

**PROJECT:** White Oak Energy Center, Danville, VA

**CLIENT:** BEST Consulting

Epsilon conducted a full air quality dispersion analysis for a proposed 680 MW electric generating plant in Virginia. The AERMOD dispersion model was used to assess the air quality impacts in the surrounding Class II area. Various operating scenarios were modeled and the predicted concentrations were compared to the Significant Impact Levels (SILs). In addition, the CALPUFF model was used to conduct a Class I increment analysis, sulfur and nitrogen deposition analysis and a regional visibility impairment assessment at Shenandoah National Park.



**PROJECT:** Indirect Source Air Quality Analyses, MA

**CLIENT:** Boston Convention Center, South Station,  
33 Arch Street, Cambridge Research Park,  
Parcel F, Harvard University, and Battery Wharf



Epsilon conducted indirect source modeling analysis consisting of microscale and mesoscale analysis for the Boston Convention Center. Epsilon has conducted numerous similar studies in support of large real estate projects in the City of Boston and the surrounding area.

**PROJECT:** Merchant Power Plant Modeling Analyses

**CLIENT:** Sithe Fore River Station, Weymouth, MA

Epsilon conducted modeling analyses for aesthetic impact analyses, visible stack plume modeling was conducted. Visible plumes from cooling towers were also assessed as well as salt deposition due to the cooling tower drift. Deposition modeling of ammonia and total nitrogen to watershed areas was evaluated. Coastal fumigation was modeled from a shoreline source. Cumulative impacts were evaluated by conducting multi-source modeling. Epsilon has conducted similar analyses for other power plants, including Nickel Hill Energy, (Constellation Power); North Smithfield, RI, (Indeck); Mantua Creek, (PG&E).



**PROJECT:** Air Modeling Alumina Refinery, Halse Hall, Jamaica, West Indies

**CLIENT:** Aluminum Company of America/JAMALCO, Halse Hall, Jamaica, West Indies

Epsilon conducted an air quality modeling analysis in support of an air pollutant discharge license application for existing sources at the Clarendon Alumina Works plant. The emissions modeled are emitted from fuel oil combustion sources and mineral processing operation sources.



**PROJECT:** Site Feasibility Study for New Fire Training Facility, Chicopee, MA

**CLIENT:** MassDevelopment with MA Department of Fire Services

Epsilon led a feasibility study for the proposed siting of a new fire training facility. A major component of the study was analysis of smoke dispersion using the Industrial Fire Simulation (IFS) model. Because the study area is adjacent to residential development, the IFS model was implemented to assess smoke plume migration patterns. This model accounts for meteorological data and allows input for volumes of combustible material (i.e., hay bales, wood pallets) to create a 3-dimensional model to assess smoke constituent concentrations over time.



**PROJECT:** Accidental Release Modeling and Risk Management Plan, Bellingham, MA

**CLIENT:** Northeast Energy Associates (NEA)

Epsilon conducted accidental release modeling and prepared the Risk Management Plan (RMP) for a carbon dioxide recovery plant. Epsilon prepared the Risk Management Plan for an anhydrous ammonia refrigeration system. Air quality modeling utilizing the HGSYSTEM model was used to determine distance to toxic endpoint for an accidental ammonia release.

