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POLICY MEMORANDUM

Radiologic Health Branch Policy No. IPM-88-2

Effective Date of Policy: December 1, 1997
Supersedes Policy IPM-88-2 Effective September 15, 1991

CLEARANCE INSPECTION AND SURVEY

1.0 SCOPE

The objective of this procedure is to verify that a facility where radioactive materials were used has been decontaminated to acceptable levels and to assure that the facility will not present a radiation hazard to future occupants.

2.0 AUTHORITY AND REFERENCE

17 CCR 30194 grants the Radiologic Health Branch (RHB) authority to issue a specific license for use of radioactive material to any applicant that meets all criteria referenced by this section.

17 CCR 30298 requires that licensees notify RHB 30 days prior to vacating any facility that may have been contaminated with radioactive material as a result of their activities. RHB is responsible for determining that radioactive material contamination is not present prior to release of the facility for uncontrolled use.

3.0 INSPECTION PROCEDURES

3.1 Preliminary Review.

Determine the scope of the licensee's program and the potential for site contamination.

3.2 Disposition of Materials.

a. Confirm by inspection of records (inventory, transfer, disposal, etc.), that licensed material has been transferred to an authorized recipient, and/or

b. Verify by inspection of the licensee's facility, that licensed material and radioactive/contaminated equipment, materials, scrap, etc., are not being used or stored. This should be done following receipt and evaluation of requests submitted by the licensee.

3.3 Surveys by Inspection Agencies.

The license reviewer will review each proposed release of a facility amendment request or termination request, including clearance survey's submitted by the licensee, to determine if a closeout or confirmatory survey is necessary. The inspection agency will be notified by licensing if either type survey is necessary. This review will be on a case by case basis, using the following criteria:

a. Those facilities that meet the following criteria do not require a confirmatory survey:

1. An adequate closeout survey has been conducted by the licensee.

2. Use has been limited to small quantities $\leq$ 10 mCi of radionuclides with half-lives of 90 days or less.

3. The use of sealed sources only (if leak tests have been <0.005 uCi).

4. The use of limited materials that pose a very low risk to public health and safety.

b. Those facilities that meet the following criteria do require a confirmatory survey:

1. Use of unsealed radionuclides with half-lives in excess of 60 days where significant residual contamination is possible.

2. An adequate closeout survey has not been conducted by the licensee, or transfer of all sources cannot be confirmed.

3.4 The Conduct of Confirmatory Surveys.

Determine by performing a survey that there is no residual radioactivity greater than the criteria in the attached table, Acceptable Surface Contamination Levels, or that the contamination present in the facility or in the environs does not pose a radiation hazard to the public. This survey should include measurements for both fixed and removable contamination (as appropriate). If the potential for contamination exists outside the facility, environmental samples should be taken.

3.5 Reports and Records.

a. Determine what plans or arrangements have been made for preserving records.

3.6 Final Inspection Report.

Prepare a final inspection report which summarizes the actions taken under this inspection procedure and the findings and evaluations of the inspection staff. Submit the report to the licensing staff using RH 2033 as the cover sheet.

4.0 INSPECTION GUIDANCE

4.1 Conduct of Confirmatory Surveys.

a. Buildings, rooms, furniture, systems and equipment; ventilation ducts, filters, sinks, drains, traps and sumps; overhead fixtures, walls and floors, etc., should all be considered as areas to be surveyed. The number of the confirming measurements made by the inspector will vary with the magnitude of the potential for contamination and the thoroughness of the licensee's survey.

b. The number and type of samples collected for analysis will depend on the determination that a potential exists for facility and environmental contamination and on other findings; i.e., the material involved, extent of area affected, nature of media involved, etc.

c. "As appropriate" is determined on the basis of the potential for environmental contamination and the inspector's professional judgement.

d. Radiation levels should be below those listed in attached table, "Guidelines for Decontamination of Facilities and Equipment Prior to Release for Unrestricted Use". The guidelines in attached table should be made available and used by the licensee during decontamination and/or decommissioning. If levels exceed those listed in the attached table, the licensee should demonstrate that reasonable efforts to decontaminate the facility do not result in an appreciable reduction in the radiation levels. If the radiation levels are greater than the accepted levels and the licensee had made a reasonable effort to decontaminate the facility, the licensing staff should be consulted in determining an acceptable radiation level for release of the facility.

e. A facility release survey should be performed in accordance to the procedure described in Appendix I to the policy memo.

4.2 Final Inspection Report.

The final inspection report becomes the official certification of the disposal of licensed material. The final inspection report forms the basis for retiring both the licensing and inspection files.

Edgar D. Bailey, Chief

ACCEPTABLE SURFACE CONTAMINATION LEVELS

NUCLIDE[a]	AVERAGE[b c]	MAXIMUM[b d]	REMOVABLE[b e]
U-nat, U-235, U-238, and associated decay products	5,000 dpm α/100 cm^2	15,000 dpm α/100 cm^2	1,000 dpm α/100 cm^2
Transuranics, Ra-226, Ra-228, Th-230, Th-228, Pa-231, Ac-227, I-129	100 dpm/100 cm^2	300 dpm/100 cm^2	20 dpm/100 cm^2
Th-nat, Th-232, Sr-90, Ra-223, Ra-224, U-232, I-125, I-126, I-131, I-133	1000 dpm/100 cm^2	3000 dpm/100 cm^2	200 dpm/100 cm^2
Beta-Gamma emitters (nuclides with decay modes other than alpha emission or spontaneous fission) except Sr-90 and others noted above.	5000 dpm β-γ/100 cm^2	15,000 dpm β-γ/100 cm^2	1,000 dpm β-γ/100 cm^2

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[a]Where surface contamination by both alpha- and beta-gamma-emitting nuclides exists, the limits established for alpha- and beta-gamma-emitting nuclides should apply independently.

[b]As used in this table, dpm (disintegrations per minute) means the rate of emission by radioactive material as determined by correcting the counts per minute observed by an appropriate detector for background, efficiency, and geometric factors associated with the instrumentation.

[c]Measurements of average contaminant should not be averaged over more than 1 square meter. For objects of less surface area, the average should be derived for each such object.

[d]The maximum contamination level applies to an area of not more than 100 cm^2.

[e]The amount of removable radioactive material per 100 cm^2 of surface should be determined by wiping that area with dry filter or soft absorbent paper, applying moderate pressure, and assessing the amount of radioactive material on the wipe with an appropriate instrument of known efficiency. When removable contamination on objects of less surface area is determined, the pertinent levels should be reduced proportionally and the entire surface should be wiped.