Republic of the Philippines
PHILIPPINE NUCLEAR RESEARCH INSTITUTE
Department of Science and Technology
Address: Commonwealth Avenue Tel. No.: 97-60-11 to 15
Diliman, Quezon City Fax No.: 95-16-46

NRLSD BULLETIN NO. 94-03 NOTIFICATION AND REPORTING OF INCIDENTS

A. ADDRESSEES

All holders of a radioactive material license.

B. PURPOSE

This bulletin is issued to remind licensees of the regulatory requirement to notify and report significant radiological incidents that occur in their facilities that may affect or threaten the safety of the facility, the workers, and the public. Timely reporting to the Institute of radiological incidents is necessary to ensure immediate assessment of licensee action to protect against radiation hazards and, when necessary, to allow the Institute to respond and provide the appropriate technical support.

C. DESCRIPTION OF CIRCUMSTANCES

It has been observed by the Institute that licensees' compliance with the notification requirements specified in the regulations and the conditions of the license have not been satisfactory. It is not unusual for the Institute to receive information about a radiological incident through the grapevines or for the Institute to be informed only after the notification and reporting period have elapsed. As a result, this specific requirement is ignored and unnecessary injuries or damage to persons and facilities may have occurred without the necessary corrective actions or remedies. This constitutes a violation of the regulations and non-adherence to safety standards. This may be a basis for the imposition of regulatory sanctions.

A most recent incident wherein licensee failed to comply with the notification and reporting requirements is described below:

Licensee: Veterans Memorial Medical Center
Diliman, Quezon City

On June 22, 1993, a cancer patient treated with 100 mCi I-131 at VMMC left the hospital unnoticed by the nurse on duty. The disappearance of the patient was only discovered when the patient's son asked for the whereabouts of the patient. The patient was later located at his residence. The following morning, the patient was found dead. The patient's household contacted the Loyola Memorial Chapel (LMC) in Guadalupe, Makati, Metro Manila. On June 24, the LMC representatives came to PNRI

to inquire about how to handle a "radioactive cadaver". An inspection team was then sent by PNRI to conduct radiation monitoring and to provide the necessary precautionary measures in performing the autopsy and embalment of the radioactive cadaver. PNRI called up the VMMC regarding the incident and the physician in charge confirmed the facts already known. Despite the turn of events relative to the incident, VMMC had not formally notified PNRI as required until six (6) days after the incident occurred.

By the nature of the incident and the events that transpired afterwards, it showed the potential for subjecting the public to unnecessary exposure to radiation from the "radioactive cadaver".

A **Notice of Violation** was issued to the licensee for its failure to comply with notification requirements. Subsequent regulatory actions in connection with other findings were enforced.

D. DISCUSSION

Part 3 of the Code of PAEC Regulations provides that each licensee shall notify the Institute within 24 hours by telephone or by any similarly fast means of communication, of any incident involving a licensed facility, source material, special fissionable material or any other radioactive material possessed by him, which may have caused or threatens to cause unnecessary risk to the health and safety of the public. Such requirement is often reiterated as a specific condition in the license. Examples of occurrences wherein notification and reporting is required are incidents which may have caused or threatens to cause:

(1) Exposure of the whole body of any individual to more than 0.05 Sv (**5 rems**) of radiation;

(2) The release of radioactive material, so that had an individual been present in an area for 24 hours, the individual could have received an intake in excess of one ALI;

(3) Levels of radiation or concentrations of radioactive material (whether or not involving exposure of any individual) in an unrestricted area in excess of ten times of any applicable limit for individual members of the general public;

(4) Substantial potential hazard to persons in unrestricted areas due to loss or theft of radioactive material;

(5) Substantial damage to property.

Licensees should be able to quickly assess the significance of an event and notify the PNRI within the time limit. If the event cannot be clearly assessed to fall under the reporting requirements, the licensee, through his RHSO, should act

conservatively and report the event. Attached is **NRLSD Form 1** which will guide the licensee on the information that should be transmitted to PNRI. This action could preclude the worsening of the incident to a more dangerous situation. The **NRLSD Form 1** should be duly accomplished, may be faxed to PNRI, and kept on file.

In addition, **CPR Part 3** requires that the licensee shall within **30 days** of the occurrence make a report in writing to the Institute concerning the incident. The report shall describe the incident in detail including the following: the licensed material involved; the extent of exposure of persons to radiation or to radioactive material (measured or calculated); levels of radiation involved; the circumstances under which the exposure, levels, concentrations, loss or theft occurred; and corrective steps taken and/or planned to prevent a recurrence. Attached is **NRLSD Form 2** which will guide the licensee in preparing the report to PNRI. This will serve as a permanent record. Guide on how to fill up the forms is given in **Appendix 1**.

The licensee's initiative to notify and report the occurrence of an incident should not be interpreted as reporting an apparent violation but rather to strengthen the responsibility of the licensee to implement radiation protection measures in accordance with the regulations and the conditions of the license by informing the regulatory authority of such occurrence to mitigate any possible adverse effect to the public.

Nevertheless, failure on the part of the licensee to comply with the notification and reporting requirements shall constitute a violation of the license condition and Institute's regulation. The Institute will formally inform the licensee of the violation and would require the licensee to explain why a proposed sanction should not be imposed.

E. REQUIRED LICENSEE ACTION

Licensees are required to comply with the regulatory requirements described in this bulletin. Licensee procedures to comply with the notification and reporting requirements should be developed and regularly reviewed to ensure personnel awareness and its effective implementation.

The Institute expects the **RHSO** of the licensee to be the responsible officer to determine the severity of the incident and to initiate the reporting procedure. While the licensee has the ultimate responsibility for the safety of its licensed activities, it does not prevent the Institute from providing the needed technical expertise and equipment to assist licensees in mitigating or controlling the incident. Prompt reporting according to the regulations of the Institute makes compliance to safety requirements easier. For further inquiries, please contact:

MR. OSROXZON L. AMPARO
Head, Standards Development Section/NRLSD
(Tel. No. 97-60-11 to 15 local 227)

August 15, 1994

NRLSD FORM 1: INCIDENT REPORT (Early Notification)

<table>
<tr><td>1. Name & Address of Licensee:</td><td>2. Name & Position of Person Reporting the Incident:</td></tr>
<tr><td>3. Date & Time of Incident:</td><td>4. Exact Location of Incident:</td></tr>
<tr><td rowspan="2">5. Person Present During the Incident/Readings of Individual Pen Dosimeters: (if available)</td><td>6. Type of Radiation Monitoring Instrument(s) Used During the Incident & their Readings:</td></tr>
<tr><td>7. Quantity/Concentration of Radioactive Material Involved:</td></tr>
<tr><td colspan="2">8. Description of the Incident:</td></tr>
<tr><td colspan="2">9. Actions Taken:</td></tr>
</table>

NRLSD FORM 2: INCIDENT REPORT (30-day Reporting)

1. Name & Address of Licensee:	2. Date & Time of Incident:
3. Exact Location of Incident:	4. Persons Present During the Incident:
5. Persons who were Overexposed at the Time of the Incident / Readings of Individual Pen Dosimeters: (if available)	6. Type of Radiation Monitoring Instrument(s) Used During the Incident:
7. Radiation Measurements:	8. Quantity/Concentration of Radioactive Material Involved:
9. Details of the Incident. Please include illustrations/diagrams/drawings: (Use additional sheets, if necessary)	
10. Corrective Actions Taken and/or Planned: (Use additional sheets, if necessary)	

APPENDIX 1-A

GUIDE IN ACCOMPLISHING NRLSD FORM 1

1. Specify name of the institution, firm, hospital or person licensed by PNRI to handle radioactive material and address where radioactive material is located.

2. Indicate the name of the individual who is making this report and his position title in the organization.

3. Indicate the date and time when the incident occurred.

4. Indicate the place (building, room, section, area) where the incident occurred.

5. Name the persons present in the area when the incident occurred, to include all those who could probably be exposed to radiation due to the incident. Indicate the individual's ID, TIN, SSS No. and readings of individual pen dosimeters, if available.

6. Identify the radiation monitoring device(s) used to monitor radiation levels and the readings indicated in the device(s). Include manufacturer, model number, and serial number.

7. Describe the radioactive material involved in the incident specifying the type, number of sources, form and activity.

8. Describe the incident by narrating the events that actually occurred and the activities being undertaken when the incident occurred. Calculate individual doses based on re-enactment of the incident.

9. Identify actions taken to control the situation, including provisions made, instructions given, and persons informed regarding the incident.

10. Transmit the information to PNRI by telephone, telefax or by any similarly fast means of communication and look for:

MR. DOMINGO B. DOMONDON
Chief, Nuclear Regulations, Licensing
& Safeguards Division

Telephone : 96-73-43; 97-60-11 to 15 local 244
Telefax : (632) 95-16-46
Telex : 66804 PNRI PN

APPENDIX 1-B

GUIDE IN ACCOMPLISHING NRLSD FORM 2

1. Specify name of the institution, firm, hospital or person licensed by PNRI to handle radioactive material and address where radioactive material is located.

2. Indicate the date and time when the incident occurred.

3. Indicate the place (building, room, section, area) where the incident occurred.

4. Name the persons present in the area when the incident occurred, to include all those who could have probably been exposed to radiation due to the incident. Indicate the readings of individual pen dosimeters, if available.

5. List the names of persons who were overexposed at the time of the incident.

6. Identify the radiation monitoring device(s) used to monitor radiation levels, and the readings indicated in the device(s). Include manufacturer, model number and serial number of device.

7. List down the different measurements conducted relative to the incident, to include those of personnel (staff, patient), equipment, and area (ventilation, surface contamination).

8. Describe the radioactive material involved in the incident specifying the type, number of sources, form and activity.

9. Give the details of the incident, specifying the sequence of events. Explain the cause or probable causes of the incident. Diagrams or drawings to clarify the incident would be useful. Conduct a re-enactment of the incident and calculate individual doses.

10. Identify radiation safety measures/actions taken to mitigate any possible adverse effect. Include procedures/programs implemented and/or planned to prevent the recurrence of the incident.