

NOAA's Atmospheric Mercury Monitoring in the Gulf of Mexico Region

January 17, 2008

In September 2006, the National Oceanic and Atmospheric Administration (NOAA) Air Resources Laboratory (ARL) and the Grand Bay National Estuarine Research Reserve (NERR) established a long-term atmospheric monitoring station for the measurement of speciated mercury compounds and ancillary trace species. The measurements are designed to:

- Assemble a long-term, publicly available data record**
- Discern trends in atmospheric mercury concentrations**
- Derive dry deposition estimates**
- Elucidate mercury source-receptor relationships**
- Establish correlations with meteorology and ancillary trace species to better understand the emission, transport, transformations, and fate of mercury in the atmosphere**
- Provide a data set for model evaluation**

Atmospheric Measurements at Grand Bay NERR



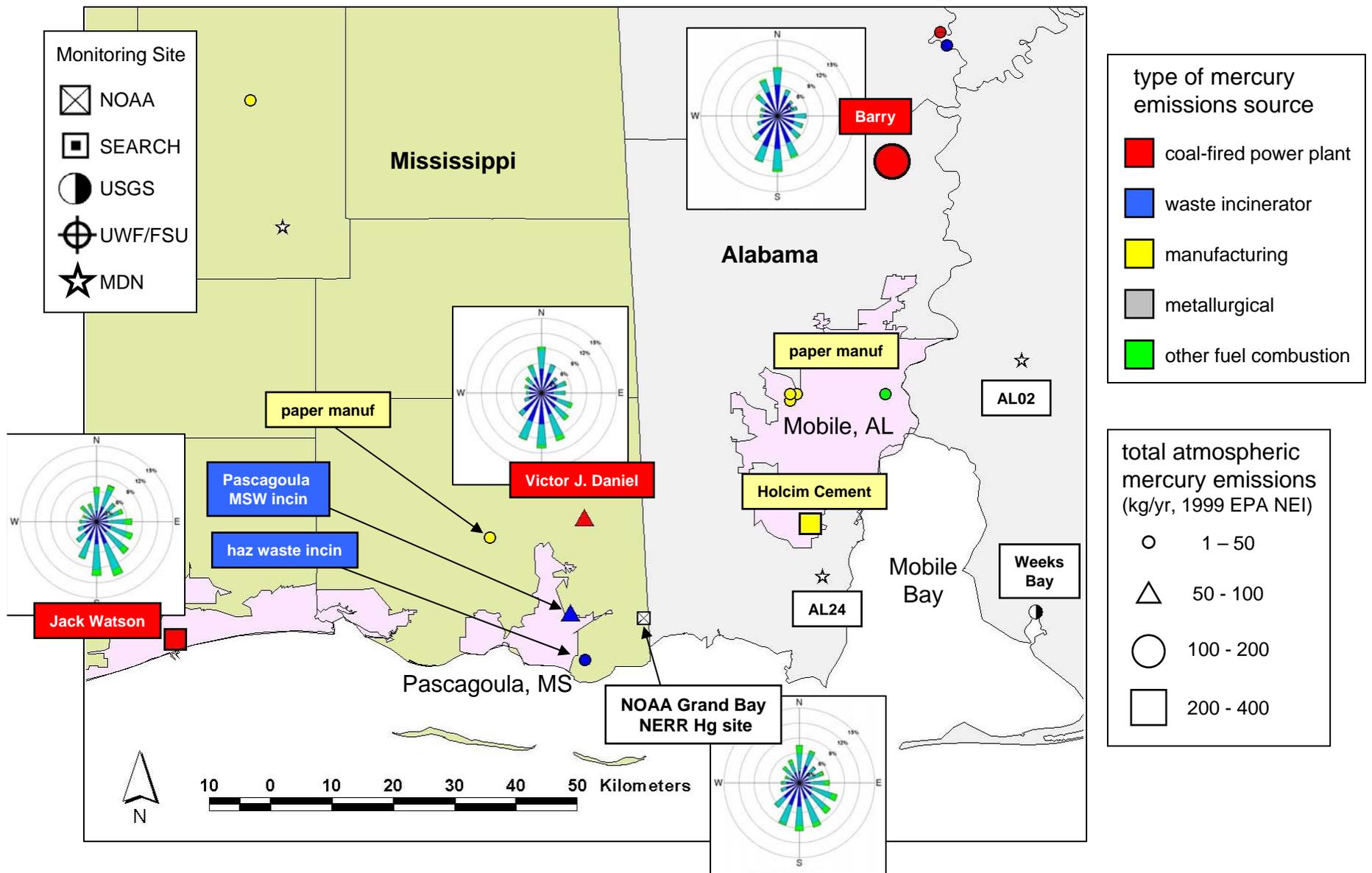
Measurement	Type	Start Date
Elemental mercury	A	Sept 2006
Fine particulate mercury	A	Sept 2006
Reactive gaseous mercury	A	Sept 2006
Sulfur dioxide	A	Oct 2006
Ozone	A	Oct 2006
Carbon Monoxide	A	Oct 2006
Nitrogen Oxides (NO, NO _y)	A	Jan 2008
Wind speed	C	Feb 2007
Wind Direction	C	Feb 2007
Relative Humidity	C	Feb 2007
Temperature	C	Feb 2007
Precipitation	C	Feb 2007
Total mercury in precipitation	B	*
Major ions in precipitation	B	*

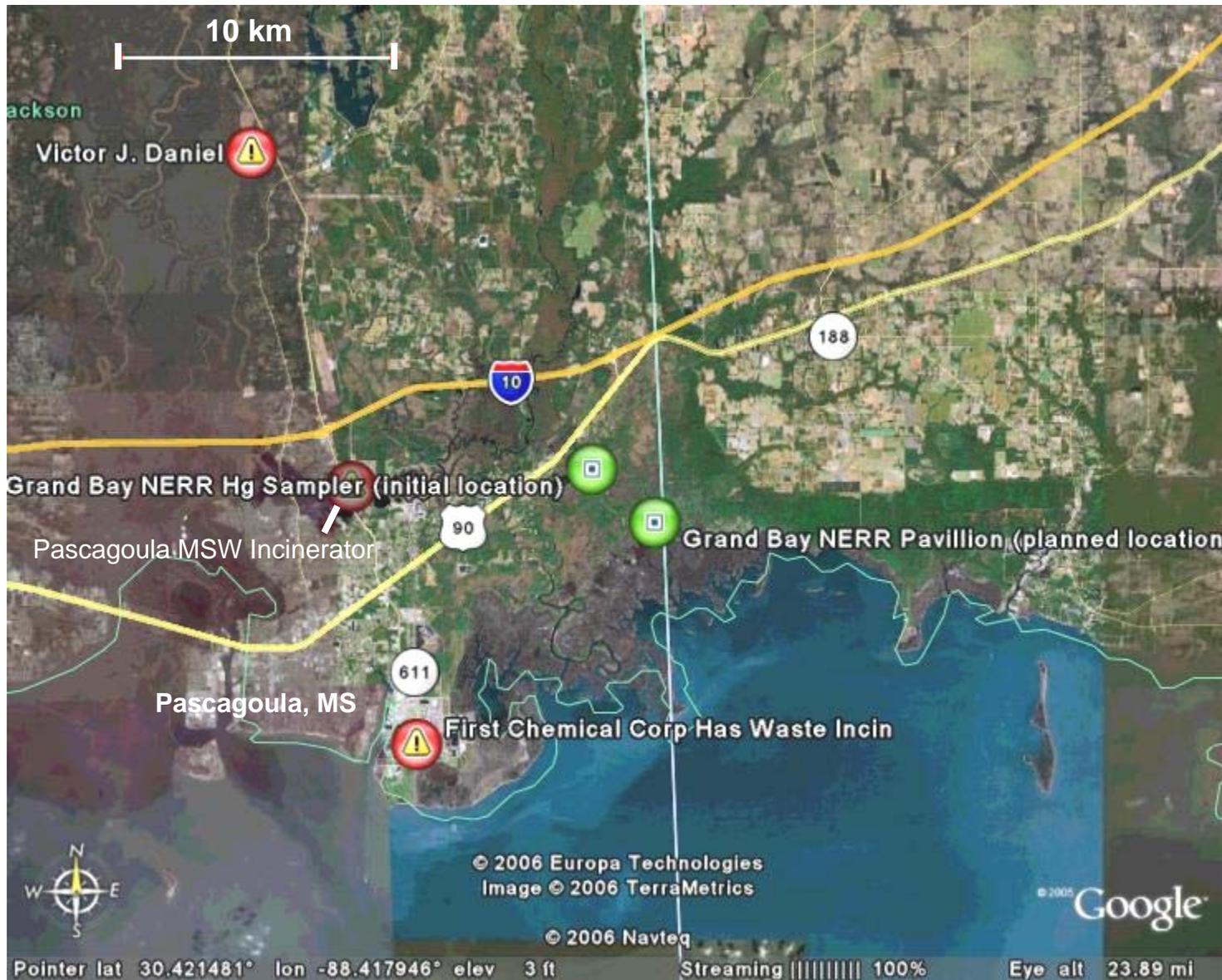
Type of Measurement:

- A = concentration in ambient air**
- B = concentration in precipitation**
- C = meteorological parameter**

* to be established

Location of the NOAA/Grand Bay NERR Atmospheric Mercury monitoring site, other atmospheric Hg monitoring sites, and major Hg point sources in the region (EPA 1999 NEI emissions inventory)





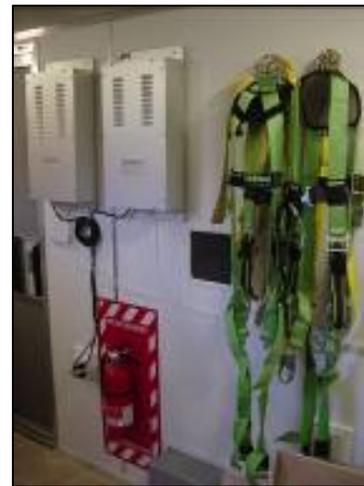
Oct 2006 Pictures of Initial Monitoring Site



Current Pictures of Permanent Monitoring Site



View from top of 10 m tower looking at the southerly (prevailing wind) sampling sector over the U.S. Fish and Wildlife Service Pavilion at Grand Bay NERR



**For additional information on these
atmospheric measurements,
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