

## Handout #1

### NJDEP FACT SHEET

#### New Jersey's Section 126 Petition Against the Portland Generating Station for SO<sub>2</sub> Emissions Impacting Warren County, New Jersey

##### Section 126 of the Clean Air Act:

- Section 126(b) of the Clean Air Act: Allows a State to request expeditious and direct action by the USEPA against an entity in another state if pollution from that entity is causing the state not to meet or stay in compliance with federal air quality standards.
- Purpose of New Jersey's Section 126 Petition: To address the impact of the emissions from Portland Generating Station (located in Pennsylvania) on attainment/maintenance of the 1-hour SO<sub>2</sub> National Ambient Air Quality Standards (NAAQS) in New Jersey, specifically, Knowlton Township, all of Warren County, and parts of Sussex, Morris and Hunterdon Counties. (See Handout #2)

##### Portland Generating Station:

- The Portland Generating Station (Portland Plant) is a power plant that is located on the Delaware River in Upper Mount Bethel Township, Northampton County, Pennsylvania. (See Handout #3)
- The Portland Plant is upwind of and within 500 feet of Warren County, New Jersey.
- Air pollution from Portland's 400 foot smokestacks have the greatest adverse impact on New Jersey's 400 foot elevated terrain that is directly across the Delaware River border.
- The Portland Plant's sulfur dioxide (SO<sub>2</sub>) emissions in 2009 were greater than emissions from all electrical generation facilities in New Jersey combined. (See Handout #5)
- The coal-burning Units 1 and 2 at the Portland Plant have no air pollution controls for SO<sub>2</sub> emissions and outdated controls for nitrogen oxides and particulate matter. There are 3 other combustion units at the facility that run on natural gas.

##### National Ambient Air Quality Standard

- **SO<sub>2</sub> 1-Hour Primary Standard = 75 ppb**; Final rule signed June 2, 2010. To attain this standard, the 3-year average of the 99th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 75 ppb.
- **Primary standards** are set to protect public health, including sensitive populations such as asthmatics, children, and the elderly.

##### Air Quality Modeling

- Air quality modeling is the mathematical prediction of ambient concentrations of air pollution, based on emission levels, stack height, terrain, and meteorological data.

- New Jersey used air quality models to predict the impacts from the Portland Plant in New Jersey. The USEPA standard model is AERMOD. EPA allows for alternative models if deemed appropriate. New Jersey used the CALPUFF model to address the unique terrain features and complex wind fields generated in the area. New Jersey also used AERMOD, and both AERMOD and CALPUFF predicted exceedances of the 1-hour SO<sub>2</sub> standard.

### **Health Impacts of Sulfur Dioxide (SO<sub>2</sub>)**

- SO<sub>2</sub> human health impacts include coughing, wheezing, shortness of breath, and inflammation of asthma.
- SO<sub>2</sub> public welfare impacts include acid rain and acid deposition, which may cause lakes and ponds to become acidic.
- SO<sub>2</sub> is also a major precursor to fine particulate matter, which has been linked to respiratory illness, asthma in children, heart and lung disease, and premature death.

### **New Jersey's 126 Petitions**

- May 12, 2010 petition addressed impacts to the 24-hour primary and 3-hour secondary sulfur dioxide (SO<sub>2</sub>) and 24-hour primary fine particulate matter (PM<sub>2.5</sub>) NAAQS.
- September 17, 2010 petition addressed impacts to the 1-hour primary SO<sub>2</sub> NAAQS.
  - SO<sub>2</sub> modeling results show 1-hour NAAQS violations from Portland's emissions alone; no background levels were included.
  - New Jersey's modeling assessment of the Portland Plant's actual emissions predicted a maximum SO<sub>2</sub> concentration in New Jersey at 10 times greater than the 1-hour standard.
  - For allowable emissions (operating at maximum capacity), New Jersey's modeling assessment predicted maximum SO<sub>2</sub> concentrations seen in New Jersey are over 17 times the 1-hour standard.
  - A trajectory analysis was conducted and indicated the Portland Plant caused elevated episodes of SO<sub>2</sub> measured at the Chester, New Jersey monitor in 2008 and 2009 (See Handout #6). The Chester monitor is located 21 miles east-southeast of the Portland Plant, in a rural, non-industrial area.
- A monitor close to Portland that began measuring concentrations in September 2010 also shows exceedances of the SO<sub>2</sub> standard. (See Handout #7)
  - Exceedances of the 1-hour SO<sub>2</sub> NAAQS threshold were measured on 9 days between September 2010 and February 2011.
  - Measured exceedances were similar to those predicted by New Jersey's CALPUFF model. A letter from NJDEP Commissioner Martin transmitting an analysis of the Columbia monitoring to the USEPA, and the report itself, can be found on the NJDEP's website at <http://www.state.nj.us/dep/baqp/petition/126petition.htm>
- New Jersey's remedial action recommendations to USEPA for the Portland Plant include the installation and operation of appropriate air pollution control technology, such as scrubbers,

and to impose more stringent emission limitations similar to those existing in New Jersey, based on Reasonable Available Control Technology rules at N.J.A.C. 7:27-1.1 et seq., within a minimum of three years. Scrubbers achieve 95-98% SO<sub>2</sub> reductions and are installed at utilities in New Jersey and throughout the country.

**Additional Information:**

- New Jersey 126 Petition Submittals to USEPA:  
<http://www.state.nj.us/dep/baqp/petition/126petition.htm>
- EPA Federal Notice for Proposed Action on the Clean Air Act Section 126 Petition from New Jersey - Sulfur Dioxide Emissions from the Portland Generating Station:  
<http://www.epa.gov/ttn/oarpg/t1pfpr.html>