

Environmental Radiation Surveillance Gamma Radiation Readings: Beginning 1995 Glossary

**Center for Environmental Health
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Health Data NY

Glossary

This glossary has been added in order to define technical terms that are used in the various supporting documents for this dataset. Please refer to the Data Dictionary for an explanation of the meaning of the column headings in the dataset.

1. **Control** – A TLD used as a reference monitor during the process of placing the device in the field, the period it is in the field and associated transportation from and to analytical laboratory.
2. **Background** – A TLD placed/posted in an area not impacted by a facility which uses or produces radioactive material. Readings from this location reflect naturally occurring radioactivity and can be used as a point of reference.
3. **Ionizing Radiation**- Radiation capable of displacing electrons from atoms or molecules.
4. **millirem (mrem)**-a unit of dose resulting from ionizing radiation; an mrem is 1/1000 of a rem. For relative comparison, the dose from a typical chest x-ray is 10 mrem (or $10 \text{ mrem} \times 1 \text{ rem}/1000 \text{ mrem} = 0.010 \text{ rem}$).
5. **Nuclear Power Plant**- An electrical generating facility using a nuclear reactor as its power (heat) source.
6. **Environmental Thermoluminescent dosimeter (TLD)**- a type of radiation detection device that is used to measure level of dose to ionizing radiation in an area. It is characteristic of TLDs that radiation produces internal changes that cause the material, when subsequently heated, to give off a measurable amount of light directly proportional to the radiation dose. TLDs cannot be read directly; they must be analyzed by a laboratory.