5.2.1.3 Compliance Monitoring

Detection and Monitoring Requirements

Procedures for and frequencies of monitoring, testing, collection of analytical data, inspections, response, and reporting must ensure compliance with 40 CFR §264.601. The permit applicant must follow appropriate guidance in monitoring for air quality and meteorologic parameters, as needed. Estimation of the air emissions from an OB/OD unit can be accomplished through emissions calculations to determine the incremental effects of operation of the unit on the overall air quality in the area. For OB/OD units, air compliance monitoring will be required for gaseous emissions, at the least. Concerns about hazardous particulates can be addressed through periodic soil sampling of areas downwind of the OB/OD operations. All EPA guidelines establishing the appropriate methods should be followed, including those governing the appropriate equipment for each type of sampling, such as that for particulates, VOCs, SVOCs, and other specific compounds of concern. Each situation must be evaluated separately because the wastes to be treated differ.

The design of a network for measurement of criteria and noncriteria air pollutants for compliance will be affected by many factors, such as topography, climatology, population, and other existing emission sources. The ultimate design of a air quality network to be used for risk assessment must be determined

on a case-by-case basis. EPA's *Ambient Monitoring Guidelines for Prevention of Significant Deterioration* (EPA 1987) provides guidance for siting an air quality monitoring network. Presented below are some general guidelines for reviewing plans for siting such networks.

Air quality monitors should be located at a height of approximately three meters for monitoring human health concerns. Locations should be chosen at areas of expected maximum air concentrations of pollutants and boundaries of the site as well as upwind locations to determine background air quality. To the extent possible, the area chosen should be free of obstructions within a reasonable distance of the unit. The permit writer should be able to review a map that provides all siting locations (based on wind direction) that the applicant believes will be affected. The plan must discuss how the sampling stations will be selected for a given burn or detonation and, if sufficient stations are not provided to cover all potential downwind locations, how sampling equipment will be transported to and set up at new locations.

Frequency of sampling will be based on OB/OD operations and meteorological conditions specific to each situation. The permit writer must determine that the frequency of sampling matches the frequency of OB/OD operations.

All ambient air quality monitoring for particulates, VOCs, SVOCs, and any other compounds of concern for OB/OD operations must follow approved reference methods. The permit applicant must provide detection limits for each contaminant for which analysis is to be conducted. The permit writer should determine that the contaminants identified are those expected from the OB/OD operation, particularly when several types of waste are to be treated.

Generally, the number of monitors will increase as the expected spatial variability of the pollutant in the area(s) of study increases.