JEFFERSON COUNTY DEPARTMENT OF HEALTH
Environmental Health Services
Air and Radiation Protection Division

Dispersion Modeling Protocol Submissions

Applicants intending to submit a modeling compliance demonstration with a permit application are expected to meet with JCDH Air and Radiation Protection Division (ARPD) staff and to submit a modeling protocol document prior to beginning modeling efforts to save time in the permit review process and to avoid any misunderstandings. **A written modeling protocol must be submitted to and approved by the ARPD staff before modeling can commence.** If the results of a screening analysis indicate that refined modeling is necessary, another modeling protocol must be submitted and approved before refined modeling can commence. There will be a fee for review of a modeling protocol. Please see Jefferson County Board of Health's *Air Pollution Control Rules and Regulations* for the fee schedule.

The information below should be included within a modeling protocol:

- General discussion about the facility (i.e., processes, location, why modeling needs to be done, pollutants applicable to the project);
- Detailed plot plan of the facility that includes all buildings (including dimensions), all emission sources being modeled clearly labeled and highlighted locations of property lines and fence lines. The plot plan should also include UTM coordinates or the latitude and longitude of at least one point, a true north indicator, and a scale;
- Topographic map with the facility labeled, a scale, and a contour interval;
- Proposed model(s) to be used in the analysis;
- Emission parameters (i.e., stack height, stack exit velocity, stack diameter, stack gas temperature);
- Complexities in modeling (i.e., consideration of fugitive emissions, merged parameters for multiple stacks, modeling merged flows out a single stack, stack height changes, byouyant volume and area sources, obstructions to flow with rain caps or a downward release);
- Buildings/structures that influence building downwash (onsite and offsite), if applicable;
- Description of meteorological data to be used (on site, nearby National Weather Service observations, or prognostic meteorological model data) and data representativeness analysis, if applicable;
- Location of PSD Class I areas, if applicable;
- Use of non-default options, if applicable;
- A discussion on how a land use analysis will be done to determine using rural or urban dispersion coefficients in modeling.