At the end of each day, the Scale House Attendant generates a report showing the total tonnage received, and tonnage received from individual sources. The scale computer database allows a number of reports to be generated depending on the nature of the information required in the report. For example, the scale computer database is used to provide data for the facility's annual report. Waste quantity tracking records are to be maintained at the facility for at least seven years.

8.2 Radiation Monitoring Protocol

For the purpose of ensuring that regulated radioactive waste is not accepted at the landfill for disposal, radiation detectors shall be installed, operated and maintained in accordance with the following procedure. Upon arrival at the facility, each inbound load entering the landfill shall be screened for radioactivity using a Ludlum Model 375 Waste Monitor, or equivalent, located at the scale/weigh station. This monitor is a "drive through" system that scans the waste hauling vehicles as they pass between 2 radiation detectors at slow speed or stopped on the scale. A log of daily background readings will be maintained at the facility. The system shall be calibrated at least annually. Field checks utilizing a source sample will be performed on a weekly basis. These documented field checks will ensure that the alarm is functioning within the calibration standards.

In order to demonstrate a correlation between kcps and pCi/g, the facility will obtain six (6) samples from waste entering the landfill. Three (3) samples will represent loads that have no elevated radiation levels associated with them. The remaining samples will be taken from loads that trigger an investigation level condition. Radiation monitoring information will be obtained for each sample at the time of sampling. The samples will then be sent for radiological analysis by an appropriately certified laboratory. The sample results will be compared to the data collected on-site to further calibrate the monitors. In the event that no loads trigger an investigative level condition, other Department approved methods may be used to demonstrate a correlation.

As a truck passes the detectors at the scale, the radiation monitoring system measures the radiation level emitted by the truck in kilo counts per second (kcps). The number of kcps over the normal "background" radiation level of the area is compared to the alarm setpoint

indicated on the digital read-out in the scale house. The alarm set point is determined during annual calibration to warn of possible radioactive materials in the truck that may exceed certain limits. Backlit indicators and a beeper warn of an investigation alarm level. A green status light is an indication of normal instrument operation.

In the event that the alarm sounds, the scale house attendant shall immediately notify the truck driver to stop and shall contact onsite landfill management. The scale house attendant shall record the reading on the Radiation Monitor Alarm Record in Attachment 2K and instruct the driver to pull off of the scale and park in the designated area away from the detectors.

It is possible that the driver may be the source of the radiation, and in an effort to determine what has activated the detector, the driver will be asked to walk near one of the detectors to rule out that possibility. If the alarm sounds due to the driver, he/she shall be asked to pull the truck back on the scale and park it and then walk at least 75 feet away so that the monitor reading of the truck alone can be determined (or use an alternate driver). If the truck alone does not cause an alarm, it may pass through. There is no restriction on the driver if he is the source of the alarm due to a medical procedure. The scale house attendant shall complete the Radiation Monitor Alarm Record and file it.

If the alarm is due to the load, the truck will again be driven through the detectors and stopped so that the detectors are centered on the load. A stabilized reading will be obtained. If only the Sigma alarm was triggered initially and the stabilized reading is less than the investigation level, the load will be considered acceptable and the load will be accepted at the landfill. If the initial alarm reading exceeded the investigation level and if after the stabilized reading is obtained the result still exceeds the investigation level, a trained management representative will determine the type of radioactivity in the load in compliance with the Facility's "Calculation of Radiation Monitor Alarm Setpoint and Procedures to Reject or Accept NORM" using hand-held radiation detector readings, visual observation, gamma spectrometer readings, and discussion with the generator. The trained representative shall follow the "Calculation of Radiation Monitor Alarm Setpoint and Procedures to Reject or Accept NORM" and shall complete the Radiation Monitor Alarm Record started by the Scale

House Attendant. Attachment 2K contains the Radiation Monitor Alarm Record and Appendix D contains the Calculation of Radiation Monitor Alarm Setpoint and Procedures to Reject or Accept NORM.

Possible types of materials with elevated levels of radioactivity include:

- NORM – Naturally-Occurring Radioactive Materials that have not been concentrated or enhanced such as rock, drilling cuttings, brick, non-commercial use of gypsum (plaster), sand blast media, ceramics (firebrick), colored glass, etc. Such materials may be accepted into the landfill if the concentration of radium-226, uranium-238, and thorium-232 are all less than 25 pCi/g when averaged over all such loads received during the calendar year. Any individual truckload may be accepted if concentrations of radium-226, uranium-238, and thorium-232 are all less than 50 pCi/g. To keep the average concentration of all of these radionuclides in the landfill to less than 25 pCi/g, the landfill may accept up to 5 loads per week with concentrations between 25 and 50 pCi/g. The investigative alarm setpoint is to be set at five (5) times background radiation levels.

- Processed and Concentrated Naturally-Occurring Radioactive Materials such as filter or evaporator sludges, furnace slag, titanium or fertilizer purification wastes, etc. in which the concentration of radionuclides has been increased over the natural material's concentration in the environment by the application of heat, filtration or chemical extraction. Such materials may NOT be accepted into the landfill.

- Medical Use Radionuclides such as iodine-131, iodine-125, technetium-99m, thallium-204, and other short-half-life nuclides may NOT be accepted into the landfill. Examples are vials, syringes, etc. improperly disposed of by a radiopharmacy or hospital directly into in bound waste loads.

- Industrial, military or commercial use radionuclides may NOT be accepted into the landfill. Examples are luminous dials or markers (radium), static eliminators or thickness gauges (strontium-90, krypton-85, etc.), non-destructive testing or

medical sources (cesium-137, cobalt-60, iridium-192, etc.), uranium counterweights, exit signs, commercial smoke detectors, thoriated aircraft engines, welding rods, etc. Inadvertent or purposeful disposal of such materials must be reported to the NYSDEC and NYSDOT.

- Liquids containing elevated concentrations of radioactivity such as gas well brine are NOT acceptable for disposal.

Immediately after the investigation, the staff member will notify the NYSDEC Region 8 Materials Management Section (585.226.2466) and Central Office Radiological Sites Section (518.402.8579) via telephone. A written record detailing the incident will be included in the facility's operational report to the State. The site staff will work cooperatively with the regulatory agencies to determine the best course of action at the time of the alarm notification.

If a situation arises where the "drive through" radiation detectors become inoperable, the facility will use the hand-held meters to perform the initial scan on the inbound vehicles.

If a driver drives away after an alarm and before the load has been investigated, the staff member or scale house operator shall immediately call the NYSDEC Region 8 and Central Office, and the New York State Police.

If a load containing regulated radioactive materials is to be released for return to the generator or for transport to a different facility, then the transporter must obtain a DOT-authorization form from the NYSDEC. A load shown to contain a medical isotope that had passed through a patient does not need a DOT authorization form – according to State regulation the load does not contain a regulated radioactive material.

Landfill staff will receive training on an annual basis related to the radiation system site operational procedures. Radiation system training will also include manufacturer provided training or the equivalent in system operation and trouble shooting.