regulations in this chapter and will not be inimical to the common defense and security or to the health and safety of the public.

A copy of the application is available for public inspection at the Commission's Public Document Room, the Gelman Building, at 2120 L Street NW., Washington, DC 20037. It is also available through http://www.nrc.gov/OPA/reports under ''What's New on This Page,'' ''Decommissioning,'' or ''Other Documents.''

Dated at Rockville, Maryland, this 28th day of February 2000.

For the Nuclear Regulatory Commission.

Ledyard B. Marsh,

Chief, Events Assessment, Generic Communications, and Non-Power Reactors Branch, Division of Regulatory Improvement Programs, Office of Nuclear Reactor Regulation.

[FR Doc. 00–5476 Filed 3–6–00; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Advisory Committee on Reactor Safeguards Subcommittee Meeting on Thermal-Hydraulic Phenomena; Revised

The ACRS Subcommittee meeting on Thermal-Hydraulic Phenomena scheduled for March 14–15, 2000, has been changed to a one-day meeting on March 15, 2000, 8:30 a.m., Room T–2B3, 11545 Rockville Pike, Rockville, Maryland. During this session, the Subcommittee will: (1) Begin review of the thermal-hydraulic issues associated with the pressurized thermal shock (PTS) Screening Criterion Reevaluation Project being conducted by NRC Office of Nuclear Regulatory Research (RES); (2) discuss the NRC staff acceptance review of the Siemens S–RELAP5 and GE Nuclear Energy TRACG codes; and (3) discuss the status of the NRC staff's review of the EPRI RETRAN–3D code. The purpose of this meeting is to gather information, analyze relevant issues and facts, and to formulate proposed positions and actions, as appropriate, for deliberation by the full Committee.

Notice of this meeting was published in the **Federal Register** on Friday, February 18, 2000 (65 FR 10122). All other items pertaining to this meeting remain the same as previously published.

For further information contact: Mr. Paul A. Boehnert, cognizant ACRS staff engineer, (telephone 301/415–8065) between 7:30 a.m. and 4:45 p.m. (EST).

Dated: March 1, 2000.

Howard J. Larson,

Acting Associate Director for Technical Support, ACRS/ACNW.

[FR Doc. 00–5472 Filed 3–6–00; 8:45 am]

BILLING CODE 7590–01–P

NUCLEAR REGULATORY COMMISSION

Sunshine Act Meeting

AGENCY HOLDING THE MEETING: Nuclear Regulatory Commission.

DATES: Weeks of March 6, 13, 20, 27, April 3 and 10, 2000.

PLACE: Commissioners' Conference Room, 11555 Rockville Pike, Rockville, Maryland.

STATUS: Public and Closed.

MATTERS TO BE CONSIDERED:

Week of March 6

Tuesday, March 7

12:55 p.m.
Affirmation Session (Public Meeting) (if needed).

1:00 p.m.
Briefing on Improvements in the Reactor Oversight Process (Public Meeting) (Contact: Bill Dean, 301–415–1257)

Week of March 13—Tentative

There are no meetings scheduled for the Week of March 13.

Week of March 20—Tentative

Wednesday, March 22

9:25 a.m.
Affirmation Session (Public Meeting) (if needed)

Friday, March 24

9:30 a.m.
Briefing on Evaluation of the Requirement for Licensee to Update Their Inservice Inspection and Inservice Testing Program Every 120 Months (Public Meeting) (Contact: Tom Scarbrough, 301–415–2794)

Week of March 27—Tentative

Thursday, March 30

8:55 a.m.
Affirmation/Discussion and Vote (Public Meeting) (If needed)

9:00 a.m.
Briefing on EEO Program (Public Meeting) (Contact: Irene Little, 301–415–7380)

Friday, March 31

9:25 a.m.
Affirmation Session (Public Meeting) (if needed)

9:30 a.m.
Briefing on Risk-informed Regulation Implementation Plan (Public Meeting) (Contact: Tom King, 301–415–5790)

Week of April 3—Tentative

There are no meetings scheduled for the Week of April 3.

Week of April 10—Tentative

There are no meetings scheduled for the Week of April 10.

*The schedule for Commission meetings is subject to change on short notice. To verify the status of meetings call (recording)—(301) 415–1292.

CONTACT PERSON FOR MORE INFORMATION: Bill Hill (301) 415–1661.

ADDITIONAL INFORMATION: By a vote of 5–0 on March 1, the Commission determined pursuant to U.S.C. 552b(e) and § 9.107(a) of the Commission's rules that ''Discussion of Intragovernmental Issues'' (Closed-Ex. 9) be held on March 1, and on less than one week's notice to the public.

The NRC Commission Meeting Schedule can be found on the Internet at: http://www.nrc.gov/SECY/smj/schedule.htm.

This notice is distributed by mail to several hundred subscribers; if you no longer wish to receive it, or would like to be added to it, please contact the Office of the Secretary, Attn: Operations Branch, Washington, D.C. 20555 (301–415–1661). In addition, distribution of this meeting notice over the Internet system is available. If you are interested in receiving this Commission meeting schedule electronically, please send an electronic message to wmh@nrc.gov or dkw@nrc.gov.

Dated: March 3, 2000.

William M. Hill, Jr.,

SECY Tracking Officer, Office of the Secretary.

[FR Doc. 00–5616 Filed 3–3–00; 8:45 am]

BILLING CODE 7590–01–M

NUCLEAR REGULATORY COMMISSION

Report to Congress on Abnormal Occurrences, Fiscal Year 1999; Dissemination of Information

Section 208 of the Energy Reorganization Act of 1974 (Public Law 93–438) identifies an abnormal occurrence (AO) as an unscheduled incident or event that the U.S. Nuclear Regulatory Commission (NRC) determines is significant from the standpoint of public health or safety.

The Federal Reports Elimination and Sunset Act of 1995 (Public Law 104–66) requires that AOs be reported to Congress annually. During fiscal year 1999, 13 events that occurred at facilities licensed or otherwise regulated by the NRC and/or the Agreement States were determined to be AOs. These events are discussed below. As required by Section 208, the discussion for each event includes the date and place, the nature and probable consequences, the cause or causes, and the action taken to prevent recurrence. Each event is also being described in NUREG–0090, Vol. 22, ''Report to Congress on Abnormal Occurrences, Fiscal Year 1999.'' This report will be available electronically at the NRC Public Electronic Reading Room link <*http://www.nrc.gov/NRC/ADAMS/index.html*> at the NRC Homepage.

Nuclear Power Plants

None of the events that occurred at U.S. nuclear power plants during fiscal year 1999 was determined to be significant enough to be reported as an abnormal occurrence (AO) to Congress.

Fuel Cycle Facilities (Other Than Nuclear Power Plants)

The following event that occurred at a fuel cycle facility during fiscal year 1999, was determined to be significant enough to be reported as an AO to Congress.

99–1 Fire Breaches Containment and Requires Shutdown of a Portion of the Cascade at the Portsmouth Gaseous Diffusion Plant in Piketon, Ohio

Date and Place—December 9, 1998; Portsmouth Gaseous Diffusion Plant, a uranium enrichment plant, operated by Lockheed Martin Utility Services for the United States Enrichment Corporation, located about 3.2 kilometers (2 miles) east of Piketon, Ohio.

Nature and Probable Consequences—On December 9, 1998, the certificate holder's operations staff observed a series of abnormal conditions associated with the side purge cascade, Cell 25–7–2. The staff's immediate response to the abnormal conditions was not successful in restoring normal operations and an exothermic reaction was either started or propagated within the cascade. The exothermic reaction continued until sufficient heat was generated to cause a failure of the Cell 25–7–2 cooling system, initiating a second exothermic reaction. Subsequent heat and pressure increases within the side purge cascade resulted in: (1) The creation of holes within the process gas cascade boundary of Cell 25–7–2; (2) an automatic shutdown of the side purge cascade caused by the motor load overcurrent protection system that provides ''Defense in Depth;'' (3) the activation of a portion of the Building X–326 automatic fire suppression sprinkler system; (4) an emergency response and approximately 2 hours of firefighting activities by the onsite fire department; and (5) challenges to the continued operation of the remainder of the process gas cascade.

There were no measurable radiological consequences or chemical consequences to the plant staff or the general public from the release of radioactivity during this event. The holes created in the side purge cascade equipment and piping created a credible pathway for water to accumulate in unsafe geometry sections of the cascade. This led to the need to revise the criticality safety basis for this portion of the side purge cascade.

Cause or Causes—The extensive fire damage experienced by Cell 25–7–2 equipment has made it difficult to determine the root cause. Much of the equipment has been damaged to such an extent that evidence needed to determine the root cause was destroyed. The investigation by the certificate holder identified two possible initiating events: a physical failure of the compressor impeller or a chemical deposit caused by wet air leakage into the equipment. In either event, mechanical friction within the process gas cascade equipment generated a sufficient amount of sustained heat to begin an exothermic reaction between the aluminum compressor components and the process gas (uranium hexafluoride). On the basis of a review of some of the Cell 25–7–2 components removed since the fire, the exothermic reaction was believed to have been initiated in the Stage 2 compressor and propagated through the cell equipment to the Stage 4 compressor. In the Stage 4 compressor, the reaction was thought to have been intensified by the input gases, received from the remainder of the cascade, resulting in increasing internal process gas cascade temperatures until there was a failure in the freon coolant system boundary. Elevated pressure, caused by the introduction of freon from the coolant system and a second exothermic reaction between the hot metal and freon, was thought to be the final event that occurred before the holes were burned in the process gas cascade boundary.

Actions Taken To Prevent Recurrence

Certificate Holder—Initial compensatory and corrective measures implemented by the plant staff as a result of the fire included: (1) administrative controls to preclude a restart of the side purge cascade and some other plant operations pending the completion of a root cause evaluation for the fire; (2) immediate manual vibration monitoring of other centrifugal compressors to search for other unstable equipment; (3) covering of openings created in the process gas piping and equipment of Cell 25–7–2 as a result of the fire; (4) development of a revised nuclear criticality safety basis for Cell 25–7–2; (5) interim training of cascade operators and managers on the lessons learned about operations from the event; and (6) interim training of firefighters and management on the safety risks of and the proper fire fighting techniques for a fire concurrent with holes in process gas cascade equipment. The long-term corrective actions include the following ''Defense in Depth'' features and administrative actions: (1) adding process gas temperature monitoring to detect high temperature reactions in a timely manner; (2) adding alarm and automatic shutdown systems on the side purge compressors for compressor high-process gas temperature to protect against the propagation of high-temperature accidents by detecting hot spots in a timely manner; (3) improving the process for evaluating and responding to cascade component vibrations to improve the identification of precursors to a hot metal reaction; and (4) completing procedures for improving operator response to other precursors to hot metal reactions. These corrective actions will be instituted prior to re-introducing process gas into the side purge cascade.

NRC—An augmented inspection team was sent to the site on December 9, 1998. The team documented its findings in an inspection report issued on February 19, 1999. A follow-up inspection was conducted in March 1999 to evaluate the effectiveness of the certificate holder's corrective actions. Although the follow-up inspection team found the certificate holder's corrective actions adequate, several procedural and reporting violations were identified during the follow-up inspections. One violation was that the event met the criteria for an ''Alert'' declaration and that the certificate holder failed to identify and declare the Alert. Since many credible accidents postulated for the Portsmouth Gaseous Diffusion Plant can occur suddenly and last a short duration, it is important for the certificate holder to make proper and timely emergency declarations that would lead to timely notifications to the

appropriate regulatory agencies. Therefore, even though, in this case, there were no significant radiological releases to the environment, the NRC staff considered the certificate holder's failure to declare an Alert, which is the lowest level emergency category, a serious violation (Level III) that carried a $55,000 civil penalty. The certificate holder acknowledged the violation and paid the civil penalty.

This event is closed for the purpose of this report.

Other NRC Licensees (Industrial Radiographers, Medical Institutions, etc.)

The following three events that occurred at institutions licensed or otherwise regulated by NRC during fiscal year 1999, were determined to be significant enough to be reported as abnormal occurrences (AOs) to Congress.

99–2 Medical Event Involving the Administration of Iodine-131 to a Pregnant Patient at St. Joseph Health Center in Kansas City, Missouri

Date and Place—October 6, 1998; St. Joseph Health Center; Kansas City, Missouri.

Nature and Probable Consequences—After a patient was administered a 5.75 gigabecquerel (155.2 millicurie) dosage of iodine-131 (I-131) for ablation of residual thyroid tissue and for the treatment of metastatic thyroid cancer, the patient was determined to be pregnant.

Preceding the administration of the I-131 therapy dosage, the licensee's nuclear medicine technologist and the authorized user, following internal policies and procedures to determine the pregnancy status of a patient, repeatedly questioned the patient regarding the possibility of a pregnancy and whether she was breast-feeding. The patient stated that she was not breast-feeding and there was no possibility of pregnancy. Approximately 3½ hours after the I-131 administration, the licensee received the positive results of a pregnancy test previously ordered by the patient's referring physician. The licensee had not been aware that the referring physician had ordered the pregnancy test.

Upon notification of the pregnancy, the licensee told the patient she was pregnant and attempted to minimize the potential exposure to the fetus by having the patient increase fluid intake in order to flush the free iodine from her system. The licensee also notified the patient's referring physician of the event. Ultrasound performed following identification of the pregnancy confirmed that the patient had been approximately 13½ weeks pregnant with twins at the time of the procedure.

The licensee does not expect the patient to experience any ill effects. The dose equivalent to each fetus was estimated to be about 0.38 sievert (Sv) (38 rem) and the dose equivalent to each fetal thyroid was estimated to be in excess of 2,000 Sv (200,000 rem). The licensee expected that such a dose would result in the following likely effects to the fetuses: (1) Thyroid ablation; (2) a 30 percent increase in the likelihood of microcephaly (small head size); (3) a 20 to 50 percent increase in the probability of childhood cancer; and (4) an increased probability for mental retardation. On the basis of this information, the patient elected to terminate the pregnancy.

Cause or Causes—This medical event appears to have been caused by the licensee's reliance on the patient's statements preceding the administration of I-131 that she was not pregnant. The patient's referring physician had ordered a pregnancy test for the patient preceding the administration of I-131; however, neither the patient nor the referring physician had informed the licensee. The referring physician believed that the pregnancy test was standard practice preceding all radiopharmaceutical therapy treatments.

Actions Taken To Prevent Recurrence

Licensee—The licensee modified its internal procedures for the administration of therapeutic radiopharmaceuticals, including diagnostic quantities of I-131 in excess of 7.4 megabecquerel (MBq) (200 microcurie [vvvCi]). All such procedures will include a statement that female patients between the ages of 10 and 55 years, without exception, prescribed to receive I-131 dosages equal to or greater than 7.4 MBq (200 vvvCi) shall obtain a ''beta serum pregnancy test'' within 24 hours preceding administration.

NRC—The NRC staff reviewed the licensee's revised procedures and determined that they were adequate to address the cause of this medical event and to preclude similar events. Because the licensee made a reasonable effort to obtain a confirmation from the patient that she was not pregnant before the I-131 administration, no NRC requirements were violated.

The corrective actions taken by the licensee were voluntary and were not required by NRC regulations.

This event is closed for the purpose of this report.

99–3 Medical Event Involving the Administration of Iodine-131 to a Pregnant Patient at Camden-Clark Memorial Hospital in Parkersburg, West Virginia

Date and Place—September 1, 1998; Camden-Clark Memorial Hospital; Parkersburg, West Virginia. The investigation on this event was completed in Fiscal Year 1999.

Nature and Probable Consequences—A patient was administered 340 megabecquerel (MBq) (9.2 millicurie [mCi]) of sodium iodide-131 (I-131) in accordance with licensee procedures for the treatment of hyperthyroidism. However, after the procedure was performed, the licensee learned that the patient was pregnant.

On July 15, 1998, the patient was scheduled for a thyroid uptake and scan involving the administration of 7.62 MBq (0.206 mCi) of iodine-123 (I-123). Before performing the procedure, the licensee's nuclear medicine technologist asked the patient if she was pregnant. The patient indicated that she was not pregnant and the technologist administered the dosage of I-123. On August 4, 1998, the patient was examined by one of the licensee's authorized users. As part of the examination, the patient was asked about her pregnancy status and she again stated that she was not pregnant. The licensee confirmed with the patient's referring physician a negative pregnancy test, performed on May 5, 1998. The authorized user determined that the patient was a good candidate for I-131 therapy based on the results of the thyroid scan and other tests and prepared a written directive for the administration of 333 MBq (9 mCi) of I-131. The authorized user informed the patient about the effects of I-131 to the fetus if it is administered to a pregnant patient. The patient signed a form acknowledging the risks associated with the procedure, as explained by the authorized user, and stated that she would not become pregnant for 1 year after the I-131 procedure.

The patient returned to the licensee's facility on September 1, 1998, and was administered 340 MBq (9.2 mCi) of I-131 in accordance with the written directive and other licensee procedures regarding the administration of radiopharmaceuticals. On October 5, 1998, the patient informed the licensee about recent information she received indicating that she was about 5 months pregnant. Subsequently, it was determined that the patient had been 14 weeks pregnant at the time of the administration.

The licensee personnel contacted a pediatric endocrinologist for assistance

in calculating the thyroid and the whole-body doses to the fetus. Using the information supplied by the licensee, the dose equivalent to the fetus was estimated to be about 0.023 sievert (Sv) (2.3 rem) and the dose equivalent to the fetal thyroid to be about 88 Sv (8,800 rem). The fetus received intra-amniotic thyroid hormone therapy from high-risk pregnancy specialists at a major university hospital.

On October 8, 1998, the licensee notified the patient's referring physician of the event and potential consequences. On October 20, 1998, the licensee notified the NRC of the event. The NRC staff engaged a medical consultant to evaluate the incident. The consultant concluded that: (1) the hypothyroidism developed in the fetal thyroid is expected to be permanent; (2) there is no increase in the risk of thyroid carcinoma; (3) a radiation-induced severe mental retardation is unlikely; and (4) the risk of leukemia and other childhood cancers is slightly higher than normal. At the time of the evaluation of this event the patient had decided to continue the pregnancy.

Cause or Causes—The cause of the event was the licensee's assumption that the patient was not pregnant at the time the radiopharmaceutical was administered based on the verbal and written statements made by the patient to the licensee staff.

Actions Taken To Prevent Recurrence

Licensee—The licensee is considering professional standards such as the 1996 American College of Radiology's ''Standard for the Performance of Therapy with Unsealed Radioactive Sources,'' which specifies acceptable methods for ruling out pregnancy preceding the administration of therapeutic doses of radiopharmaceuticals. These include a pregnancy test obtained within 48 hours preceding administration of the radiopharmaceutical; or documented hysterectomy or tubal ligation; or post-menopausal condition.

NRC—An inspection was conducted to review the circumstances of the event. Because the licensee made a reasonable effort to obtain a confirmation from the patient that she was not pregnant before the I-131 administration, no NRC requirements were violated.

The corrective actions taken by the licensee were voluntary and were not required by NRC regulations.

This event is closed for the purpose of this report.

99–4 Sodium Iodide Radiopharmaceutical Misadministration at Holy Redeemer Hospital and Medical Center in Meadowbrook, Pennsylvania

Date and Place—September 14, 1999; Holy Redeemer Hospital and Medical Center; Meadowbrook, Pennsylvania.

Nature and Probable Consequences—A patient's referring physician intended for the patient to receive a thyroid uptake and scan. The licensee routinely performed this procedure using iodine-123 (I-123). However, because of an error, the patient was administered iodine-131 (I-131).

The authorized user intended to administer 11.1 megabecquerel (MBq) (0.300 millicurie [mCi]) of I-123 to a patient for the evaluation of hyperthyroidism. However, no one prepared a written directive to indicate the type of thyroid procedure to administer. The patient was mistakenly listed on the licensee's schedule for a whole-body imaging as part of an evaluation for thyroid cancer therapy. The licensee routinely performs this type of procedure using I-131. Therefore, the licensee's technologist administered a 196.1 MBq (5.3 mCi) dosage of I-131 without obtaining a written directive. As a result of this error, the licensee's medical physicist determined that the patient's thyroid received an unintended dose of about 41.9 gray (4,190 rad) based on a 65 percent uptake.

The NRC's consultant stated that the impact of the misadministration on the status of the patient's health should be negligible, with no expected long-term disability. The licensee believes that no harm was done to the patient because the patient's condition required additional thyroid treatment using I-131. The patient was notified of the misadministration on September 16, 1999, and a written report was prepared. The patient's referring physician was also notified.

Cause or Causes—The technologist performed a thyroid procedure using I-131 without a written directive from an authorized user. The licensee's authorized user was not involved in the process of administration of I-131 to clarify what type of thyroid evaluation was needed for the patient.

Actions Taken to Prevent Recurrence

Licensee—The licensee counseled the technologist on the importance of implementing the NRC regulations.

NRC—The NRC staff conducted a special safety inspection on September 17, 1999, and is evaluating enforcement options.

This event is closed for the purpose of this report.

Agreement State Licensees

The following nine events, which occurred at Agreement State licensees during fiscal year 1999, were determined to be significant enough for reporting as AOs to Congress.

AS 99–1 Medical Event Involving the Administration of Iodine-131 to a Pregnant Patient at Via Christi Regional Medical Center in Wichita, Kansas

Date and Place—May 7, 1999; Via Christi Regional Medical Center; Wichita, Kansas.

Nature and Possible Consequences—A pregnant patient was administered a 436.6 megabecquerel (MBq) (11.8 millicurie [mCi]) dosage of I-131 for a thyroid treatment.

Before the treatment, the technologist and the authorized user interviewed the patient regarding her pregnancy status and the patient certified that she was not pregnant and signed a consent form for the treatment. The patient then was administered the dosage of 436.6 MBq (11.8 mCi) of I-131. Approximately one week after the I-131 administration during a routine gynecological exam the patient learned that she was between 18 and 20 weeks pregnant.

A telephone report was made to the State of Kansas Radiation Control Program on May 12, 1999, and the State staff conducted an on-site investigation on May 13, 1999. They contacted the Department of Energy's Radiation Emergency Assistance Center/Training Site (REACTS) in Oak Ridge, Tennessee for assistance. REACTS provided initial medical guidance and dosimetry calculations and agreed to act as consultant to the attending physician.

The dose equivalent to the fetus was estimated to be about 0.03 sievert (Sv) (3 rem) and the dose equivalent to the fetal thyroid was about 253 Sv (25,300 rem). The fetal thyroid dose was considered to be ablative. The authorized user notified the patient and her husband about the fetal exposure and the possible consequences. The patient continued her pregnancy to full term.

Causes or Causes—The cause of the event was the licensee's assumption that the patient was not pregnant at the time the radiopharmaceutical was administered based on the verbal and written statements made by the patient to the licensee staff.

Actions Taken To Prevent Recurrence

Licensee—The licensee's radiation safety officer conducted an investigation and determined that the licensee's procedures and policies had been followed and that a reasonable effort

had been made to determine the pregnancy status of the patient preceding the administration of I-131. The licensee indicated a revision of its policy to require that all females of child-bearing age be tested for pregnancy preceding administration of therapeutic doses of radioactive material.

State Agency—The State staff conducted an investigation and agreed with the licensee's findings and believes that the licensee's proposal is adequate to prevent recurrence.

The corrective actions taken by the licensee were voluntary and were not required by the State Agency.

This event is closed for the purpose of this report.

AS 99–2 Industrial Radiography Occupational Overexposure at Global X-ray and Testing Corporation in Aransas Pass, Texas

Date and Place—December 31, 1998; Global X-ray and Testing Corporation; Aransas Pass, Texas.

Nature and Probable Consequences—A radiography trainee failed to retract a 4.6 terabecquerel (123 curie) source of iridium-192 into the shielded position after taking a radiograph (exposure). As a result, the trainee received an estimated TEDE of about 100 mSv (10 rem) and an extremity annual shallow-dose equivalent of about 30,000 to 50,000 mSv (3,000 to 5,000 rem).

On December 31, 1998, a radiographer and a radiography trainee were working at a job site. At about 6 p.m., the radiography trainee thought that the radiography work was completed and removed a tool belt with a dosimeter and an alarming ratemeter and placed it in the truck. However, the radiographer asked the trainee for assistance to obtain additional radiographs. The trainee tried to take an additional radiograph but the source would not crank and the trainee realized that the source was not retracted into the shielded position after the previous exposure. During this process, the trainee stood at the end of the guide tube for approximately 4 minutes at a distance of about 61 centimeters (2 feet) and touched the end of the guide tube where the source was located three or four times for about 2 or 3 seconds each time.

On January 10, 1999, signs of a radiation injury, including redness, dry skin, and slight swelling accompanied by aching pain, appeared in the index finger of the trainee's right hand. On January 27, 1999, the finger developed a callous. On follow-up of the symptoms, it was indicated that the trainee received an extremity annual shallow-dose equivalent of about 30,000 to 50,000 mSv (3,000 rem to 5,000 rem).

Cause or Causes—The company's president told the office manager that the radiographer could act as a trainer because the paperwork requesting to name the individual radiographer as a trainer had been mailed to the State's Bureau of Radiation Control. Therefore, the radiographer was sent with the trainee to the job site. However, the radiation safety officer later told the office manager and the president of the company that Global X-ray and Testing Corporation had not yet received a license amendment naming the radiographer as a trainer.

The radiographer had been a trainer for several other radiography companies and was familiar with the requirements for a trainer working with a trainee. However, the radiographer was new with the company, was not familiar with this trainee, and was not aware that the trainee was not a radiographer. Therefore, the trainee was not appropriately supervised.

The trainee thought that the work for the day was completed and took the belt off and put it in the truck. The dosimeter and alarming rate meter were on the tool belt and were not used during the additional exposures. An operating survey meter was available, but the trainee did not use it during the radiographs.

Actions Taken To Prevent Recurrence

Licensee—The licensee met with all the radiography personnel to discuss the incident and make a presentation on radiation safety. Trainees were told to verify they were assigned to work with a trainer before leaving for a job site and radiographers were told to verify whether or not they were assigned to work with trainees. A memorandum stating these requirements was added to the licensee's safety training program. The office manager was given a written reprimand, which stated that another violation of any radiation regulation or safety policy would result in immediate termination of employment. The radiographer and the radiographer trainee had their employment terminated.

State Agency—The licensee was cited for violations of the radiation safety program and an escalated enforcement conference was conducted. As a result, inspection of the licensee's program and the radiographers' audit frequency was increased. A ''Preliminary Report for Assessment of Administrative Penalties'' was compiled and the licensee requested a settlement conference with the State agency.

This event is closed for the purpose of this report.

AS 99–3 Industrial Radiography Overexposure to a Member of the Public at Professional Service Industries, Inc. in Seattle, Washington

Date and Place—December 16, 1998; Professional Service Industries, Inc.; Seattle, Washington.

Nature and Probable Consequences—The Washington State Department of Health was notified by Professional Service Industries, Inc. (PSI), that on December 16, 1998, a contractor's employee (member of the public) had accidentally handled a source guide tube containing a 2.22 terabecquerel (60 curie) iridium-192 radiography source at a temporary job site in Seattle, Washington.

A radiographer and a radiographer's assistant working for PSI were performing radiography at a large parking garage of an office building. The building entrances and the place where radiographs (exposures) were taken were properly posted. Two of the contractor's employees were allowed inside the parking garage along with the radiographer in order to mark locations for future radiographs. The radiographer was talking with the contractor's employees while a radiograph was in process. One of the contractor's employees needed a ladder and approached the ladder in the garage that was being used to support the radiography source collimator. The radiography source collimator was positioned on the top of the ladder. The contract employee's actions dislodged the collimator from the source guide tube. The radiographer's assistant, who was monitoring the floor above the parking garage, came back to the garage and saw the contractor's employee trying to reassemble the collimator and the guide tube. The radiographer's assistant immediately shouted a warning and the radiographer, being alerted, ran to crank in the source to a safe position.

PSI's radiation safety officer (RSO) at the Seattle office and the corporate RSO were notified and PSI began an immediate investigation, including a re-enactment. Preliminary shallow-dose equivalent estimates for the extremities ranged from 6 to 17 sievert (Sv) (600 to 1700 rem). The Washington State Department of Health's Radiation Control Program was notified approximately 4 hours after the incident occurred and an investigation team was dispatched the next morning. The Washington Radiation Control Program estimated that the individual received a shallow-dose equivalent of: (1) 6.8 Sv (680 rem) to the right thumb; (2) 1 Sv

(100 rem) to the right index finger; and (3) 1.7 Sv (170 rem) to the palm of the left hand. The TEDE was estimated to be less than 0.05 Sv (5 rem). A cytogenetic study by the Department of Energy's Radiation Emergency Assistance Center/Training Site in Oak Ridge, Tennessee, determined that the TEDE was in the range of 0.01 to 0.15 Sv (1 to 15 rem).

No physical signs of radiation damage to the contract employee's hands were observed by the primary physician during the weeks following the incident. The exposed individual and his physician were kept informed of the findings of the investigation.

Cause or Causes—The cause of the incident was attributed primarily to the radiographer's failure to: (1) maintain direct surveillance of a radiography operation; and (2) warn individuals in the area that an exposure was underway.

Actions Taken To Prevent Recurrence

Licensee—PSI has complied with the corrective actions recommended by the State by: (1) completing a 2-day training for the Seattle PSI radiography personnel based on the incident; (2) accelerating the schedule of field audits of the PSI Seattle radiography personnel; and (3) performing a cytogenetic study for the contractor's employee.

State Agency—PSI was cited for violations that resulted in the overexposure of a member of the public and for failure to maintain direct surveillance of the radiography operation by allowing a member of the public to enter a high-radiation area.

This event is closed for the purpose of this report.

AS 99–4 Gamma Stereotactic Radiosurgery (Gamma Knife) Misadministration at University of Maryland Medical Systems in Baltimore, Maryland

Date and Place—December 16, 1997; University of Maryland Medical Systems; Baltimore, Maryland. The State agency was notified of this misadministration on December 17, 1997, and performed an investigation of the event. The investigation was completed on October 23, 1998.

Nature and Probable Consequences—A patient was prescribed a radiation therapy treatment using a gamma knife device for a brain metastasis involving three lesions. The patient was prescribed 1,600 centigray (cGy) (1,600 rad) to the first lesion. However, because of an error in the treatment plan, the first lesion received 2,600 cGy (2,600 rad).

The neurosurgeon prepared the treatment plan for the first lesion. While treating the first lesion, the neurosurgeon prepared the treatment plans for the second and third lesions. However, the treatment plan for the second lesion unintentionally included the settings for a treatment of a focal point of the first lesion. The neurosurgeon and the oncologist reviewed the treatment plans but failed to identify any deviation from the prescribed dose. After the three lesions had been treated, the medical physicist who reviewed the dose calculations determined that an error occurred that resulted in an overdose to the first lesion. The licensee's oncologist determined that the administered overdose was within the range of acceptable prescribed dose for intracranial lesions. It was not anticipated that any complications would occur in addition to those normally seen with this type of therapy treatment.

The neurosurgeon notified the patient and the referring physician of the event on December 17, 1997. A letter confirming the discussion of the event was also sent to the patient on January 8, 1998. The patient died on January 20, 1998, of lung cancer.

Cause or Causes—This misadministration was caused by human error in preparing the treatment plans. The neurosurgeon and the oncologist did not follow procedures describing the team approach in treatment planning. Furthermore, the treatment planning procedure did not accurately reflect the role and responsibilities of each type of authorized user. Finally, the neurosurgeon and the oncologist reviewed and signed the treatment plan without identifying the unintended dose.

Actions Taken To Prevent Recurrence

Licensee—The licensee immediately implemented measures to ensure that treatment will only be carried out after planning for all treatment sites is completed. The medical physicist will participate in the entire treatment planning process and will review the treatment plan before the plan is executed. The neurosurgeon and the oncologist will collaborate at critical points in the process, such as dose selection, approval of the written plan, and initiation of treatment.

State Agency—The licensee was cited for violations that included training deficiencies, failure of the radiation safety committee and the radiation safety officer to assume their duties and responsibilities, failure to apply for and receive license amendments before changing procedures, and failure to comply with notification requirements. Enforcement action is pending.

This event is closed for the purpose of this report.

AS 99–5 Gamma Stereotactic Radiosurgery (Gamma Knife) Misadministration at Good Samaritan Hospital in Los Angeles, California

Date and Place—October 15, 1998; Good Samaritan Hospital; Los Angeles, California.

Nature and Probable Consequences—A patient was prescribed treatment of 9,000 centigray (cGy) (9,000 rad) to the left trigeminal nerve. However, the treatment was administered to the patient's right trigeminal nerve.

The licensee's medical physicist prepared a treatment plan for the wrong treatment site (right trigeminal nerve). The radiation oncologist, who was an authorized user on the license, signed the treatment plan without verifying the neurosurgeon's request, which listed the correct treatment site (left trigeminal nerve). Because the head restraint was positioned correctly on the patient, the medical physicist experienced difficulty positioning the patient in the gamma knife for the incorrect treatment site. In response to questions from the medical physicist, both the patient and the nurse informed him that the correct treatment site was the left trigeminal nerve. Inexplicably, this did not lead the medical physicist to recognize that he was about to treat the wrong trigeminal nerve. The error was discovered after the procedure was completed. As a result, the patient received a dose of 9000 cGy (9000 rad) to the wrong treatment site. During this procedure, the medical physicist was training another medical physicist on how to use the facility's gamma knife equipment. The patient's neurosurgeon was not present during this procedure because of a scheduling conflict, even though it was the licensee's standard practice for the neurosurgeon to be present.

Treatment of the intended left trigeminal nerve was postponed pending evaluation of the medical outcome of the treatment of the wrong trigeminal nerve. The patient's physician stated that the patient might experience increasing numbness on the affected area of the face within 1 to 18 months. If the numbness occurs, it may affect the plan for treating the prescribed left site.

Cause or Causes—The misadministration occurred because: (1) the medical physicist prepared a treatment plan for the wrong treatment site; (2) the radiation oncologist signed the treatment plan without properly

verifying it; and (3) the neurosurgeon was not present during the procedure, which differed from standard licensee practice. The radiation oncologist had not conferred with the patient before the treatment, which may have contributed to the incorrect site treatment. Although it is possible that his training of the other medical physicist distracted the medical physicist, this could not be determined as a contributing cause.

Action Taken To Prevent Recurrence

Licensee—The licensee revised the gamma knife treatment procedure to require that: (1) the treatment plan be verified before each procedure by the neurosurgeon, the radiation oncologist, and the medical physicist; (2) two of the three individuals (the neurosurgeon, the radiation oncologist, and the medical physicist) verify that the treatment program coordinates are correctly set; (3) either the neurosurgeon or the radiation oncologist verify the prescribed treatment site after the patient is positioned; and (4) the neurosurgeon and either the radiation physicist or the radiation oncologist be physically present during the treatment. Also, the radiation oncologist shall examine the patient before the treatment and verify the treatment site.

State Agency—The State cited the licensee for failure to report the therapeutic misadministration within 24 hours as required. The licensee was also cited for failure of the authorized user to verify the dosimetry plan and treatment programming.

This event is closed for the purpose of this report.

AS 99–6 Therapeutic Radiopharmaceutical Misadministration of Iodine-131 to the Wrong Individual at Hermann Hospital in Houston, Texas

Date and Place—August 4, 1999; Hermann Hospital; Houston, Texas.

Nature and Possible Consequences—A patient was scheduled to receive a 1010 megabecquerel (MBq) (27.3 millicurie [mCi]) dosage of iodine-131 (I-131) for a thyroid treatment. However, because of an identification error, the wrong individual was administered the I-131.

Two middle-aged female Asian patients were at the licensee's nuclear medicine department for different procedures. The patient who was scheduled to receive the I-131 dosage left the waiting room. The licensee's technologist approached the other patient to verify her name and date of birth by stating the name and date of birth of the patient who was to receive the I-131 treatment. The patient responded with ''yes,'' although she did not understand the questions. She also indicated she understood the instructions previously given to her about the I-131 treatment. Therefore, she was administered the dosage of I-131. Later it was found that the I-131 was administered to the wrong individual. The licensee ordered another dosage of I-131, which was administered to the correct patient as prescribed.

The licensee estimated that: (1) The dose to the patient's thyroid as a result of the misadministration was about 220 gray (22,000 rad); (2) the patient has about an 85 percent chance of losing thyroid function; and (3) replacement thyroid hormone will be required indefinitely. The patient's attending physician was contacted and remedial action was taken.

Causes or Causes—The patient who received the misadministration spoke English as a second language. She was asked identification questions that could be answered ''yes'' or ''no'' without her actually understanding the meaning of the questions. No further verification of the patient's identification was performed.

Actions Taken To Prevent Recurrence

Licensee—The licensee has changed procedures for all outpatient therapy treatments that involve radioactive materials. The format of questions for patient identification will be revised to read ''What is your name?'' and ''What is your date of birth?'' instead of ''Is your name * * *?'' or ''Is your date of birth * * *?'' Outpatients will also be asked to show a picture form of identification. In the case of pediatric patients, the child's parent or guardian must confirm the patient's identification.

State Agency—The licensee was cited for administering a therapeutic dosage of I-131 to the wrong individual, who had a normally functioning thyroid, and for the authorizing physician user not being physically present when therapy procedures were being performed. Enforcement action is pending.

This event is closed for the purpose of this report.

AS 99–7 Therapeutic Radiopharmaceutical Misadministration of Iodine-131 to the Wrong Individual at Milton Hospital in Milton, Massachusetts

Date and Place—July 31, 1998; Milton Hospital; Milton, Massachusetts. The information on this event was sent to the NRC staff in March 1999.

Nature and Possible Consequences—A patient was prescribed a diagnostic dosage of 270.1 megabecquerel (MBq) (7.3 millicurie [mCi]) of technetium-99m (Tc-99m) for a thyroid scan. However, the patient was erroneously administered a therapeutic dosage of 318.2 MBq (8.6 mCi) of iodine-131.

The licensee's technologist administered the patient the diagnostic dosage of 270.1 MBq (7.3 mCi) of Tc-99m. After this procedure was finished, the patient was asked to remain in the waiting room while the thyroid scan was processed. Because of an identification error, the patient was taken again into the treatment area by the authorized user and was administered the therapeutic dosage of I-131. This dosage was intended for another patient who was still in the waiting room. The patient was informed of the error.

The licensee believes that no harm was done because the patient's condition required additional thyroid treatment using I-131.

Causes or Causes—The authorized user, who also was the primary care physician for both patients, was aware that both patients were to have I-131 treatment. However, on the day of the incident, the patient should have received only the Tc-99m dosage. Since the authorized user failed to follow the established Quality Management Program (QMP) procedures requiring verification of the patient's identity by more than one method before administering radioactive material, the wrong individual was administered the I-131.

Actions Taken To Prevent Recurrence

Licensee—The licensee modified its procedures as follows: (1) The authorized user will review the chart for each therapy patient; (2) each chart will contain a photograph of the patient; (3) each patient will be identified by checking the photograph in the chart; (4) preceding the administration of radiopharmaceuticals, a band will be placed on the wrist of the identified therapy patient; and (5) the authorized user and the technologist will be present during the radiopharmaceutical administration. The written directive form for iodine therapy dosages was modified to include the changes made in the procedures.

State Agency—The State investigated this event on September 10 and 11, 1998, and the licensee was issued a Notice of Violation on September 14, 1998, for not following its submitted procedures for radiopharmaceutical therapy as outlined in the QMP. The State acknowledged the action taken by the licensee to prevent recurrence of this incident.

This event is closed for the purpose of this report.

AS 99–8 Therapeutic Radiopharmaceutical Misadministration of Samarium-153 at Merle West Medical Center in Klamath Falls, Oregon

Date and Place—March 10, 1999; Merle West Medical Center; Klamath Falls, Oregon.

Nature and Probable Consequences—A patient with metastatic prostate cancer was prescribed a dosage of 2,294 megabecquerel (MBq) (62 millicurie [mCi]) of samarium-153 (Sm-153) to palliate bone pain. However, because of an error, the patient was administered a dosage of 3,589 MBq (97 mCi) of Sm-153. The recommended dosage for the Sm-153 procedure is ''1 mCi per kg of body weight'' (37 MBq per kilogram [kg]) (1 mCi per 2.2 pounds [lb]).

The misadministration resulted in an additional dose of 200 centigray (cGy) (200 rad) to the bone marrow. The patient's other organs received additional doses that were below 1,000 cGy (1,000 rad). The hospital checked with the manufacturer, DuPont Merck Pharmaceutical Company, concerning possible side effects of the misadministration. The pharmaceutical company indicated that other studies have been done using 74 to 92.5 MBq per kg (2.0 to 2.5 mCi per 2.2 lb) of Sm-153 with no significant side effects.

Both the attending physician and the patient's family were notified of the misadministration.

Cause or Causes—This event was caused by a human error. The licensee indicated that the dosage was calculated using the patient's weight in pounds instead of kilograms.

Actions Taken To Prevent Recurrence

Licensee—The incident was discussed with the Radiation Safety Committee (RSC). The licensee revised its Quality Management Program (QMP) for the use of Sm-153 and strontium-89 therapy to require the prescribing physician to calculate and personally order the dosage. The RSC approved the changes to the QMP. The technologist involved in the procedure was counseled concerning therapy procedures, dosage administrations, and the importance of rechecking calculations.

State Agency—The State cited the licensee for failure to report the misadministration within the required time.

This event is closed for the purpose of this report.

AS 99–9 Sodium Iodide Radiopharmaceutical Misadministration at St. Edward Mercy Medical Center in Fort Smith, Arkansas

Date and Place—December 7, 1998; St. Edward Mercy Medical Center; Fort Smith, Arkansas.

Nature and Probable Consequences—A patient was prescribed a thyroid scan using 222 megabecquerel (MBq) (6 millicurie [mCi]) dosage of technetium-99m (Tc-99m) pertechnetate. However, the patient was administered about a 148 MBq (4 mCi) dosage of iodine-131 (I-131).

The medical center routinely received unit dosages from a nuclear pharmacy packaged in appropriately sized syringes ready for injection to patients. However, in this case, instead of being in a syringe, the dosage was in a glass vial within a large lead container. The shipping package also contained two dispensing straws. The shipping container, the lead ''pig,'' and the vial were labeled by the nuclear pharmacy as 222 MBq (6 mCi) of Tc-99m. The licensee's staff surveyed the incoming package but saw nothing unusual. The licensee's staff attributed the change in the appearance of the package (a glass vial instead of a syringe and the presence of the dispensing straws) to a mistake made by the nuclear pharmacy. Therefore, the oral solution of the I-131 dosage, mislabeled as Tc-99m, was drawn into a syringe and was injected into the patient.

The licensee's medical physicist determined that the dose to the patient's thyroid based on the radiopharmaceutical manufacturer's package insert was about 48 gray (4,800 rad). The patient was notified of the misadministration by the licensee's radiation safety officer (RSO). The patient's attending physician was also notified of the circumstances and possible complications. The RSO advised the patient to continue long-term follow-up with the primary care physician.

Cause or Causes—This event was caused by the nuclear pharmacy mislabeling a radiopharmaceutical dosage. Also, it appears that the medical center's nuclear medicine staff did not question or address the unusual package upon receipt.

Actions Taken To Prevent Recurrence

Licensee—The licensee reported this event to the Arkansas Department of Health on December 7, 1998, and submitted a written report on December 8, 1998. The center's management revised the policy and procedure for the receipt of radiopharmaceuticals from the nuclear pharmacy. The revision states that only I-131 radioactive dosages will be accepted in glass vials. Any suspect or other labeled isotope received in glass vials will be questioned or returned to the pharmacy for isotope verification. The nuclear pharmacy indicated that policies and procedures for dispensing radiopharmaceutical therapy products have been revised to prevent recurrence of similar incidents.

State Agency—The State staff performed an on-site investigation at the medical center and the nuclear pharmacy on December 8, 1998.

The investigation discovered violations associated with license conditions and regulations for activities conducted at the nuclear pharmacy.

This event is closed for the purpose of this report.

Dated at Rockville, Maryland, this 1st day of March, 2000.

For the Nuclear Regulatory Commission.

Andrew L. Bates,

Secretary of the Commission.

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SECURITIES AND EXCHANGE COMMISSION

Submission for Office and Management Budget Review; Comment Request

Upon written request, copies available from: Securities and Exchange Commission, Office of Filings and Information Services, Washington, DC 20549

Extension:

Rule 15g–4, SEC File No. 270–347, OMB Control No. 3235–0393; Rule 15g–5, SEC File No. 270–348, OMB Control No. 3235–0394; Rule 17a–8, SEC File No. 270–53, OMB Control No. 3235–0092; Rule 17Ac2–1 and Form TA–1, SEC File No. 270–95, OMB Control No. 3235–0084; Rule 19d–2, SEC File No. 270–204, OMB Control No. 3235–0205.

Notice is hereby given that pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), the Securities and Exchange Commission (''Commmission'') has submitted to the Office of Management and Budget requests for extension of the previously approved collections of information discussed below.

Rule 15g–4 requires brokers and dealers effecting transactions in penny stocks for or with customers to disclose the amount of compensation received by the broker-dealer in connection with the transaction. It is estimated that approximately 270 respondents incur an average of 100 hours annually to comply with the rule.