

Applied Radiological Control, Inc.

HEALTH AND SAFETY PROCEDURE

TITLE Posting & Control of Areas

NUMBER 1.8

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APPLIED RADIOLOGICAL CONTROL, INC.

HEALTH & SAFETY PROCEDURE 1.8

POSTING & CONTROL OF AREAS

1.0 Purpose

- 1.1 This Procedure describes the method for posting and control of areas for the purpose of protecting individuals from exposure to radiation or radioactive materials.

2.0 Scope and Responsibilities

- 2.1 This Procedure applies to all Personnel working on a job site where the potential exists for personnel exposure to radiation or radioactive materials.
- 2.2 The Health & Safety Supervisor is responsible for implementation of this procedure.

3.0 Definitions

- 3.1 Restricted Area - Any area, access to which is limited for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials.
- 3.2 Radiation Area - Any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 5 milliRem in one hour at 30 centimeters from the radiation source of any surface that the radiation penetrates.
- 3.3 High Radiation Area - Any area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 100 milliRem in one hour at 30 centimeters from the radiation source or any surface that the radiation penetrates.
- 3.4 Very High Radiation Area - Any area, accessible to individuals, in which radiation levels could result in an individual receiving an absorbed dose in excess of 500 Rads in one hour at 1 meter from a radiation source or any surface that the radiation penetrates.
- 3.5 Airborne Radioactivity Area - Any room, enclosure or operating area in which airborne radioactive materials exist in concentrations (1) in excess of the derived air concentrations (DACs) specified in Appendix B to 10 CFR 20.1001 - 20.4001, or (2) to such a degree that an individual present in the area without respiratory protective equipment could exceed, during the hours that an individual is present in a week, an intake of 0.6 percent of the annual limit on intake (ALI) or 12 DAC-hours.
- 3.6 Radioactive Materials Area - Any area or room in which licensed material is used or stored and which contains an amount of licensed material in excess of 10 times the quantity of material specified in Appendix C to 10CFR 20.1001 - 20.4001.

4.0 Posting of Areas

- 4.1 Areas posted in accordance with this procedure should be delineated by a definitive physical boundary such as a fence, rad ribbon or the door to a room. Each side and entrance to the area shall be conspicuously posted with a yellow and magenta sign bearing the standard tri-foil radiation warning symbol, the word "caution" or "danger" and the appropriate warning for the hazard present in the area (i.e. "Radiation Area" or "airborne radioactivity area"). Very High Radiation Areas shall be posted with signs bearing the words "Grave Danger, Very High Radiation Area."
- 4.2 Radioactive materials outside of a controlled area shall be marked with a durable, clearly visible label bearing the radiation symbol, the words "Caution Radioactive Material" and information identifying the material such as isotopes, concentrations, exposure levels, etc.
- 4.3 In addition to the posting requirements, entryways to High Radiation Areas shall be locked except during periods when access to the area is required with positive control over each individual entry.
- 4.4 Very High Radiation Areas shall have addition access control measures to ensure that an individual is not able to gain unauthorized or inadvertent access to the area.

5.0 References

10CFR20 "Standards for Protection Against Radiation"