individuals who enter areas to perform services such as maintenance or cleaning should be provided information on the location of radioactive material and should be instructed to avoid contact with radioactive material.

For interpretation of this rule, the words ''* * * likely to receive * * *'' include normal situations as well as abnormal situations involving exposure to radiation which can reasonably be expected to occur during the life of a licensed facility. For example, reactor licensees should consider both normal operations and anticipated operational occurrences (AOOs). AOOs can include, for example, unplanned onsite events involving spills of reactor coolant; sudden increases in external radiation levels (loss of shielding); and a loss of control of radioactive materials leading to a localized high airborne radioactivity area. However, reactors would not need to consider for the purpose of 10 CFR 19.12(b) those design basis accidents analyzed in FSARs which are not reasonably expected to occur but which are hypothesized or postulated for the purpose of establishing conservative design requirements for safety equipment.

The decision as to whether a specific worker is likely to receive in a year a dose in excess of 100 mrem (1 mSv) cannot be based solely on past experiences at a given facility or the exposure history of the individual. These decisions may need to take into account the impact training might have on maintaining exposures below 100 mrem (1 mSv) in a year for certain workers.

For example, certain workers such as janitors or maintenance workers who either frequent restricted areas or work in the vicinity of restricted areas, and are likely to receive doses in excess of 100 mrem (1 mSv) unless properly trained, should receive training sufficient to prepare them to avoid unnecessary exposure. On the other hand, clerical workers, who may work in restricted areas but whose duties are unlikely to involve direct interaction with radioactive material, are unlikely to receive doses in excess of 100 mrem (1 mSv) in a year, and for whom training would have no bearing on exposures, would not necessarily require training just because of the location of their work.

The final rule adds the following language to 10 CFR 19.12(b) to clarify that these situations would be included in the phrase ''likely to receive'': In determining those individuals subject to the requirements of paragraph (a) of this section, licensees must take into consideration assigned activities during normal and abnormal situations involving exposure to radiation and/or radioactive material which can reasonably be expected to occur during the life of a licensed facility. This clarification has been integrated with the existing requirement that the training should be commensurate with the potential health protection problems present in the workplace. Further, the format of § 19.12 is revised to clearly indicate the requirements for training which previously were combined in a single long paragraph.

The proposed rule would have deleted the definition of, and numerous references to, the ''Controlled Area.'' The intent was to make it clear that any area to which access is restricted for the purpose of radiological protection is a ''Restricted Area'' as defined in the regulation and thus appropriate radiation protection measures associated with restricted areas would apply. Neither the existing definitions nor the supplemental information to the new regulations provide a basis for deciding whether to designate a given area as a ''Restricted Area,'' or a ''Controlled Area,'' and there was a concern that some confusion had resulted regarding how to implement the new standards.

Deletion of ''Controlled Area'' was supported by three Agreement States and several materials licensees. However, six power reactor licensees and the Nuclear Energy Institute (NEI), argued that deletion of ''Controlled Area'' would constitute a major and costly backfit. The commenters stated that nuclear power plants have areas that sometimes exceed 2 mrem (0.02 mSv) in an hour, but to which access can easily be restricted so that no one can exceed 100 mrem (1 mSv) in a year. The power reactor licensees argued that to change written procedures and facilities to remove existing ''Controlled Areas'' would be costly. These licensees believed that using controlled areas permits better ''defense'' of restricted areas. Also, the utilities said that if unrestricted area boundaries were moved inward, power licensees could have difficulty monitoring occupancy and calculating effluent doses to demonstrate compliance with the public dose limits. The commenters stated that if restricted area boundaries were moved outward, the cost of applying unneeded radiation protection measures to large areas would be extensive. NEI stated that the cost per plant to delete the term ''Controlled Area'' now would be from 10 to 100 thousand dollars per plant with no significant benefit to health and safety.

The NRC agrees with the backfit argument. The concept of Controlled Area is not deleted from 10 CFR Part 20.

The proposed rule would have revised the definition of ''Public Dose'' so that a licensee was responsible for dose to any member of the public, from effluents or any other source of radiation under the control of the licensee, regardless of location. The current rule limits dose to a member of the public from radiation within a licensee's controlled area or in unrestricted areas, but permits member of the public to receive a dose up to the occupational limit within the licensee's restricted area. Public comment supported the proposed change and it is adopted in the final rule. The definition of ''Public Dose'' thus means the dose received by a member of the public from exposure to radiation and/or radioactive material released by a licensee, or to any other source of radiation under the control of a licensee. The change is consistent with the new definition of ''Occupational Dose,'' also made final by this rulemaking action, and eliminates the possibility that a member of the public could become subject to occupational dose limits simply by entering a restricted area. This change also makes it clear that licensees are not responsible for doses from sources not under their control. This change does not relieve a licensee from responsibility for, nor does it limit a licensee's flexibility in, determining whether individual doses received are occupational or public. Further guidance on this issue is provided in question and answer numbers 26 and 444 in NUREG/CR–6204,[1] ''Questions and Answers Based on Revised 10 CFR Part 20.''

The proposed rule included a revision to the definition of ''Member of the Public,'' so that an individual is a member of the public except when that individual is a worker receiving an occupational dose. Part 20 currently defines ''Member of the Public'' as an individual in a controlled or unrestricted area. This permits the radiation dose to a member of the public to be controlled by occupational dose limits rather than public dose limits solely because the individual entered a restricted area. The proposed change was supported by public comment and

[1] Copies of NUREGs may be purchased from the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013–7082. Copies are also available from the National Technical Information Service, 5285 Port Royal Road, Springfield, VA 22161. A copy is also available for inspection and/or copying at the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.