No.: CT 5000 Series

Type of Action: New

Comment:

Contrary to guidance from NUREG-1556, Vol. 3, Section 10.5, no specific identical device was identified for either comparison studies or evidence of successful operational history.

File No.: 4

Registry No.: WA-653-D-108-B

Manufacturer: Keymaster Technologies, Inc.

Date Issued: 11/30/01

SS&D Type: X-Ray Fluorescence

Model No.: Benchtop Series

Type of Action: New

File No.: 5

Registry No.: WA-0510-S-127-S

Manufacturer: North American Scientific, Inc.

Date Issued: 6/30/00

SS&D Type: Medical Brachytherapy

Model No.: MED3633

Type of Action: New

Comments:

- a) SS&D reviewer, concurrence reviewer, and staff professional engineer conducted a site visit in California in support of the review of this evaluation. A great deal of information, including answers to letters of deficiency, was obtained for this evaluation during the site visit, but that information was not documented.
- b) Total maximum activity was not reported accurately with front page information. Information reported in the External Radiation Levels portion of the evaluation indicates that each sealed source may contain in excess of twice the amount reported on the front page.

ATTACHMENT

October 30, 2003 Letter from Janice Adair,
Acting Assistant Secretary, Washington Department of Health

ML033180620

ATTACHMENT

October 30, 2003 Letter from Janice Adair,
Acting Assistant Secretary, Washington Department of Health

ML033180620



STATE OF WASHINGTON
 DEPARTMENT OF HEALTH
 ENVIRONMENTAL HEALTH PROGRAMS

NewMarket Industrial Campus, Bldg 2 • P.O. Box 47820 • Olympia, Washington 98504-7820

October 30, 2003

Duncan White, CHP
 Regional State Agreements Officer
 Division of Nuclear Materials Safety
 Nuclear Regulatory Commission
 475 Allendale Road
 King of Prussia, Pennsylvania 19406-1415

RECEIVED
 REGION 1
 2003 OCT 31 AM 10:14

Dear Mr. White:

It was a pleasure to meet you during the recent review of our Office of Radiation Protection. Thank you for the opportunity to comment on the draft report of your review. My staff has provided a few technical comments, which are attached to this letter. Overall however, we are very pleased with the report and want to assure you that we are working diligently to address the one recommendation you have provided. It is our intention to have a complete work plan to you in time for the Management Review Board (MRB). Gary Robertson, Director of the Office of Radiation Protection, will be in contact with you regarding our availability for the MRB.

On behalf of Mary Selecky, Bill White, and myself, please accept our thanks for your team's thoroughness in helping the Washington Department of Health maintain not just an "adequate and compatible" program, but one that is a national leader.

Sincerely,

Janice Adair
 Acting Assistant Secretary



The Office of Radiation Protection's technical comments:

REPORT:

Page 1 - second (real) paragraph - The Eastern Regional Director is noted to be "primarily responsible for the low-level radioactive waste disposal activities at Hanford which is not subject to NRC jurisdiction." This should be changed to read: "... primarily responsible for oversight of activities on the Hanford Nuclear Reservation."

Page 2 - last paragraph of section 1.0 - the very last sentence requests our response to "all recommendations in the final report". There is only one "recommendation" in the draft report.

Page 2 - Section 3.1, second paragraph - Change the third sentence to read "These positions were created partially to focus a higher level of management attention on activities on the Hanford Nuclear Reservation and partially for succession planning."

Page 3 - third paragraph - The third sentence is incomplete. It should read: "Staff members are required to have a bachelor's degree or equivalent experience in a physical science, engineering or biological science."

Page 3 - fourth paragraph - The third sentence should read: "For the six sections in the Office, this would require ..." This change makes it clear that the two Sections comprising the Agreement State program are not alone in needing to address the required FTE reduction.

Page 4 - first paragraph - Near the end, the assertion is made that the first responders did not "have" alpha or beta detection capability. It is more accurate to state they did not "use" their alpha/beta detection capability, instead relying on their "high-tech" gamma analyzers. Subtle difference, but more accurate.

page 6 - fourth paragraph - in the last sentence, the name of the Section is "Environmental Radiation Section".

Page 6 - fifth paragraph - ATG is located at Richland, WA (not Hanford, since it is not on the Hanford Nuclear Reservation proper).

Page 6 - fifth paragraph - in the sixth line, the term is "mixed waste" (not "mixed radioactive waste"); the term "mixed waste" means "both radioactive and hazardous wastes combined". To use "mixed radioactive waste" is confusing.

Page 6 - fifth paragraph - the name in the last line should be "Pacific EcoSolutions, LLC" (note, there is NO space between "Eco" and "Solutions")

Page 10 - Section 4.1.1 - in the fifth line, the word "impacted" is used improperly (to "impact" is "to hit"). It should be "affected".

Page 10 - Section 4.1.2, second paragraph - again, "impacted" is not the right word; use "affected".

Page 12 - Section 4.2.2, fourth paragraph - the lead in, "In most cases", implies some files "did not" contain the items listed. We suggest the sentence read: "Of the registration files reviewed, all were found to contain all correspondence, photographs ... "?

INTEGRATED MATERIALS PERFORMANCE EVALUATION PROGRAM

QUESTIONNAIRE

Name of State: **Washington**

Reporting Period: **September 4, 1999 to September 12, 2003**

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.

<u>Licensee Name</u>	<u>Insp. Frequency (Years)</u>	<u>Due Date</u>	<u>Months O/D</u>
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Waste Section:

There are no licensee inspections in either the Waste Management or Radioactive Materials Sections that are overdue.

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.

Materials Section: We rarely have inspections that become overdue by NRC standards, although this has happened since the last review. To assist section staff with not having overdue inspections, we use administratively imposed escalated inspection frequencies. This method usually precludes inspections from becoming overdue. The inspection schedule and impending inspections are discussed during each monthly staff meeting. Each inspector is assigned a specific inspection, usually years in advance, and each is charged with performing the inspections in a manner that keep inspections from becoming overdue. When an inspection does become overdue the inspector is directed to perform it within the next month, while not allowing other impending inspections to also become overdue.

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.

Waste Section: There are no licensees in the Waste Management Section that are inspected more or less frequently than required by the U.S. Nuclear Regulatory Commission. However, certain licensees in the Waste Management Section are inspected in "slice of the pie" fashion. These include the LLRW facility, and ATG. Over the course of a year, the entire program is reviewed.

Materials Section: By general policy, the Materials Section places emphasis on more frequent inspections to assure compliance and catch problems before they become engrained, or health and safety issues.

- Group – Broad licenses – priority 1 (NRC priority 2&3) – per policy
- Group – Nuc. laundry – priority 1 (NRC priority 2) – per policy
- Group – Manufacturer – priority 1 (NRC priority 5) – per policy
- Group – Nuc. pharmacy – priority 1, (NRC priority 2) – per policy
- Group – Minor HP – priority 3, (NRC priority 5) – per policy
- Group – Medical – priority 2, annual insp. (NRC priority 5) – per policy
- Group – Mobil Nuc. Med – priority 1, (NRC priority 3) – per policy
- Group – Laboratory – priority 3, insp. biannual (NRC priority 5) – per policy
- Group – Ind. Gauge – priority 4, insp. every 3 years (priority 5) – per policy
- Group – Gas chroma. – priority 5, insp. every 3 years (NRC priority 7) per policy
- Group – Receipt and redist. – Priority 3, insp. biannual (NRC priority 5) per policy

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

NRC Priority	Number of Licensees			
	Granted Reciprocity Each Year	Inspected Each Year		
Service Licensees	YR 9/1/99 to 8/31/00	5	YR 9/1/99 to 8/31/00	6
	YR 9/1/00 to 8/31/01	6	YR 9/1/00 to 8/31/01	2
	YR 9/1/01 to 8/31/02	5	YR 9/1/01 to 8/31/02	4
	YR 9/1/02 to 7/31/03	6	YR 9/1/02 to 7/31/03	1
Radiography	YR 9/1/99 to 8/31/00	4	YR 9/1/99 to 8/31/00	1
	YR 9/1/00 to 8/31/01	2	YR 9/1/00 to 8/31/01	2
	YR 9/1/01 to 8/31/02	2	YR 9/1/01 to 8/31/02	3
	YR 9/1/02 to 7/31/03	3	YR 9/1/02 to 7/31/03	2
2	None	0	None	0
Well Logging	YR 9/1/99 to 8/31/00	2	YR 9/1/99 to 8/31/00	0
	YR 9/1/00 to 8/31/01	3	YR 9/1/00 to 8/31/01	0
	YR 9/1/01 to 8/31/02	2	YR 9/1/01 to 8/31/02	0

	YR 9/1/02 to 7/31/03	YR 9/1/02 to 7/31/03
4. Dev. of	None	None
5. Gauges & HP service	YR 9/1/99 to 8/31/00 20 YR 9/1/00 to 8/31/01 23 YR 9/1/01 to 8/31/02 21 YR 9/1/02 to 7/31/03 23	YR 9/1/99 to 8/31/00 3 YR 9/1/00 to 8/31/01 2 YR 9/1/01 to 8/31/02 0 YR 9/1/02 to 7/31/03 7

5. 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.

In accordance with B. III. 33 and B. IV. 34, this question is answered as follows: The goal for inspections in the Waste Section is to complete all LLW and uranium mill inspections once per year. This goal has been attained.

I. Technical Quality of Inspections

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

Waste Section: Inspection checklists for the LLRW facility, DMC Mill site operations, and DMC Water Treatment Plant Operations have been updated and are currently in use. An inspection checklist has been developed and is utilized for the ATG waste processing facility. An inspection checklist for the Dawn uranium mill demolition project has been developed and is in draft form but is being used for the mill demolition project.

The Waste Management Section has developed an inspection procedure for Uranium Mill Reclamation and Construction Projects. This procedure is currently in draft form but will be followed in the event of any reclamation or construction projects. These procedures are being used on a trial basis before final approval and sign-off.

Materials Section: All procedures may receive minor evolutionary upgrades as necessity dictates. No major changes have been made to Radioactive Materials Section Procedures since the last IMPEP inspection of September 1999.

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

Inspector	Supervisor	License Cat.	Date
(Waste Management Section)			
Fordham	Elsen	LLW	9/00

Elsen	Fordham	Uranium Mill	11/00
Elsen	Fordham	Uranium Mill	10/01
Fordham	Elsen	LLW	9/02
Elsen	Fordham	Uranium Mill	10/02
Stoffel	Elsen	Uranium Mill	3/03
Fordham	Elsen	Waste Processor	5/03

(Radioactive Materials Section)

DeMaris	Frazee	Diagnostic NM	Sept 99
Busby	Frazee	Medium Lab	Dec 99
Verellen	Frazee	Diagnostic NM	Dec 99

(plus Wainhouse and Walsh by peer accompaniments in 1999)

Elsen & Grumbles were inactive in 1999, no accompaniments.

Walsh	Frazee	PG	Aug 00
Scroggs	Frazee	FG	Oct 00
Grumbles	Frazee	Med Combo	Nov 00
Elsen	Frazee	PG	Dec 00
Wainhouse	Frazee	Lg Lab	Dec 00

(plus Scroggs by peer accompaniment in 2000)

M. Robertson in training, several accompaniments by various inspectors in 2000.

Scroggs	Frazee	PG	Jun 01
M. Robertson	Frazee	Diagnostic NM	Dec 01

(plus DeMaris, Verellen, Walsh, Elsen and Grumbles by peer accompaniments in 2001)

Wainhouse	Frazee	Medium Lab	Dec 02
Walsh	Frazee	PG	Dec 02
Grumbles	Frazee	Broad A	Dec 02
M. Robertson	Frazee	Med Combo	Dec 02
Verellen	Scroggs (acting)	PG	Mar 02
DeMaris	Scroggs (acting)	Diagnostic NM	Apr 02
DeMaris	Scroggs	IR	Dec 02

(plus Verellen by peer accompaniment in 2002)

Schwab, Matthews and Lawrence in training starting 2003.

Walsh	Scroggs	PG/IR	July 03
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8. Describe internal procedures for conducting supervisory accompaniments of inspectors in the field.

Waste Section: Procedures require that the supervisor or designated senior inspector accompany each inspector at least once per year. Senior inspectors are accompanied by the supervisor once every three years. The supervisor evaluates how well the inspector has prepared for the inspection, and debriefs with the inspector prior to closeout with licensee management to make sure that the items of noncompliance are clear and correct. After the inspector prepares the Notice of Correction, the

supervisor reviews the items of noncompliance with the inspector. The response letter as well as the inspection report is reviewed and the report is then closed out. The accompaniment is then documented.

Materials Section: Staff are accompanied annually by the supervisor or a peer. Generally, the supervisor accompanies "new" inspectors annually until deemed experienced, then every other year thereafter. For supervisory accompaniment, staff are asked to provide a list of upcoming inspections and the supervisor chooses a conveniently located and representative inspection. The supervisor accompanies the inspector and observes all aspects of the inspection. Notes are made during the accompaniment and the inspector is informed of any findings immediately following the inspection. A summary form is prepared and filed to document the accompaniment. These documents are available for NRC review in the office.

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

Waste Section: Instruments in the Waste Management Section are sent directly to Ludlum for calibration. All instruments in use are currently in calibration. Instruments include Eberline RO-2's, Technical Associates TBM-3s, and Ludlum Models 3, 9, and 19. Backup meters are available.

Materials Section: All field staff have available as their basic instrument set an ion chamber, a GM meter, and a scintillator. Typical instruments, including multiple backup units of each, are Eberline's RO-2s, Technical Associates' TBM-3s, and Ludlum's Models 2 and 19 Micro R meters. Other brands and models are also represented in our assortment of instrumentation, including portable MCAs, low energy scintillation probes, alpha meters, and a neutron meter.

All survey instruments for the Radioactive Materials Section are tracked in a database which includes the calibration due date. Instruments in need of calibration are collected and delivered twice a month to the Northwest Radiation Instrument Calibration Facility at the University of Washington. All instruments in use are currently calibrated.

III. Technical Staffing and Training

10. 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 between offices, the table should be consolidated to include all personnel contributing to the radioactive materials program. Include all vacancies and identify all senior personnel assigned to monitor work of junior personnel. If consultants were used to carry out the program's radioactive materials responsibilities, include their efforts. The table heading should be:

Name	Position	Area of Effort	FTE%
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The listing is for current staffing levels.

T. Frazee	WMS2	Administration	67%
M. Elsen	HP4	Administration	40%
M. Elsen	HP4	LLW Licensing/HP	30%
S. Murphy	HP3	LLW Compliance/HP/Engr.	90%
A. Thatcher	HP3	LLW Performance Assess.	40%
J. Ahmad	HP2	LLW Licensing/Engr	80%
N. Darling	Geohydr.	LLW EIS	45%
D. Stoffel	Geohydr.	LLW Lic/Comp/Closure	25%
E. Fordham	WMS 2	LLW Lic/Comp/Closure	10%
J. Riley	Geochem.	LLW Performance Assess.	10%
Others combined		LLW Environmental	10%
Others combined		LLW Laboratory	50%
U.S. DOE		LLW Performance Assess.	75%
M. Elsen	HP4	U-Mill Licensing/HP	30%
S. Murphy	HP3	U-Mill HP/Engr.	10%
J. Ahmad	HP2	U-Mill Closure	20%
D. Stoffel	Geohydr.	U-Mill Lic/Comp/Closure	75%
N. Darling	Geohydr.	U-Mill Closure	5%
J. Riley	Geochem.	U-Mill Closure/Perf. Assess	30%
Others combined		U-Mill Environmental	10%
Others combined		U-Mill Laboratory	50%
A. Scroggs	HP4	Administration	100%
C. DeMaris	HP3	Materials Licensing/Comp.	100%
A. Grumbles	HP3	Materials Licensing/Comp.	100%
C. Lawrence	HP3	Materials Licensing/Comp.	100%
K. Schwab	HP2	Materials Licensing/Comp.	100%
S. Mathews	HP2	Materials Licensing/Comp.	100%
P. Walsh	HP1it	Materials Licensing/Comp.	100%

11. 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.

Waste Section:

Sean Murphy—BS, Mechanical Engineering. Has also received training for Uranium Mill Safety Officers, and Certified Health Physics Part 1 exam training. Naval Nuclear Power training (1982-1984). Approximately 20 years in health physics.

Materials Section:

Kristen Schwab – BS, Radiological Health; (has completed course work for MS in Radiological Health and will finish thesis soon), over 13 years experience in Health Physics.

Steve Matthews – BS, Marine Resources; 11 years experience in Health Physics.

Craig Lawrence – BA, Environmental Science; 15 years experience with health physics. Was a radiation worker at a nuclear power plant for an additional 2 years.

Mike Robertson – BS, Zoology; over 10 years experience in Health Physics (employee resigned employment with the state on 17 June 2003).

Carroll Cobb – MS, Bioengineering; 1 year experience in Health Physics.

12. 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.

Waste Section:

The new member of the Waste staff, Sean Murphy, needs Licensing Practices and Procedures, and Inspection Procedures courses (both scheduled for September 2003). Additionally, it is anticipated that Dorothy Stoffel, and Nancy Darling will attend NRC training in Licensing Practices and Procedures, and Inspection Procedures courses in the next few years.

Materials Section:

Anine Grumbles – needs SS&D Workshop (scheduled in 9/03), Root Cause/Investigations course (anticipated for FY 2004), Safety Aspects of Well Logging course (anticipated for FY 2004).

Kristen Schwab – needs all NRC’s licensing and inspector courses. Inspection Procedures course and Licensing Practices and Procedures course (scheduled in 9/03). Other courses to follow in succeeding FY’s.

Steve Matthews – This reviewer/inspector is a return employee. Prior to leaving in April 1988, he was a fully qualified inspector. He needs SS&D Workshop (anticipated for FY 04).

Craig Lawrence – needs all NRC’s reviewer/inspector courses. Inspection Procedures course and Licensing Practices and Procedures course (scheduled in 9/03). Anticipate taking other NRC’s courses starting FY 04.

Pamela Walsh – Long-time employee has started an in-training program to become an RHP1. Needs SS&D Workshop (scheduled for 9/03), Safety Aspects of Industrial Radiography course, Safety Aspects of Well Logging course, and Inspecting for Performance course (anticipate one or more in FY 04).

Carroll Cobb – began August 11, 2003 and needs all courses. Will be scheduled beginning FY 04.

In general, the policy of the Waste Management and Materials sections is that all staff who perform technical assignments:

- 1) receive on the job training in the task**
- 2) receive formal classroom training in the task as soon as practical**
- 3) perform duties commensurate with their qualifications and training**

The foundation of the requirements is a performance based “learn, do, and be reviewed” format. An individual shall not be an inspector, investigator, or license reviewer for a license until he or she has demonstrated competency in the program training area applicable to that type of license.

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

Waste Section:

The following individuals left the Waste Section since the last review:

- John Blacklaw – transferred April 2001**
- Maxine Dunkelman – transferred March 2001**
- Gary Robertson – promoted June 2002**
- Earl Fordham – promoted December 2002**

Materials Section:

Robert Verellen – retired May 2003
Mike Robertson – resigned June 2003
Leo Wainhouse – promoted December 2002
Bruce Busby – resigned February 2002

14. 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.

Waste Section: There are no vacancies in the Waste Management Section.

Materials Section: An HP2 position was briefly vacant. The position was vacated in mid-June 2003, and interviews to fill the position were held on July 31. The new employee started on August 11, 2003.

IV. Technical Quality of Licensing Actions

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

Waste Section:

ATG, Inc. – declared bankruptcy in December 2001. Since that time, the trustee has sold the company. The new company is Pacific Ecosolutions. The department currently has a meeting set up with the new licensee to discuss transfer of the license. As of August 12, 2003, the sale of the facility has not been finalized and closed.

US Ecology, Inc., WN-1019-2 (waste disposal site operator)

- **Amendment #26 – March 23, 2000 – addition of Condition 74.J, Facility Standards Manual, and deletion of Condition 74.I, old Facility Standards Manual.**
- **Amendment #27 – March 14, 2002 – administrative amendment to add Condition 74.K, Facility Standards Manual, and deletion of Condition 74.J, old Facility Standards Manual.**
- **Amendment #28 – February 24, 2003 – deletion of Conditions 74.C and K, and addition of Conditions 74.L-O. These tie-in conditions relate to reductions in audit frequency and internal management and radiological audits.**
- **Amendment #29 – April 14, 2003 – change of address within Boise, Idaho.**

US Ecology, Inc., WN-10522-1 (waste consolidation)

- **Original license issued September 7, 2001.**
- **Amendment #1 – November 5, 2001 – revised in its entirety to show**

changes in authorized users, revision to storage requirements (including area surveys and ground protection), more specific shipping and packaging requirements, and a new condition stating that a decommissioning plan will be submitted to DOH within 60 days after operations have ceased.

- Amendment #2 – April 10, 2003 – change of address within Boise, Idaho.

Dawn Mining Company, WN-I043-2 (uranium mill)

- Amendment #23 – April 11, 2001 – amended in its entirety to allow the direct disposal of Midnite Mine Water Treatment Plant sludge into TDA-4, and the deletion of conditions related to the acceptance of out-of-state 11.e(2) byproduct material.

Western Nuclear, Inc., WN-I033-1 (uranium mill)

- Amendment #32 – September 27, 1999 – revised Condition 22 to update and clarify tie-in to environmental monitoring program, revised Condition 29 to reflect license termination requirements, and added Condition 37 for provision of engineering support.
- Amendment #33 – March 21, 2000 – deleted license conditions that were no longer applicable.
- Amendment #34 – March 9, 2001 – termination of license.

Allied Technology Group, WN-I0393-1 (low-level waste processor/broker)

- Amendment #9 – October 15, 1999 – change in possession limits, change in storage requirements, and change in authorized users.
- Amendment #10 – December 22, 1999 – stricter (monthly) reporting requirements and a new condition requiring monthly custody (inventory) reports.
- Amendment #11 – March 14, 2000 – revised in its entirety to increase possession limits, add a new WAC for transportation, reflect the current national standard for tritium, to add specifics about surety reviews, and to add authorized users.
- Amendment #12 – May 3, 2000 – changes in isotopes and possession limits, adding support personnel for RSO, and changes in authorized users.
- Amendment #13 – July 21, 2000 – addition of Ra-226 to isotopes, for storage of NARM waste from Spain.
- Amendment #14 – October 20, 2000 – deletion of Ra-226 (Spain waste).
- Amendment #15 – April 19, 2001 – replacing text (aerial photograph requirement) that was inadvertently omitted from earlier amendment, and adding strengthening text to conditions about procedures.
- Amendment #16 – May 25, 2001 – replacing RHF-31 condition that

- was inadvertently omitted from earlier amendment.
- **Amendment #17 – September 17, 2001 – removing time restrictions from Condition 9, A-D, and installing them for Condition 34.**
 - **Amendment #18 – September 19, 2001 – decreasing some possession limits, and adding some isotopes.**
 - **Amendment #19 – June 13, 2002 – revised in its entirety to reflect changes in the RSO's support personnel and authorized users, new conditions governing the receipt, monitoring, and storage of waste, removal of Condition 31 for a custody report, and a new condition stating that decommissioning will begin 12 months after operations have ceased.**

Allied Technology Group, WN-I0508-1 (mixed waste processor/broker)

- **Original license issued November 12, 1999.**
- **Amendment #1 – December 3, 1999 – Condition 9 was altered to allow functional tests of equipment, and to add authorized users.**
- **Amendment #2 – December 22, 1999 – revised in its entirety primarily to increase radioisotopes and possession limits, and add authorized users.**
- **Amendment #3 – January 7, 2000 – increased possession limits, revised Condition 9 (demonstration testing and storage locations) to different boxes and more storage locations, and added authorized users.**
- **Amendment #4 – January 14, 2000 – changed Subitem 7.E to include liquid form, increased possession limits, and revised Condition 9 to more boxes and revised storage locations.**
- **Amendment #5 – February 9, 2000 – increased and decreased possession limits and revised Condition 9 to different boxes and revised storage locations.**
- **Amendment #6 – February 16, 2000 – increased possession limit and revised storage locations.**
- **Amendment #7 – March 15, 2000 – increased possession limits, revised Condition 9 to different boxes, and administratively added Conditions 19, 20, and 21, pertaining to DOH notification of incoming shipments, to environmental monitoring, and to leak testing, respectively.**
- **Amendment #8 – April 6, 2000 – Subitem 7 revised to include liquid processing, one possession limit increased, Condition 9.A-D divided into two sections, and added authorized users.**
- **Amendment #9 – June 15, 2000 – revised in its entirety to increase possession limits, to add more specifications to authorized uses, to revise the authorized users, and to remove Conditions 19, 20, and 21.**
- **Amendment #10 – August 17, 2000 – revised Condition 9 to change storage locations, and revised the authorized users.**

- **Amendment #11 – December 14, 2000 – revised authorized uses (and added a section) to show changes in demonstration testing, changed the RSO, and revised the authorized users.**
- **Amendment #12 – December 28, 2000 – increased one possession limit and added a section to Condition 9, about demonstration testing.**
- **Amendment #13 – February 14, 2001 – revised authorized uses.**
- **Amendment #14 – March 16, 2001 – revised possession limits and authorized uses, added authorized users, and added Condition 19, exempting ATG from a survey requirement (covered by procedures).**
- **Amendment #15 – June 11, 2001 – modified Conditions 16 and 18 to include reference to procedures, and added Conditions 20 and 21, for container integrity and shipment documents, respectively.**
- **Amendment #16 – October 12, 2001 – revised in its entirety to increase possession limits, break Condition 9 (authorized uses) into more specific sections, and revise the authorized users.**
- **Amendment #17 – November 19, 2002 – (post-bankruptcy) revised in its entirety to revise possession limits and authorized uses, remove some isotopes, to describe assistants to the RSO, to remove some authorized users, and to add a new condition stating that decommissioning will begin 12 months after operations have ceased.**

Materials Section:

All but a few of the Washington State issued licenses have been either amended or renewed since September of 1999. For the most part these have been routine in nature. Below is a list of the licensing actions deemed by staff to be major, complex or unusual.

Boeing Company – I005-1 – renewal – Apr 01

Deaconess Hosp – M005-1; amend to add gamma knife – April 02

**Eisenhart, James – L0144-1; termination of manufacturer rep.
license – Nov 02**

Fred Hutchinson Cancer Research Center – L042-1; renewal – Dec

Keymaster Technologies – I0282-1 – amend in entirety – Jan 02

PetNet Cyclotron – NP009-1; new cyclotron – June 00

**Professional Service Ind. – IR021-1 – amend for no in-state storage –
Sept 02**

Swedish Hosp – M008-1; renewal – March 00

**U.W. Harborview Hosp – M0219-1; amend to add gamma knife – Feb
00**

Univ. of Washington – C001-1; renewal – August 99

**Univ. of Washington – C001-1; amend to add several new medical
procedures – Jan 03**

00

Washington State Univ. – C003-1; renewal – June 02

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

WASTE SECTION: LLW LICENSE VARIANCES REQUESTED 1999-2003

ACTION #	DATE REC'D	COMPANY	SUBJECT	APPROVED D (Yes or No)
1999				
V-4-99	6/24/99	US Ecology	L.C. 74 – internal monitoring & limited rad worker training for Trojan reactor	Y
V-5-99	10/1/99	US Ecology	Place 14 drums into ECB for stabilization, for Ra-226 & H3	Y
V-6-99	9/16/99	EMC/Moravek Bio.	Classify stab. liquids over outer drums instead of stab. volume	N
V-7-99	10/12/99	US Army Industrial Ops	Ship Coast Guard door w/no package, LC 17	Y
V-9-99	10/28/99	Moravek Bio.	Dispose of solidified liquid (concrete) in ECB	Y
2000				
V-1-00	1/14/00	PGE – Trojan	Disposal of sorbed oil in Poly HIC	Y
V-7-00	3/1/00	Moravek Bio.	Concurrence for packaging Class C, C-14 liquid waste	Y
V-13-00	8/11/00	EMC	Wants to use other than 17H/7A containers for biological carcasses – L.C. 33 & 34	Y
2002				
V-5-02	2/7/02	Yale University	Class A – request to wrap metal instead of packaging, due to size	Y
V-20-02	5/24/02	US Ecology, Oak Ridge	Variance to ROP 70 – exceed the 300 mCi drum limit for Ra-226	Y
V-29-02	6/21/02	US Ecology	Reduce audit inspections – vendor, facility	Y
V-34-02	9/12/02	US Ecology	Request for variance to BTP on waste class – RTG's	N
V-36-02	11/8/02	US Ecology/Moltan	Name change from Ultrasorb 248 to Xtrasorb 248	Y
V-40-02	12/2/02	Honeywell Engines & Systems	Alternative package for aircraft components	Y
2003				
V-4-03	2/18-3/12	Harvard University	Request for alternative packaging, accelerator decommissioning	Y
V-13-03	4/18/03	US Ecology	Request no aerial photo due to increased security over Hanford	Y

V-15-03	4/25/03	US Ecology	Storage greater than 3 months for Harvard waste	Y
V-18-03*	6/2/03	US Ecology	Receive package from ENW & PSNS, and Moravek for survey, inspection, & consolidation	Y

* V-18-03 is a variance to the US Ecology, Inc. Consolidation license WN-I0522-1

WASTE SECTION: ATG LICENSE WN-I0393-1 VARIANCES
(since June 23, 1999)

Variance number	Date Issued	Objective
10	6/18/99	Tennessee QCEP material time extension
11	8/12/99	Tennessee material storage modification
12	N/A	Variance request rescinded by ATG
13	8/4/99	Time extension for DOE material
14	8/18/99	Co-60 increase -- DENIED
15	8/27/99	Increase Co-60 limit to 11.75 Ci for 2 wks
16	9/24/99	Increase Co-60 limit to 11 Ci for 35 days
17	2/7/00	Continued storage of DOE Am-241
18	4/6/00	H-3 & C-14 levels raised for 30 days
19	N/A	No variance issued; license amended
20	6/19/00	Temp. storage near proc bldgs.
21	7/5/00	Drum storage on pallets (covered)
22	9/28/00	One time vehicle inspection exemption
23	10/9/00	Extend storage time -- DENIED
24	10/24/00	Storage of Taiwan tubes outside of authorized location -- DENIED
25	12/21/00	Storage of drums outside -- DENIED
26	4/11/01	Stayed use of RHF-31
27	8/31/01	DOE RSR authorization
28	9/20/01	81 Ci of H-3 causing LC 8A limit to be exceeded
29	11/16/01	Taiwan tube reporting -- DENIED
30	9/20/02	Relief from 2 nd independent audit
31	5/15/03	Increase Co-60 to 38 Ci for legacy waste processing
32	6/18/03	Increase Co-60 to 42 Ci for legacy waste processing

WASTE SECTION: ATG LICENSE WN-I0508-1 VARIANCES
(since June 23, 1999)

Variance number	Date Issued	Objective
1	4/13/00	Raise 8D and 8G limits until 5/15/00
2	5/11/00	Raise activity levels for 8A, 8G, and source
2a	12/20/00	Raise source material limits to 1000 kg
3	3/8/01	Time extension to 9/30/01
4	4/11/01	Suspend RHF-31 requirement until 5/4/01
3a	6/6/01	Time extension for add'l waste to 12/31/01
5	8/31/01	One party exception to Uniform Manifest usage requirement until 2/28/02

Variance number	Date Issued	Objective
6	9/19/01	Raise C-14 limit for processing until 12/31/01
4a	6/21/02	Suspend RHF-31 requirement until 9/30/02
	8/1/02	Use of Uniform Haz Waste Manifest -- DENIED
	9/20/02	Relief from 2 nd independent audit for 2002
	12/16/02	Savannah River storage extension to 3/15/03
7	5/30/03	Time onsite extension (continuing). Previous letters dated 11/22/02, 8/14/02 and 10/17/01.
8	4/21/03	Sr-90 limit raised to 7 Ci until 7/31/03

Materials Section: No variances in licensing policies and procedures, or exemptions from the regulations, have been granted during the review period.

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

Waste Section: No changes to licensing procedures have been made in the Waste Management Section.

Materials Section: No written changes have been made.

18. For NRC Regions, identify by licensee name, license number and type, any renewal applications that have been pending for one year or more. Please indicate why these reviews have been delayed.

In accordance with B. III. 33 and B. IV. 34, this question is answered as follows:

The license for US Ecology, Inc. (WN-I019-2) has been in timely renewal since 1997, pending the completion of an Environmental Impact Statement for the disposal facility. The EIS is examining relicensing of the facility, approving a closure plan, and determining the amount of diffuse NARM that should be allowed for disposal. It is anticipated that the final EIS will be issued by September 2003.

The license for Dawn Mining Company (WN-I0390-1- Water Treatment Plant) has been in timely renewal since 1997, pending adequate surety and surety arrangement.

V. Responses to Incidents and Allegations

19. For Agreement States, 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 during the review period. Information included in previous submittals to NRC need not be repeated (i.e., those submitted under OMB clearance number 3150-0178, Nuclear Material Events Database). The list should be in the following format:

<u>Licensee Name</u>	<u>License #</u>	<u>Date of Incident/Report</u>	<u>Type of Incident</u>
WA State DOT	WN-L065-1	30 June 2003	Gauge run over Possible over- exposure
Fred Hutchinson	WN-L042-1	16 June 2000	

20. 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?

Waste Section: None

Materials Section:

WA-99-049, IR camera lock malfunction, e-mail & fax, Jan 00
WA-00-019, IR source disconnect, e-mail & fax, May 00
WA-00-025, XRF source dislodged inside device, e-mail & fax, July 00
WA-00-044, leaking Na-22 source, e-mail & fax, Sept 00
WA-00-046, FG source disconnect, e-mail & fax, Sept 00
WA-00-054, FG source disconnect (2nd time), e-mail & fax, Oct 00
WA-00-069, FG source disconnect (3rd time), Nov 00
WA-01-051, leaking Pm-47 source, e-mail & fax, Nov 01
WA-02-003, leaking Na-22 source, e-mail & fax, Feb 02
WA-02-006, FG source inadvertently removed from gauge, e-mail & fax, Feb 02
WA-02-025, HDR treatment procedural error, e-mail & fax, July 02

21. For Agreement States, 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.

Waste Section: None

Materials Section: The only event/incident that qualifies as an equipment design issue involved a Ronan fixed gauging device at Transalta Mining

Centralia, License Number WN-I0241-1. There were 4 separate and somewhat different incidents occurring over about one and one-half years. The first was reported in September of 2000. These incidents involved a single one of four seemingly identical fixed gauges, installed in 1995, that are used for gauging the flow of raw coal ore being moved in slurry through a plant fuel refining process.

The first incident involved the source unscrewing from the source-rod. A fixed gauge service provider, following direction supplied by the device manufacturer, retrieved the source from inside a dry-well enclosure and reattached the source to the rod.

The second incident occurred about three weeks after the first and involved source rod failure. The rod, fabricated by assembling 2 three-foot rod sections, broke at the connection point between the two sections. A new rod was built and sent by the manufacturer to the licensee.

The third incident occurred about seven weeks after the second and involved the replacement source rod. The new rod again failed at the connection point between the two sections of the rod. A second replacement rod was built and sent to the licensee by the manufacturer.

The fourth incident occurred slightly more than one year later and involved the accidental removal of the rod with attached source when a gauge operator was placing the source into the shielded position. Our licensee chose to retire the gauge shortly after this incident.

Although we communicated, through our licensee, with the manufacturer and reported the various incidents to the NRC, there is no evidence in the file to show whether we communicated directly with the manufacturer or the state of Kentucky (the manufacturer's regulatory agency).

22. Identify any changes to your procedures for handling allegations that occurred during the period of this review.

No changes to the allegation procedures have been made in the Waste Management or Radioactive Materials sections since the last review.

VI. General

23. 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. Describe the results of any program audits completed during the review period.

Waste Section: A recommendation was made to develop additional specialized inspection procedures for the Uranium recovery program. The

Waste Management Section has developed an inspection procedure for Uranium Mill Reclamation and Construction Projects. This procedure is currently in draft form but will be followed in the event of any reclamation or construction projects. These procedures are being used on a trial basis before final approval and sign-off.

Materials Section: There were no recommendations from the last review.

24. For NRC Regions, briefly describe any recent efforts, or future plans, on your part to: (1) improve the safety performance of licensees operating below acceptable levels for ensuring public health and protection, (2) increase the public confidence in your program, (3) increase your effectiveness, and efficiency, or (4) reduce any unnecessary regulatory burden for your stakeholders.

N/A

25. 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 which occurred during this review period.

We believe our program continues to be technically strong, despite recent staff turnover. The office has a diversified staff which includes three certified health physicists, plus a professional engineer, geologists, and hydrologists. We have an excellent state laboratory and funding is adequate and stable.

Our program weaknesses are in the documentation and updating of inspection and licensing procedures, and also in remaining timely with regulations changes required for compatibility.

B. NON-COMMON PERFORMANCE INDICATORS

I. Legislation and Program Elements Required for Compatibility

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

**RCW 70.98 Nuclear Energy and Radiation
RCW 70.121 Mill Tailings, Licensing and Perpetual Care
RCW 70.94 Washington Clean Air Act**

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

No

28. Please complete the enclosed table based on NRC chronology of amendments. Identify those that have not been adopted by the State as detailed in the current RATS form, 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.

SEE TABLE

29. 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.

(For "EXCEPTION" RULES only):

Obtain approval from Assistant Secretary to develop rule -- three weeks

Draft rule language, prepare required backup documents -- four weeks

Assistant Attorney General review, revisions -- three weeks

Obtain Department approvals & file with Code Reviser -- two to four weeks

Publication of Proposed Rule in State Register -- two weeks

Public hearing follows publication by minimum of three weeks

Review of public comments, revisions & final documents -- one to four weeks

Adoption by Secretary & filing with Code Reviser -- two to four weeks

Effective Date of Rule is 31 days after filing -- four weeks

(Minimum time required for an "easy" rule change is 6 to 8 months)

II. Sealed Source and Device Program

30. 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:

<u>SS&D Registry Number</u>	<u>Manufacturer, Distributor or Custom User</u>	<u>Product Type or Use</u>	<u>Date Issued</u>	<u>Type of Action</u>
WA-1032-D-102-S	GE	medical device	May 00	new
Same	GE	same	Nov 01	amend
Same	GE	same	Jan 02	amend
WA-0510-S-127-S	NAS	therapy seed	June 00	new
WA-0653-D-107-B	Keymaster (EDAX)	XRF	Apr 00	new
WA-0653-D-106-B	Keymaster (EDAX)	XRF	Apr 00	amend
Same	Keymaster (EDAX)	XRF	Oct 00	amend
WA-0406-S-202-S	IPL	line source	Aug 01	new
WA-653-D-108-B	Keymaster	XRF	Nov 01	new
WA-946-D-101-G	Honeywell Int.	ice detector	Mar 03	amend

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

Materials Section: Current NRC guides, standards and procedures are used.

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

Technical Staffing and Training - A.III.10-14
Technical Quality of Licensing Actions - A.IV.15-18
Responses to Incidents and Allegations - A.V.19-22

Answers applicable to the SS&D Program are incorporated within the sections listed above.

III. Low-Level Waste Program

33. Please include information on the following questions in Section A, as they apply to the Low-level Waste Program:

Status of Materials Inspection Program - A.I.1-3, A.I.5
Technical Quality of Inspections - A.II.6-9
Technical Staffing and Training - A.III.10-14
Technical Quality of Licensing Actions - A.IV.15-18
Responses to Incidents and Allegations - A.V.19-22

Answers applicable to the LLW Program are incorporated within the sections listed above.

IV. Uranium Mill Program

34. Please include information on the following questions in Section A, as they apply to the Uranium Mill Program:

Status of Materials Inspection Program - A.I.1-3, A.I.5
Technical Quality of Inspections - A.II.6-9
Technical Staffing and Training - A.III.10-14
Technical Quality of Licensing Actions - A.IV.15-18
Responses to Incidents and Allegations - A.V.19-22

Answers applicable to the U-Mills Program are incorporated within the sections listed above.

TABLE FOR QUESTION 28.

10 CFR RULE	DATE DUE	DATE ADOPTED OR EFFECTIVE	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Any amendment due prior to 1993. Identify each regulation (refer to the Chronology of Amendments)				
Emergency Planning; Parts 30, 40, 70	4/7/93	1/21/95		
Standards for Protection Against Radiation; Part 20	1/1/94	1/9/94		
Safety Requirements for Radiographic Equipment; Part 34	1/10/94	1/9/94	Allowed equipment "effective date" of 1/1/98 to lapse	
Notification of Incidents; Parts 20, 30, 31, 34, 39, 40, 70	10/15/94	1/21/95		
Quality Management Program and Misadministrations; Part 35	1/27/95	3/25/94		
Licensing and Radiation Safety Requirements for Irradiators; Part 36	7/1/96		N/A – no irradiators in Washington State	
Definition of Land Disposal and Waste Site QA Program; Part 61	7/22/96	11/20/97		
Decommissioning Recordkeeping: Documentation Additions; Parts 30, 40, 70	10/25/96	5/1/97		
Uranium Mill Tailings: Conforming to EPA Standards; Part 40	7/1/97	7/12/97		
Timeliness in Decommissioning Parts 30, 40, 70	8/15/97	5/3/97		
Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use; Parts 30, 32, 35	1/1/98	7/9/98		
Frequency of Medical Examinations for Use of Respiratory Protection Equipment	3/13/98	7/9/98		

10 CFR RULE	DATE DUE	DATE ADOPTED OR EFFECTIVE	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Low-Level Waste Shipment Manifest Information and Reporting	3/1/98	5/23/98		
Performance Requirements for Radiography Equipment	6/30/98	3/8/99		
Radiation Protection Requirements: Amended Definitions and Criteria	8/14/98	3/8/99		
Medical Administration of Radiation and Radioactive Materials.	10/20/98	7/9/98		
Clarification of Decommissioning Funding Requirements	11/24/98	5/3/97		
10 CFR Part 71: Compatibility with the International Atomic Energy Agency	4/1/99	8/21/99		
Termination or Transfer of Licensed Activities: Recordkeeping Requirements.	6/16/99	8/21/99		
Resolution of Dual Regulation of Airborne Effluents of Radioactive Materials; Clean Air Act	1/9/2000	8/21/99		
Recognition of Agreement State Licenses in Areas Under Exclusive Federal Jurisdiction Within an Agreement State	2/27/2000	8/21/99		
Criteria for the Release of Individuals Administered Radioactive Material	5/29/2000	7/9/98		
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiography Operations; Final Rule	6/27/2000	4/24/00		
Radiological Criteria for License Termination	8/20/2000	4/15/00		
Exempt Distribution of a Radioactive Drug Containing One Microcurie of Carbon-14 Urea	1/2/2001	1/26/01		
Deliberate Misconduct by Unlicensed Persons	2/12/2001	1/26/01		

10 CFR RULE	DATE DUE	DATE ADOPTED OR EFFECTIVE	OR	
			CURRENT STATUS	EXPECTED ADOPTION
Licenses for Industrial Radiography and Radiation Safety Requirements for Industrial Radiographic Operations; Clarifying Amendments and Corrections	7/9/2001	4/24/00		
Minor Corrections, Clarifying Changes, and a Minor Policy Change	10/26/2001	3/7/01		
Transfer for Disposal and Manifest; Minor Technical Conforming Amendments	11/20/2001	5/23/98		
Radiological Criteria for License Termination of Uranium Recovery Facilities	6/11/2002	8/26/02		
Respiratory Protection and Controls to Restrict Internal Exposures	2/2/2003	3/7/01		
Energy Compensation Sources for Well Logging and Other Regulatory Clarifications	5/17/03	7/3/03		
New Dosimetry Technology	1/8/04	7/3/03		