Neville-Synthèse Organics, Inc.
PITTSBURGH, PENNSYLVANIA 15225 412/331-4200

P. O. Box 98
Oil City, PA 16301

MS 16
KO

July 18, 1986

Josephine M. Piccone, Ph.D
Nuclear Materials Safety Section B
Division of Radiation Safety and Safeguards

Ref: Docket No. 030-29281
Control No. 105567

Dear Dr. Piccone:

Enclosed please find the additional information you requested pertinent to our application for a material license.

1) Neville-Synthese Organics, Inc.
Route 8 North
Oil city PA 16301

2) Edward G. Stets
Training received 3/24/86 through 3/28/86 (40 hrs)
Applied Health Physics
P. O. Box 197
Pittsburgh, PA

Please remove the following individuals from item 7 of the application as they have had no formal training.

Frank Sommerfield Andy McAuley
Jamil E. Elayan

3) Neville-Synthese Organics, Inc. makes the commitment that any employee who will operate their device will attend the training and instruction given at the time of installation. A training record will be kept on file for each individual to identify when and by whom the training and instruction was given.

4) Attached are sketches which depict the location of all NSO gauges. There is a controlled gate system that restricts access to the plant except for employees.
Padlocks are installed on the shutter mechanisms of the sources. The key to the padlocks are in the possession of the RSO.

5) Semi-annual inspections and physical inventory are made by the RSO for proper shutter operation, lock in place, visibility of labels and signs, and condition of gauges.

6) Attached are emergency procedures to be followed in the event of accidents involving damage to the gauge.

I hope this additional information meets with your approval. I will be glad to furnish further information as you may deem necessary.

8611200526 860805
REG1 LIC30
37-27849-01 PDR

105567 "OFFICIAL RECORD COPY" ML10

JUL 2 1 1986

E. G. Stets
Radiation Safety Officer
E. G. Stets

jb

BY VLS DATE 1/27/28

CHK'D. BY ____ DATE ____

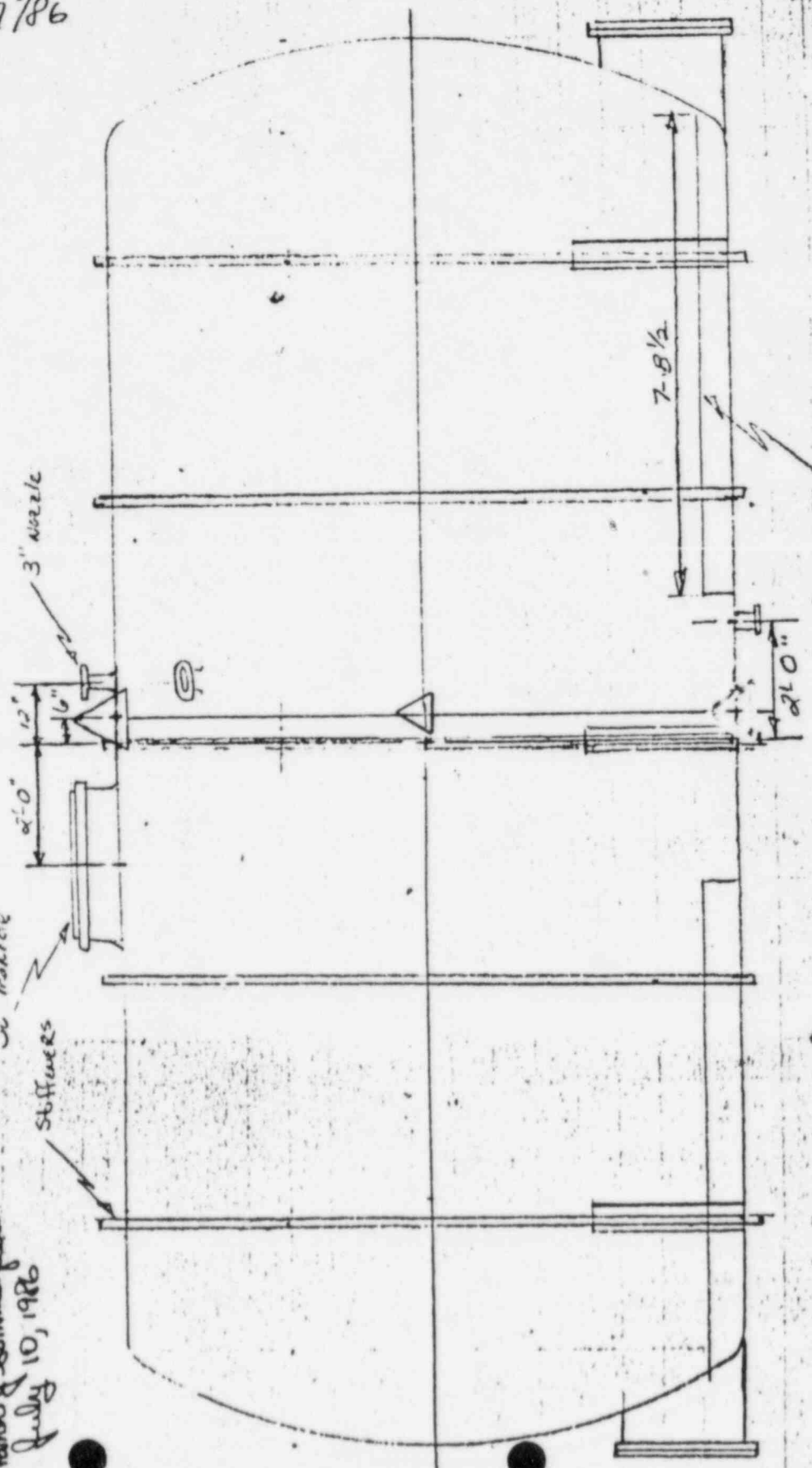
SUBJECT Side view 3'12 & 3'14 bottle level instrument (KAY-RAY) sourser

SHEET NO. 4 OF 4

JOB NO. ____

shit 1 of 1

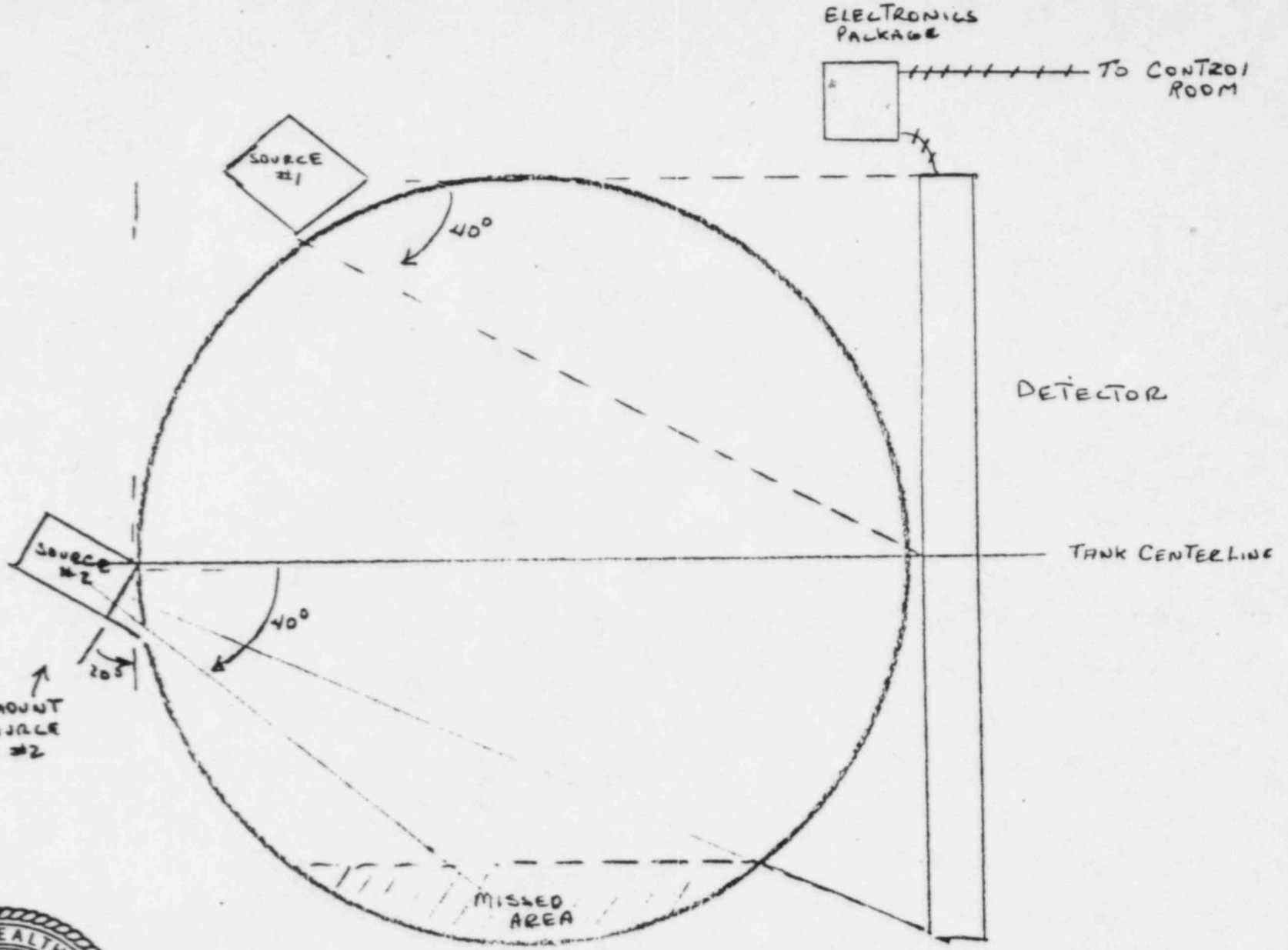
Corrected FJ Sommerfeld 7/9/86



Δ- proposed location of Kay-Ray

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL ENGINEER
FRANK J. SOMMERFIELD
21758-E

Frank J Sommerfield
July 10, 1986



SHOULD WORK OVER ENTIRE RANGE EXCEPT BOTTOM HEEL AREA of ABOUT 1 FOOT IN KETTLE

COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
FRANK J. SOMMERFIELD
ENGINEER
31758-E

Frank J. Sommerfield
July 10, 1986

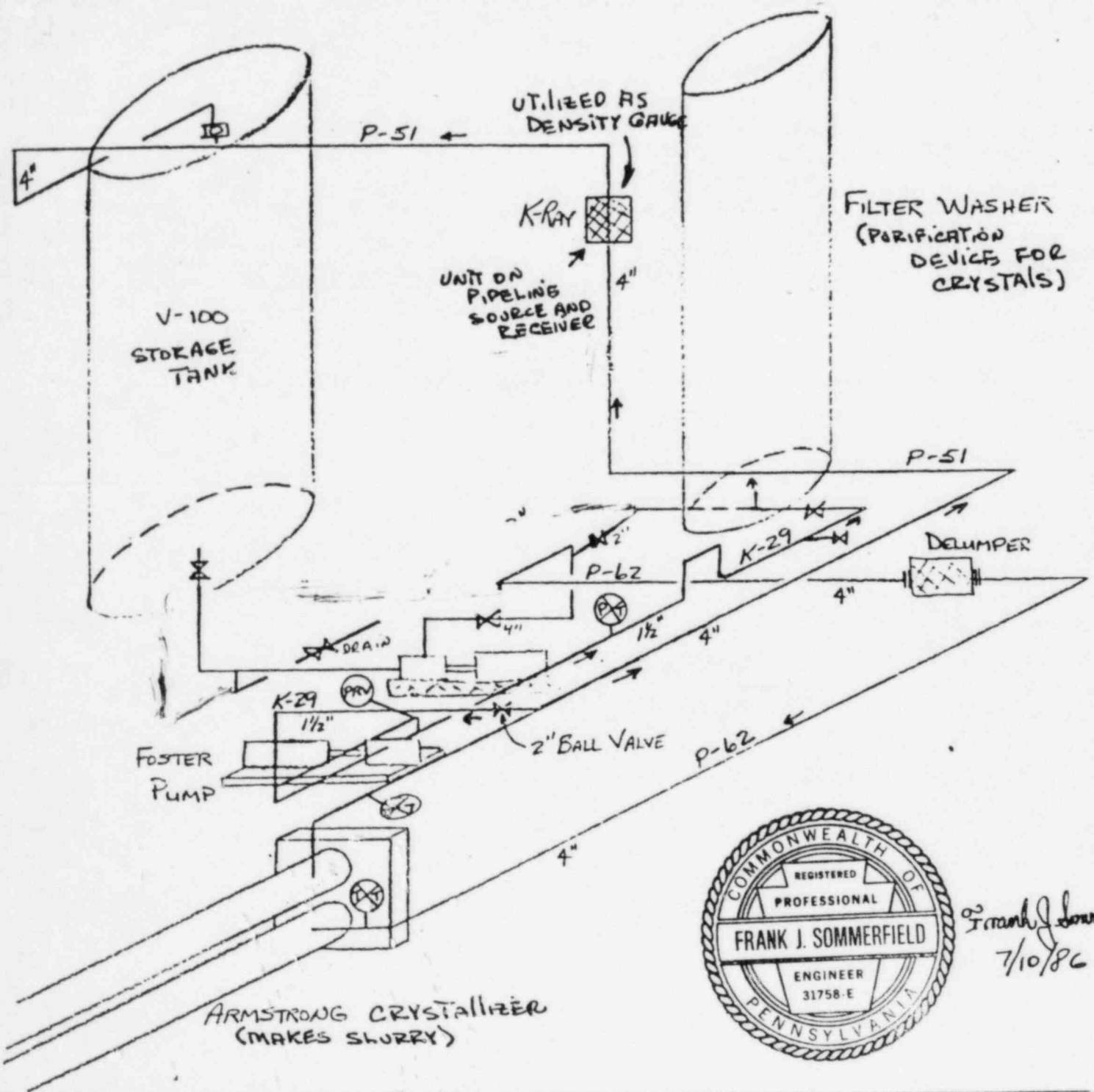
7/9/86 - 340 Kettle renamed 314 Kettle due to process changes.

DETAIL SKETCH
ENGINEERING DEPARTMENT

CHEMICALS AND PLASTICS

INDEX NUMBER			DRAWING NUMBER
LOCATION	SITE	SUBJECT	
JOB NUMBER	ZONE	AREA	UNIT SYMBOL

DESCRIPTION	DRAWN BY	CHECKED BY	REFER TO DRAWING
PIPING ON FILTER WASHER PURIFICATION LINE		FJS	



COMMONWEALTH OF PENNSYLVANIA
REGISTERED PROFESSIONAL
FRANK J. SOMMERFIELD
ENGINEER
31758-E

Frank J. Sommerfield
7/10/86

WORK ORDER	2ND NO.	ISSUED FOR	DATE	REVISION	BY	CKD

936-180-007

EMERGENCY PROCEDURES, NOTIFICATION AND REPORTING OF ACCIDENTS, INCIDENTS, RADIATION DEFECTS AND SOURCES OF IONIZING RADIATION, RADIOACTIVE MATERIALS AND OTHER SOURCES OF ELECTROMAGNETIC RADIATION

General

Any unusual incident or accident related to the use of radiation sources which 1) actually or potentially involves the loss of control over radioactive materials and sources of radiation; 2) human exposure and/or injury; or 3) which may be cause of concern to employees shall be promptly reported and investigated, in order 1) to establish and record facts of the incident or accident, 2) to identify the reporting action required, and 3) to prevent recurrence.

Personnel Monitoring Devices

Personnel taking part in emergency operations shall have on their bodies, monitoring devices such as film or TLD badge or pocket dosimeters. In those cases where there is a likelihood for excessive extremity exposure, finger and/or wrist dosimeters shall be worn. In addition, at least one appropriately ranged direct reading survey instrument shall be provided each working party.

Neville-Synthese Organics, Inc. Notification Requirements

The individual responsible for the proper and safe use of the source of radiation, shall immediately notify the facility manager and the Radiation Safety Officer (RSO) if any situation has occurred that has resulted in actual or potential loss of control of the source, release of radioactive material or has caused actual or potential property damage.

The RSO is responsible for collecting all information concerning the incident, keeping the facility manager fully informed, and reporting details of the incident to the Occupational Health and Product Safety Department- Industrial Hygiene Section (OH & PS-IH) as follows:

	OFFICE	HOME
Primary - E. G. Stets	814-677-2028	814-336-1478
Alternate - R. Kullmann	814-677-2028	814-676-8393

Regulatory Agency Notification Requirements

Those facilities licensed and regulated by the United States Nuclear Regulatory Commission (NRC) shall report any defect in a radiation producing device which may constitute a substantial safety hazard (Title 10, CFR Part 21). Any incident which might need to be reported under this regulation shall be evaluated by the following procedures:

1. An investigation, if necessary, of the incident will be made by a committee composed of the facility manager, plant RSO corporate (Control) RSO, plant and/or group safety personnel.

2. If deemed necessary, by the investigation committee, the appropriate NRC regional office and/or state agency will be notified.

3. A report will then be drafted, finalized and signed by all members of the investigation team. This report, along with a letter of notification, will then be sent to the NRC signed by the plant manager and the responsible individual as designated on the license.

Emergency Procedures

Each facility RSO shall prepare a set of emergency instructions for each sealed source of ionizing radiation. In general, these plans should include an emergency notification list, along with procedures to limit exposure, the release of effluents and the spread of contamination. Where necessary, the procedures shall also include warning systems, evacuation routes and designate a medical care facility. Emergencies may result from:

A. Failure of shielding or mechanical failure of shutter mechanism

B. Fire and/or explosion involving the rupture or melt down of a source holder

C. Fires or other major emergencies where the source(s) cannot be located

Guidance for the Preparation of Emergency Procedures

The following guidance has been extracted from material listed in the reference section of this document:

A. Incident involving the failure of a source to return to its shielded position or where the irradiation port fails to close:

1. Person responsible for using the source shall:

a. Immediately repeat shut-down procedures

b. Immediately inform all personnel in the area of the failure and instruct same to vacate

c. Notify the facility RSO.

2. The Plant RSO shall:

a. Verify the extent of the incident, inform facility management, group safety, and the Loss Control Section.

b. If necessary, initiate the erection of barriers, fences (a minimum of 15 feet in any direction from the source), and signs to prevent casual access to the radiation area where a radiation area is defined in 10 CFR 20.202 as any area in which radiation levels exist where a major portion of the body could receive in any one hour period a dose in excess of 5 millirems

Note: Where available a survey meter should be used to establish safe distances.

c. Notify Control Section personnel for further assistance/instructions

d. Prepare a complete history of the incident, subsequent actions and corrective steps taken, for submission to the appropriate regulatory agency as described previously

B. Fire and/or explosion involving the rupture or melt down of a source holder:

1. The responsible user of the source of radioactive materials or the individual discovering the emergency shall:

a. Immediately sound the alarm

b. Follow normal emergency procedures for evacuation

c. Attempt to put out any fires if a radiation hazard is not immediately present

d. Notify the fire department, the RSO and other local safety personnel

2. The Plant RSO shall:

   a. Verify the extent of the emergency, involvement of a sealed source(s) and inform plant management, group safety, and the Loss Control Section

   b. Advise fire fighting and other rescue personnel of hazards to be anticipated

   c. Instruct fire fighters to keep at least one water stream on the source(s) and surrounding structure(s)

   d. Follow the emergency, monitor the exterior of the area and erect appropriate warning signs, barriers, or establish guard posts to prevent unauthorized access

   e. Permit no persons to resume work or enter the area without prior clearance by the Loss Control Section

      Note: After the situation has been stabilized, a radiation survey of the area and source leak test will have to be conducted.

   f. Prepare a complete history of the incident, subsequent actions and corrective steps taken, for submission to the appropriate regulatory agency as described previously

C. Fires and other major emergencies where the source(s) cannot be located:

   1. The responsible user of the source of radioactive materials or the individual discovering the emergency shall:

      a. Immediately sound the alarm

      b. Follow normal emergency procedures for evacuation

      c. Attempt to put out any fires if a radiation hazard is not immediately present

      d. Notify the fire department, the RSO and other local safety personnel

2. The Plant RSO shall:

   a. Verify the extent of the emergency and inform the plant manager, group safety, and the Loss Control Section as appropriate

   b. Advise fire fighting and other rescue personnel of hazards to be anticipated

   c. Follow the emergency, monitor the exterior of the area and erect appropriate warning signs, barriers, or establish guard posts to prevent unauthorized access

   d. Permit no persons to resume work or enter the restricted area without prior clearance by the Loss Control Section.

3. Control Section personnel will:

   a. After the situation has been stabilized, conduct a survey of the area to locate the source

   b. Upon discovery, wipe test the source and proceed no futher until leak test results are available

   c. Remove the source to an approved storage area, after leak test results show removable radioactive material to be less than 0.005 microcuries

   d. Dispose of the source, in accordance with applicable local, state or federal law, should leak test results equal or exceed 0.005 microcuries

   e. Prepare a complete history of the incident, subsequent actions and corrective steps taken for submission to the appropriate regulatory agency as described previously

Special Cases

Situations where a sealed source is determined to be leaking, based on routine leak testing/surveying or personnel are overexposed to ionizing radiation, will be addressed as follows:

A. Leaking Source

In most cases, source leakage will be detected via leak test swabs or swipes and reported to the Plant RSO.

Any test which reveals the presence of more than 0.005 microcuries of removable radioactive material shall be considered evidence that the sealed source is leaking (Title 10, Part 34, Section .25 Code of Federal Regulations).

1. The following actions are required by the Loss Control Section

   a. Inform plant management

   b. The equipment involved will be immediately withdrawn from service for decontamination/repair or disposal, in accordance with local, state, or federal law, as applicable

   c. Prepare a report to be filed, within five days of the test results, with the NRC describing the following:

      - the equipment involved
      - test results
      - corrective action taken

B. Actions to be Followed in Event of Injury or Overexposure to Personnel Due to Ionizing Radiation

1. The Plant RSO shall:

   a. Report all radiation accidents involving personnel (wounds, overexposure, ingestion, inhalation) to the Loss Control Section

   b. Ensure decontamination is conducted using clean running water

   c. Call a physician qualified to treat radiation injury

   d. Permit no person(s) involved in a radiation injury to return to work without the approval of the medical director and the attending physician

   e. Prepare a complete history of events leading to and subsequent to the injury for the records of the facility and for submission outlined in the notification procedures listed above

References

1. Code of Federal Regulations, Title 10, Part 20.

2. NCRP Report No. 24, Protection Against Radiation from Sealed Gamma Sources.

3. NCRP Report No. 29, Exposure to Radiation in an Emergency.

4. NCRP Report No. 32, Radiation Protection in Educational Institutes.

5. NCRP Report No. 39, Basic Radiation Protection Criteria.

6. National Bureau of Standards Handbook 48, Control and Removal of Radioactive Contamination in Laboratories.

EGS/sm - 7-10-86