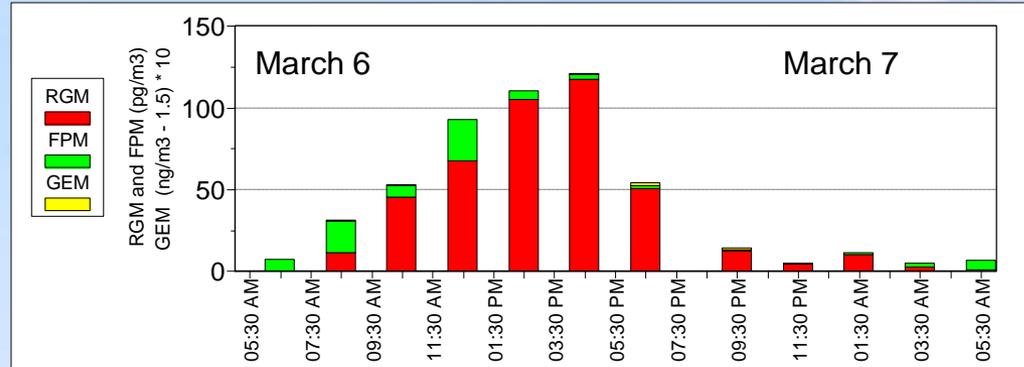
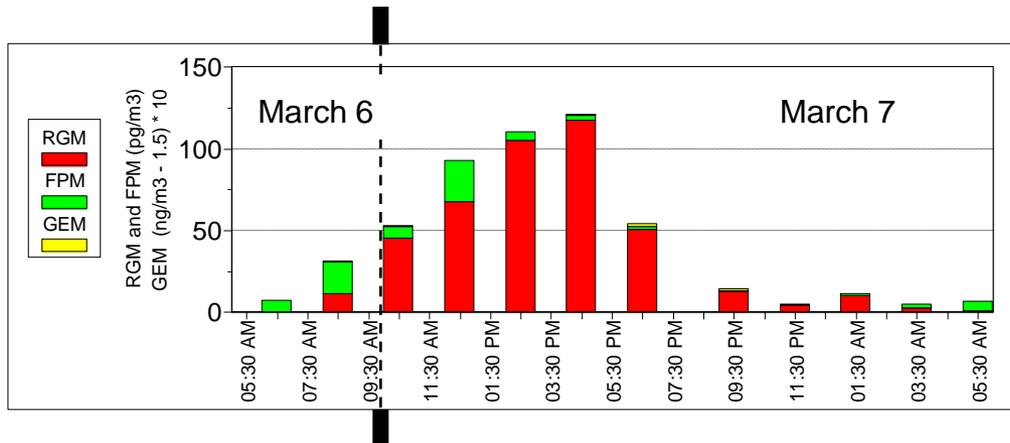
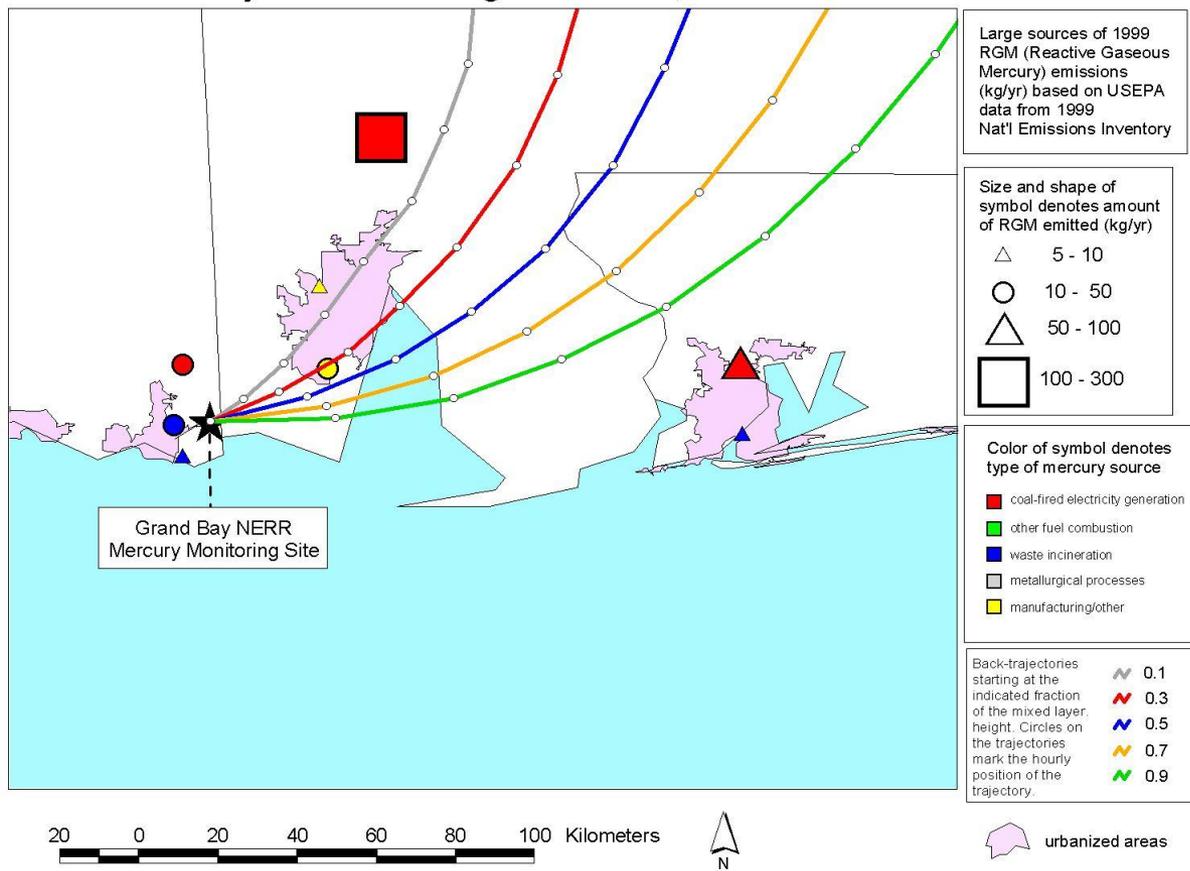
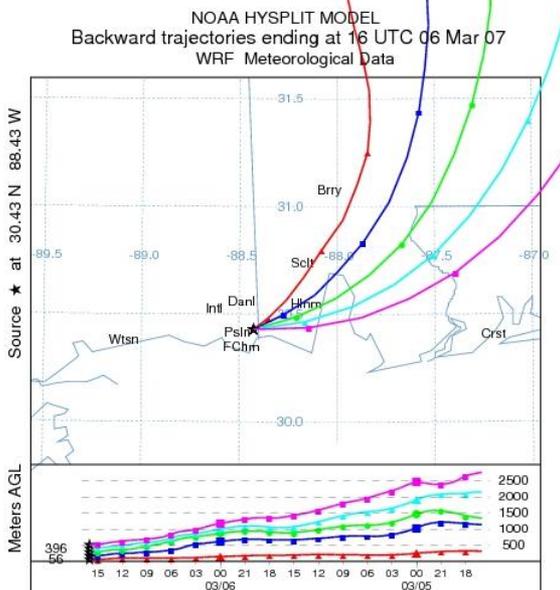


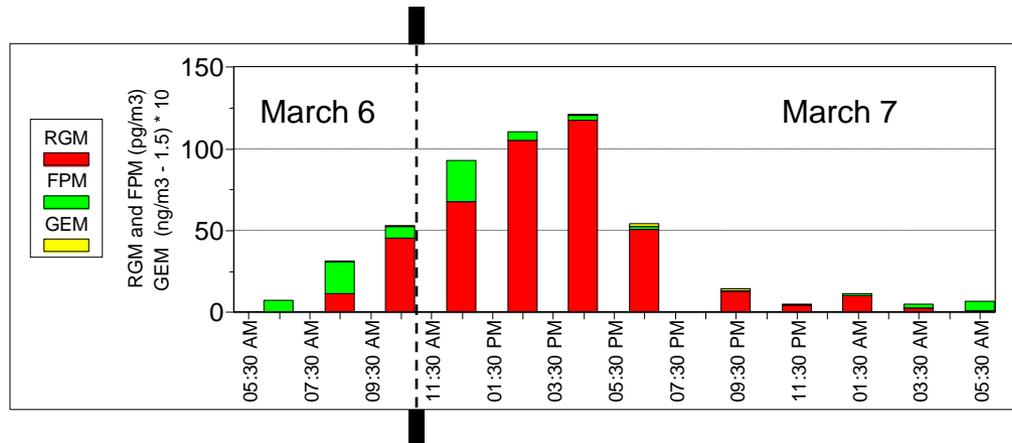
# Grand Bay Episode March 6, 2007



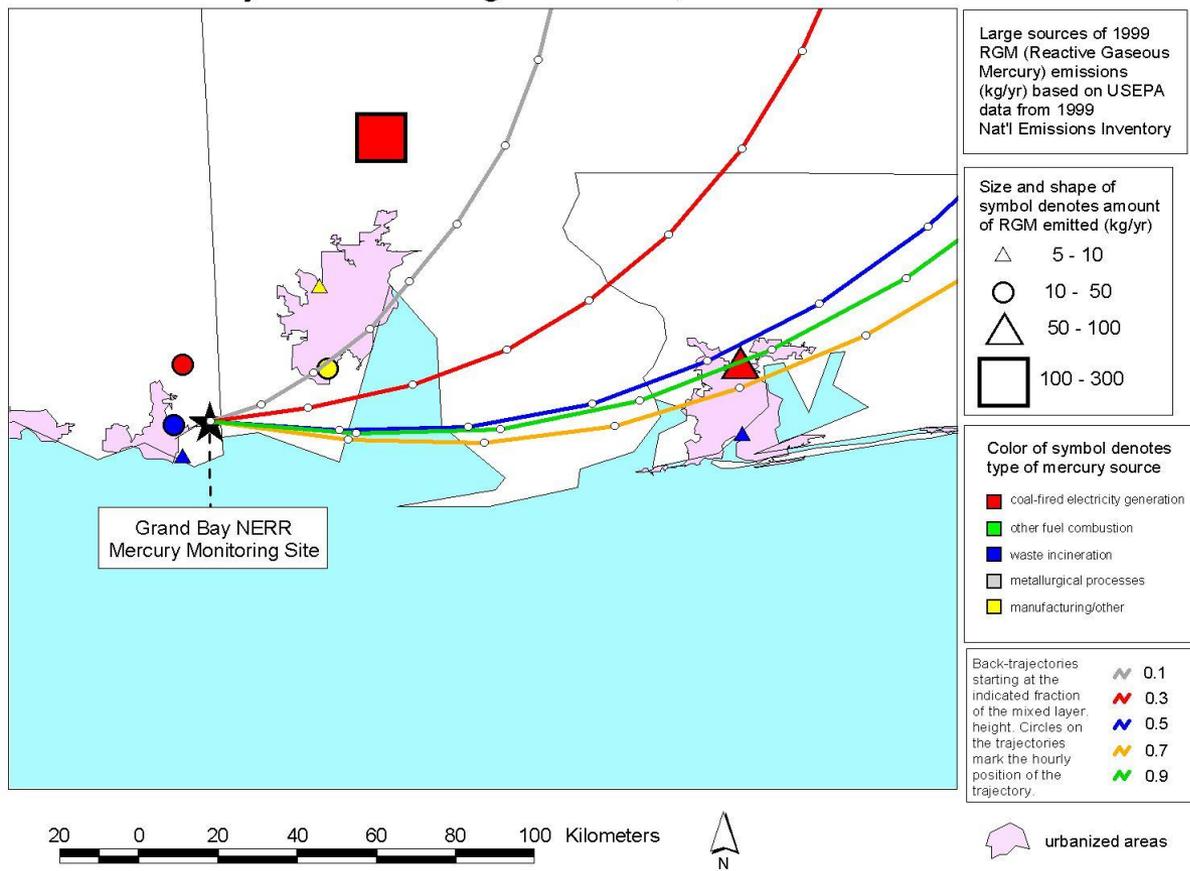
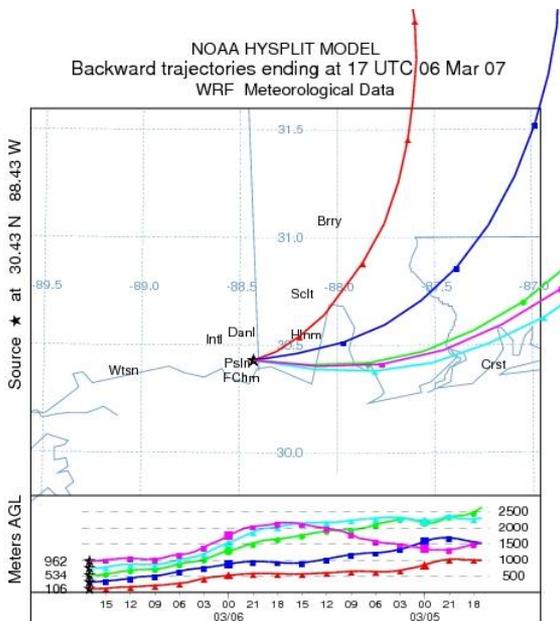


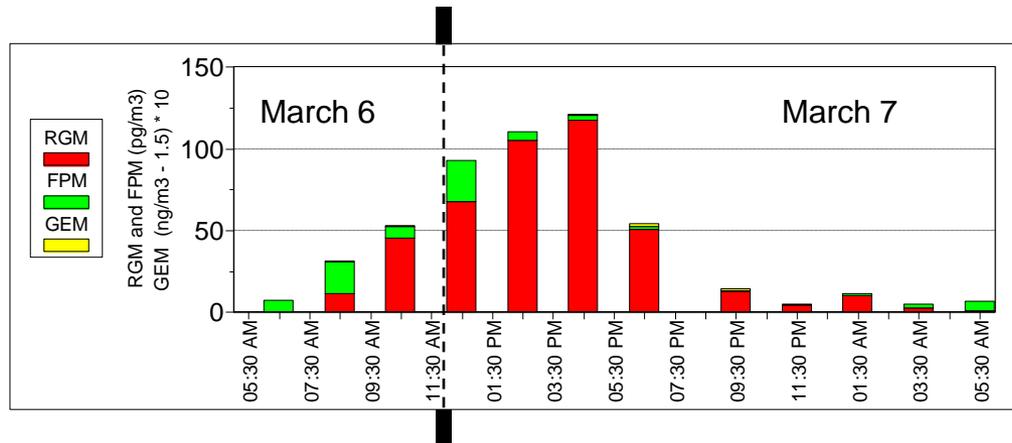
**Back Trajectories Arriving at March 6, 2007 10:00 CST**



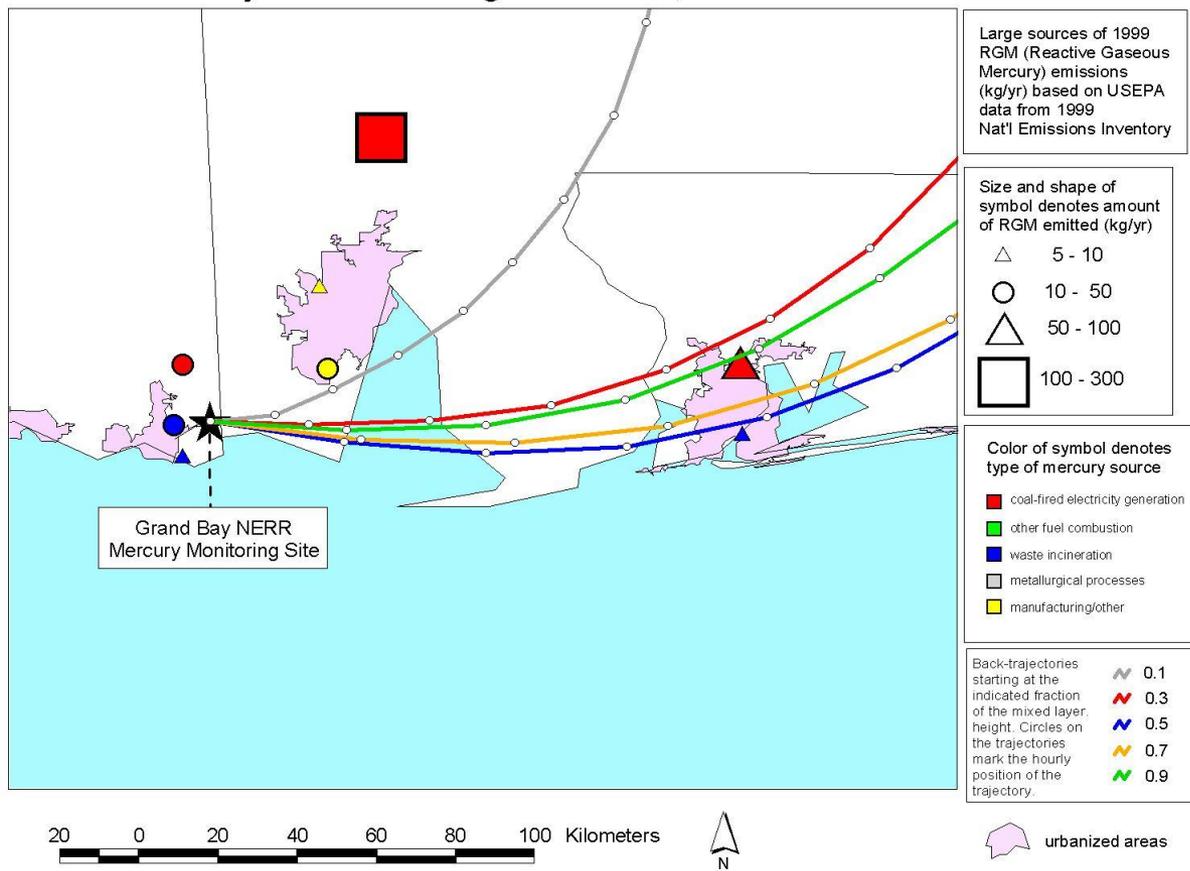
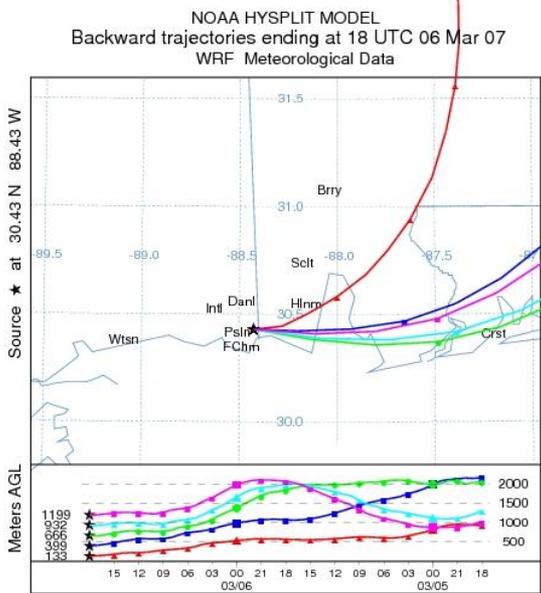


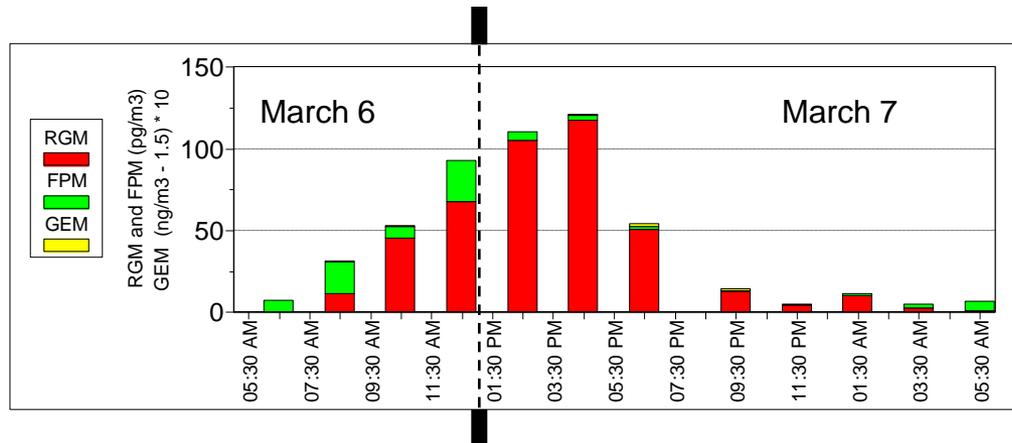
**Back Trajectories Arriving at March 6, 2007 11:00 CST**



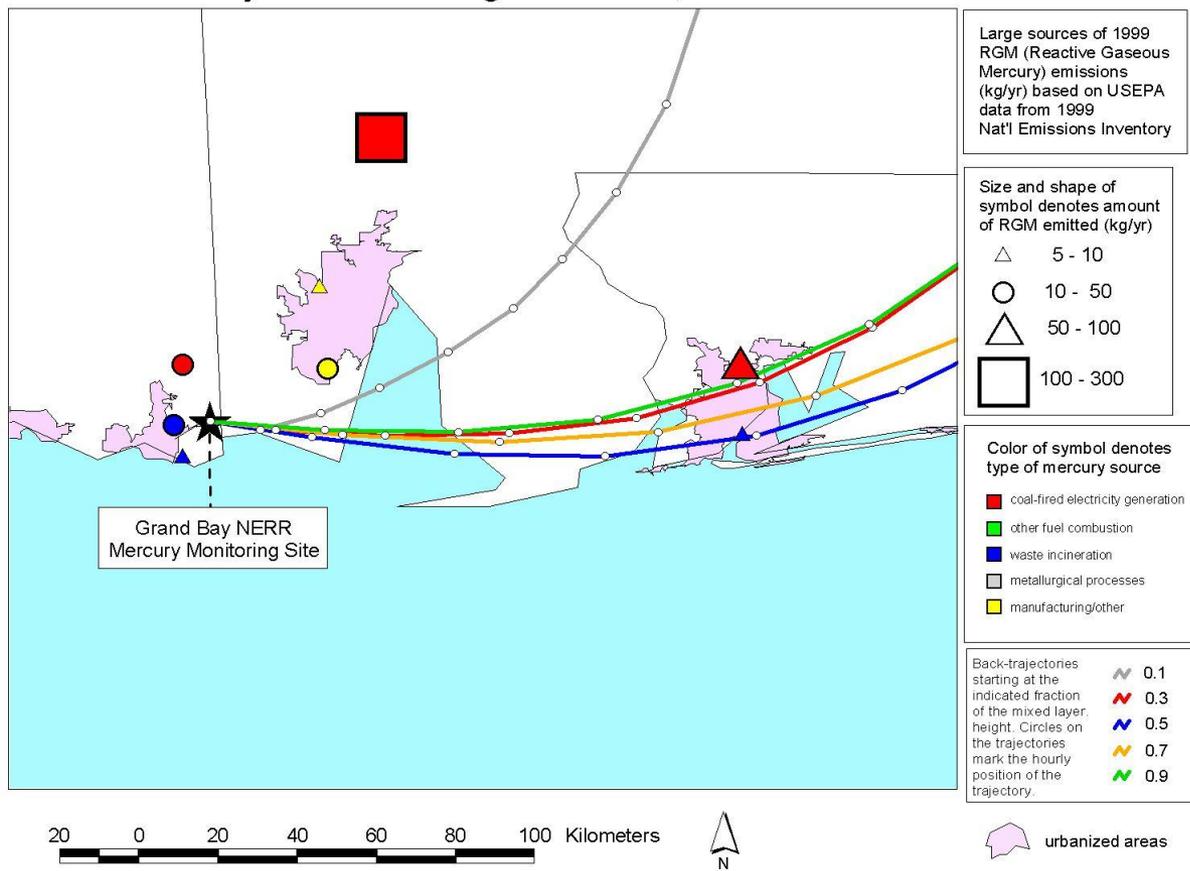
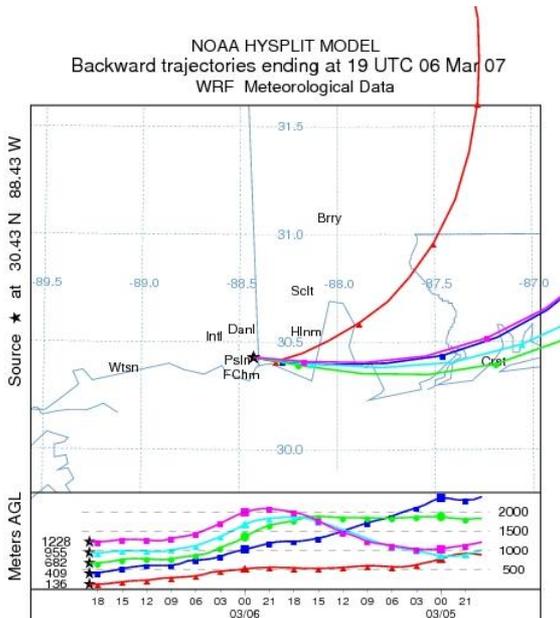


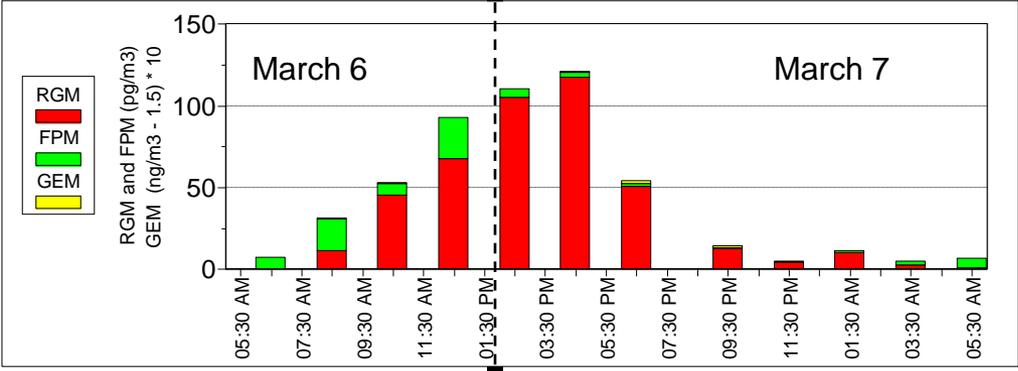
### Back Trajectories Arriving at March 6, 2007 12:00 CST



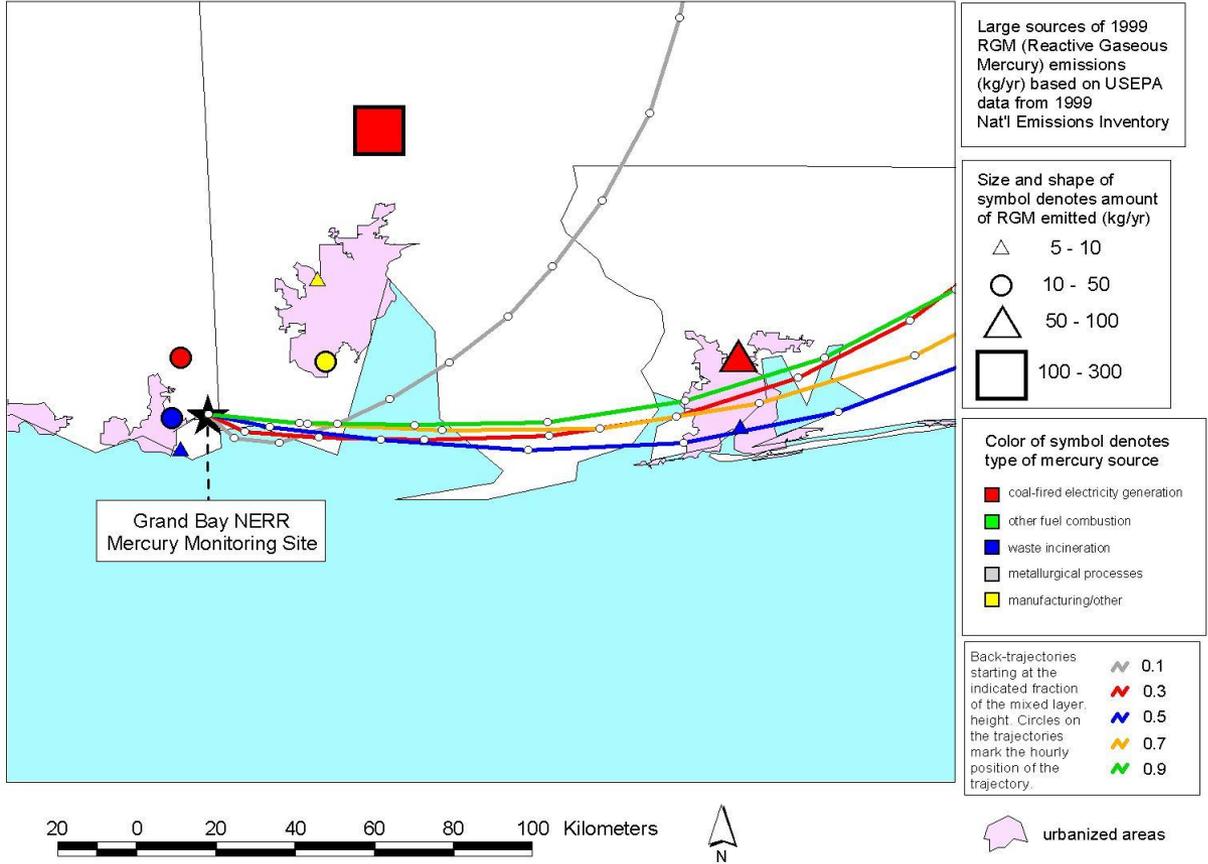
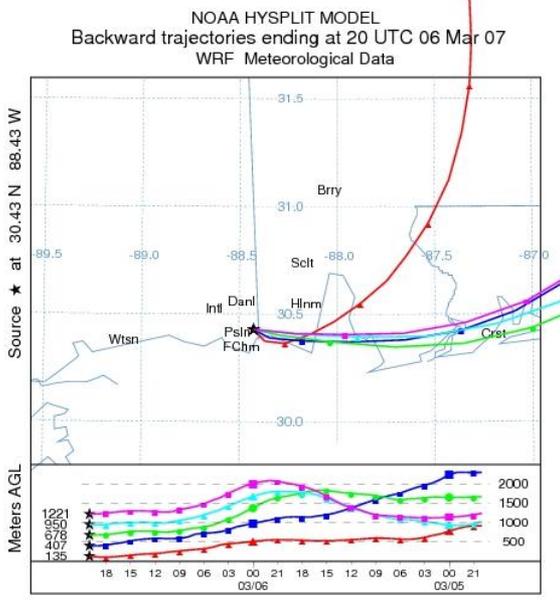


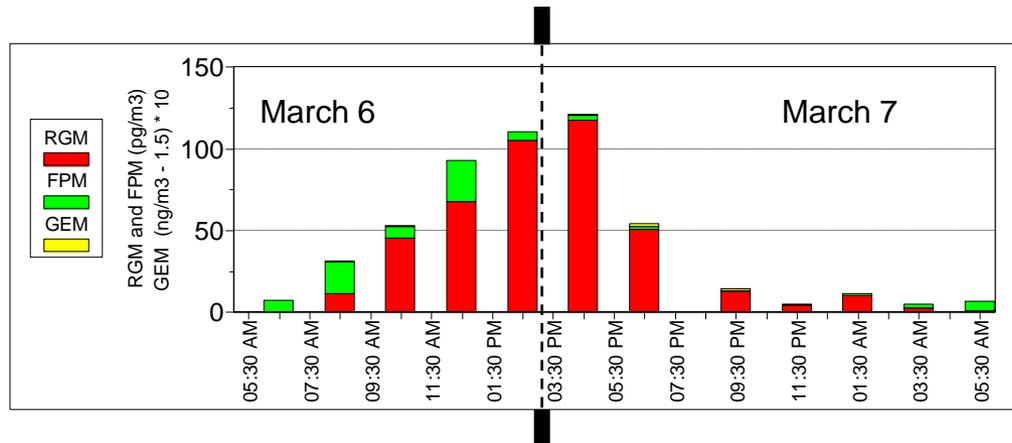
**Back Trajectories Arriving at March 6, 2007 13:00 CST**



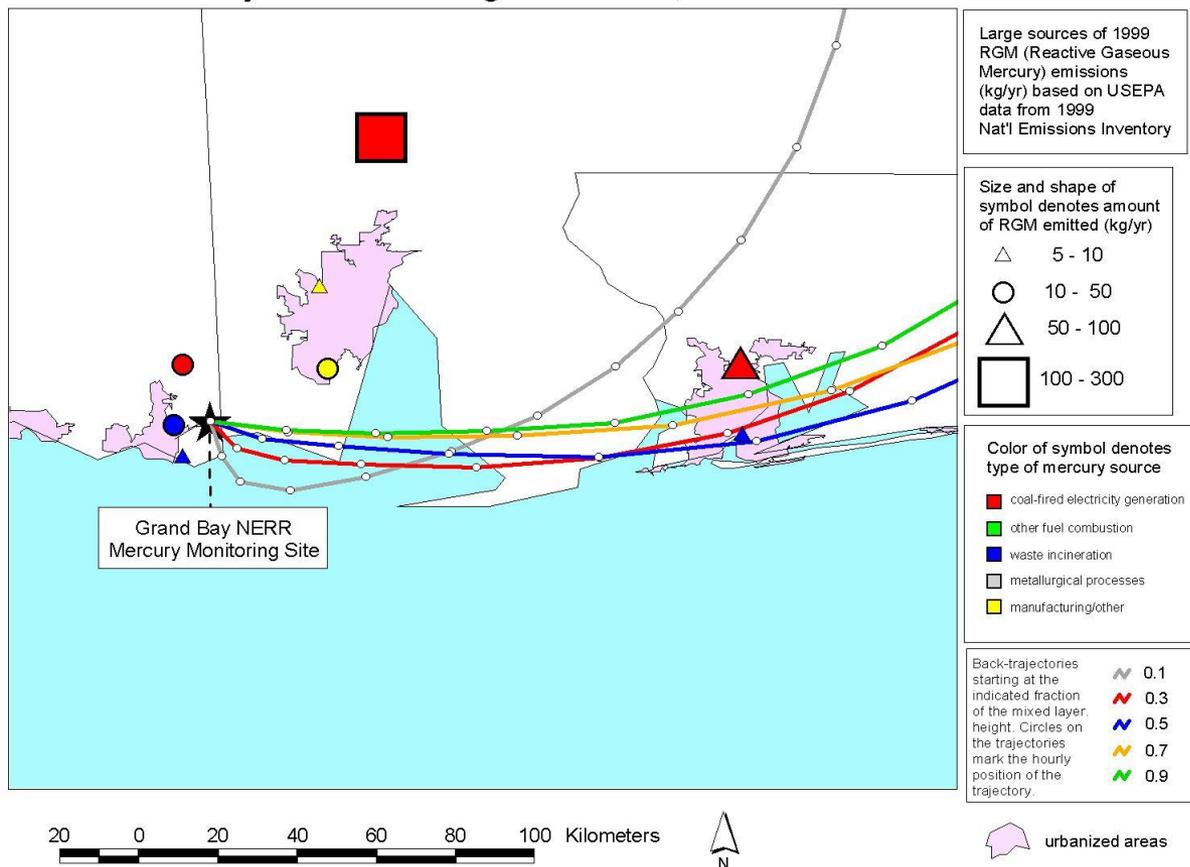
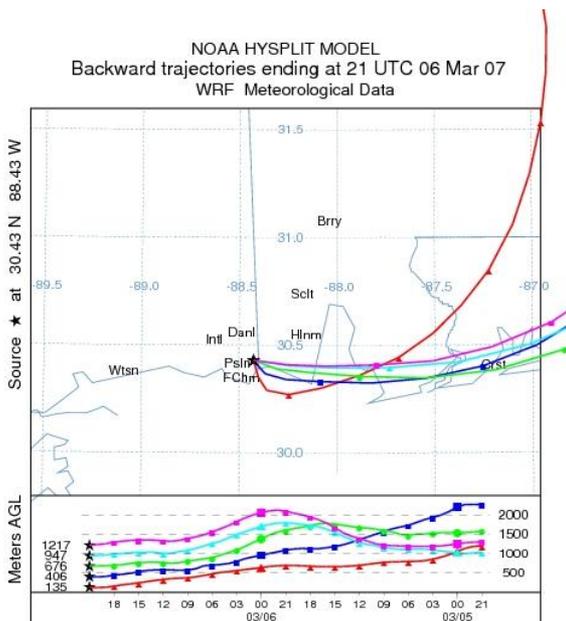


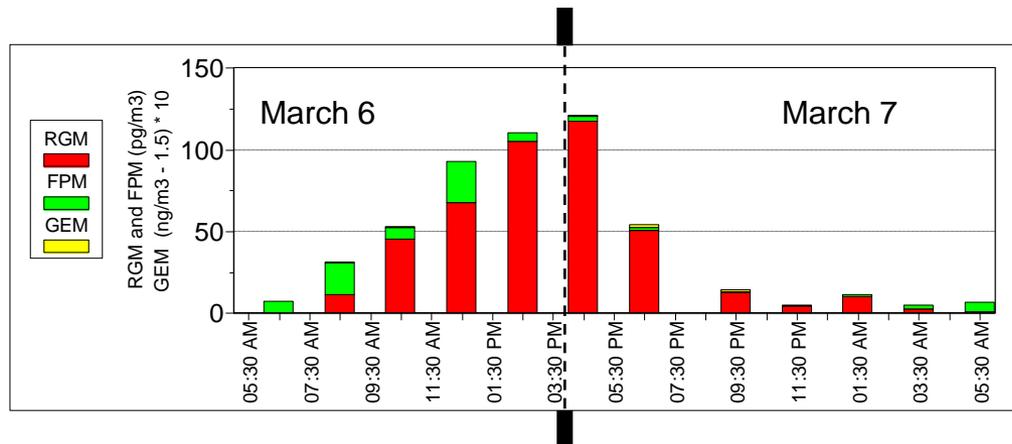
**Back Trajectories Arriving at March 6, 2007 14:00 CST**



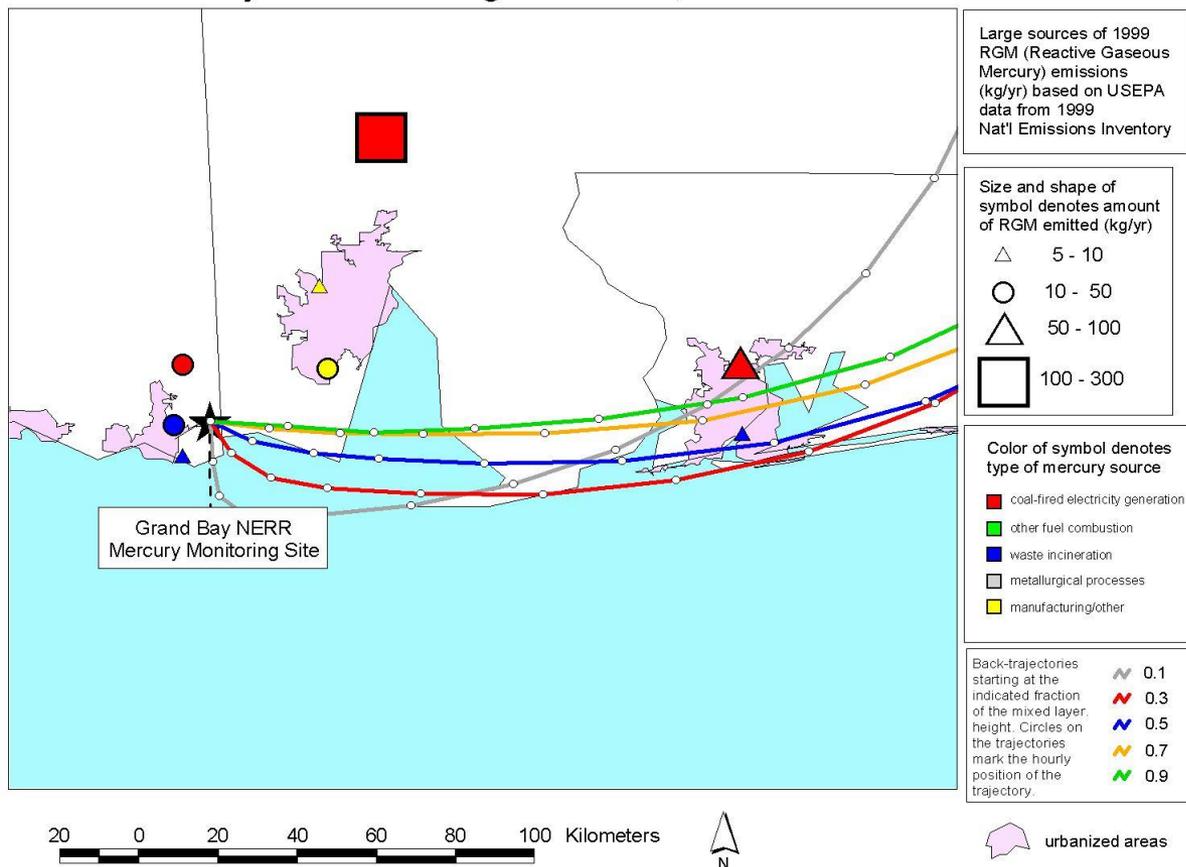
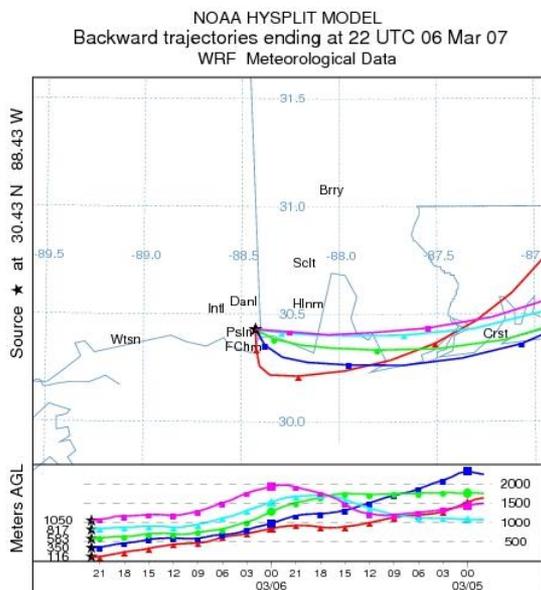


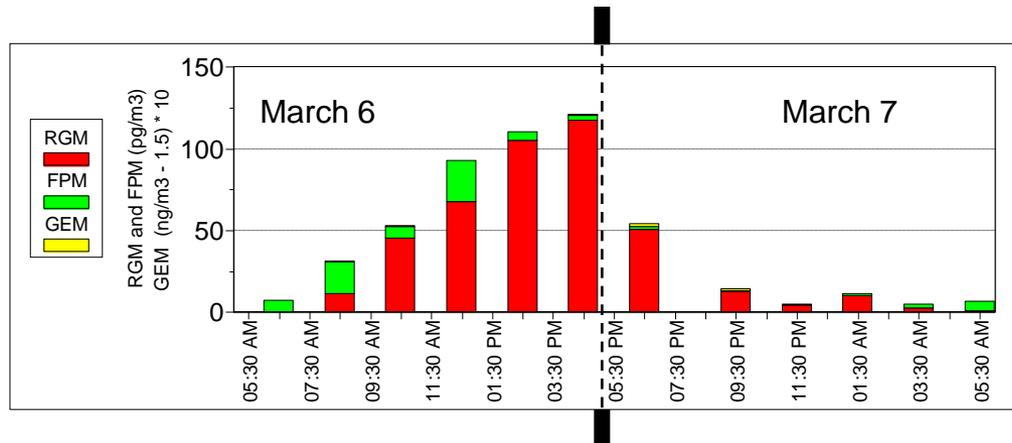
### Back Trajectories Arriving at March 6, 2007 15:00 CST



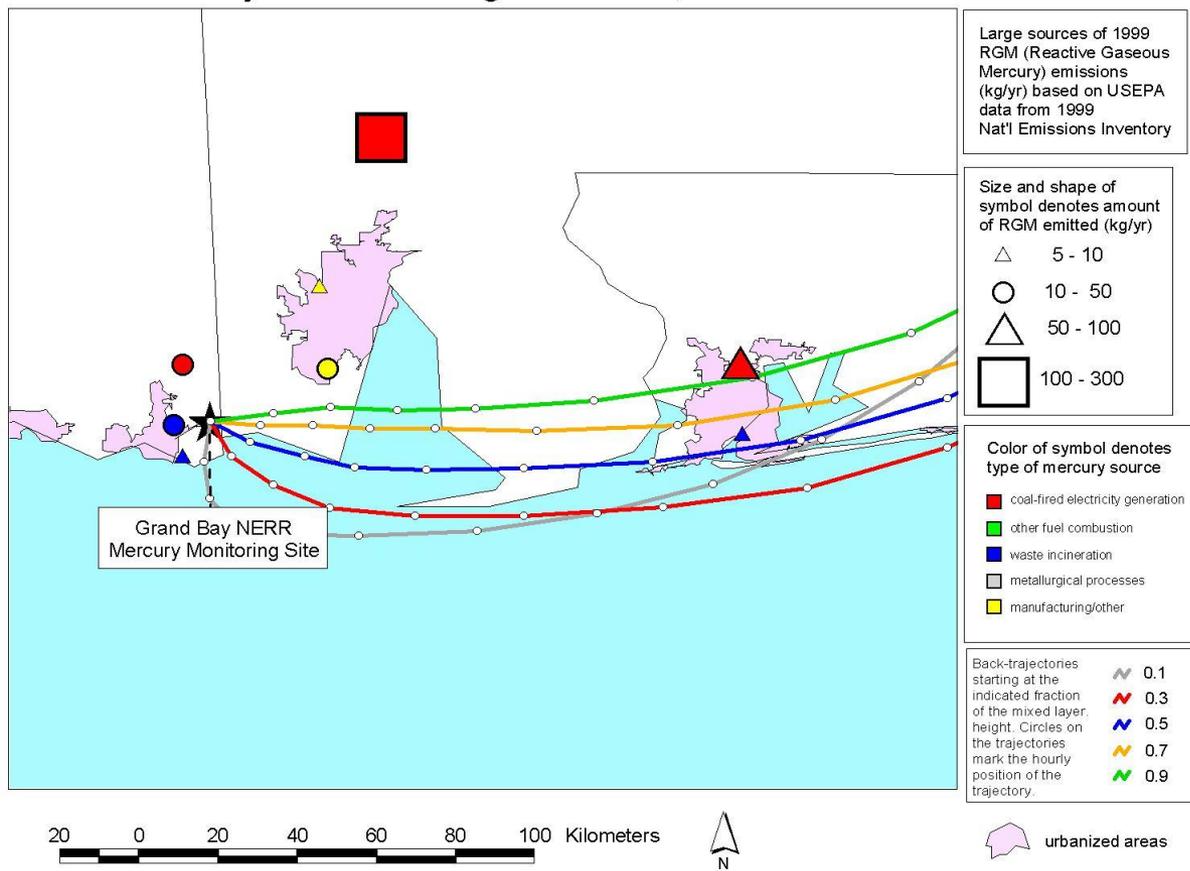
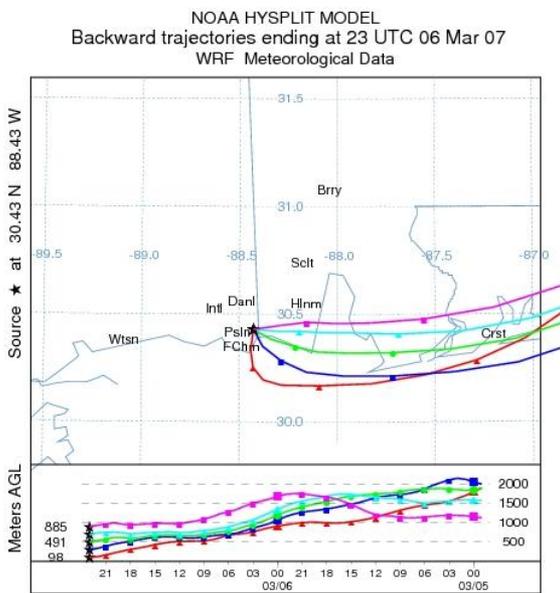


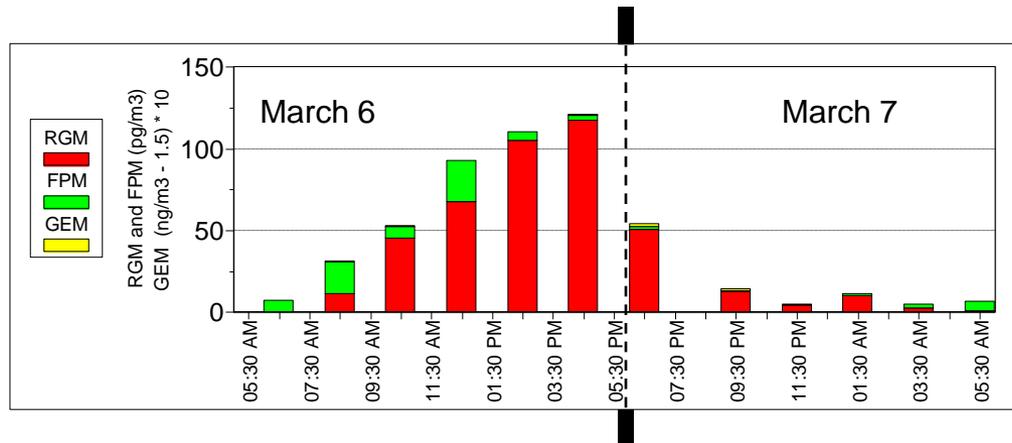
**Back Trajectories Arriving at March 6, 2007 16:00 CST**





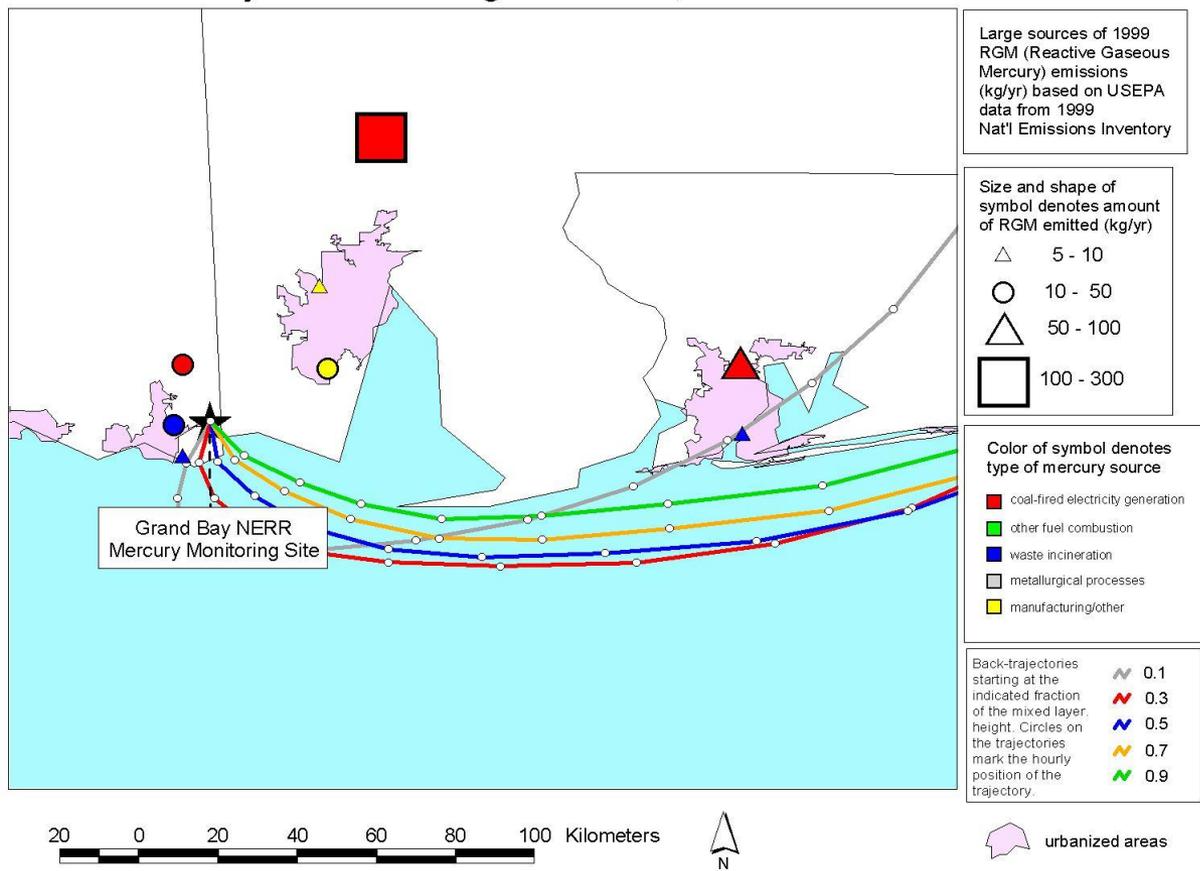
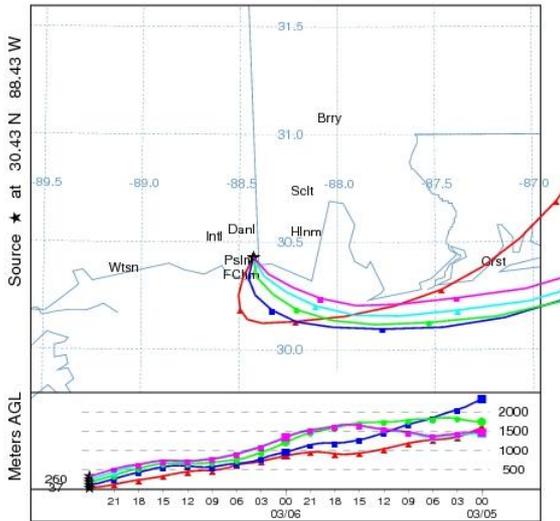
### Back Trajectories Arriving at March 6, 2007 17:00 CST

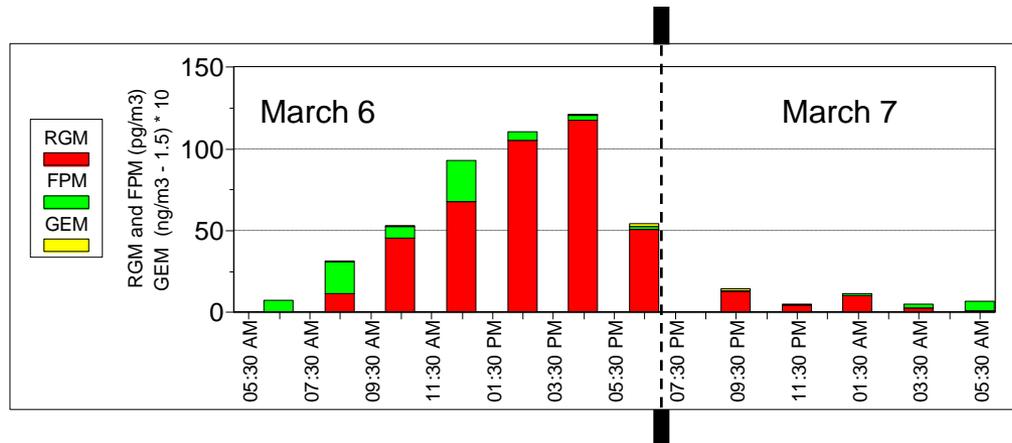




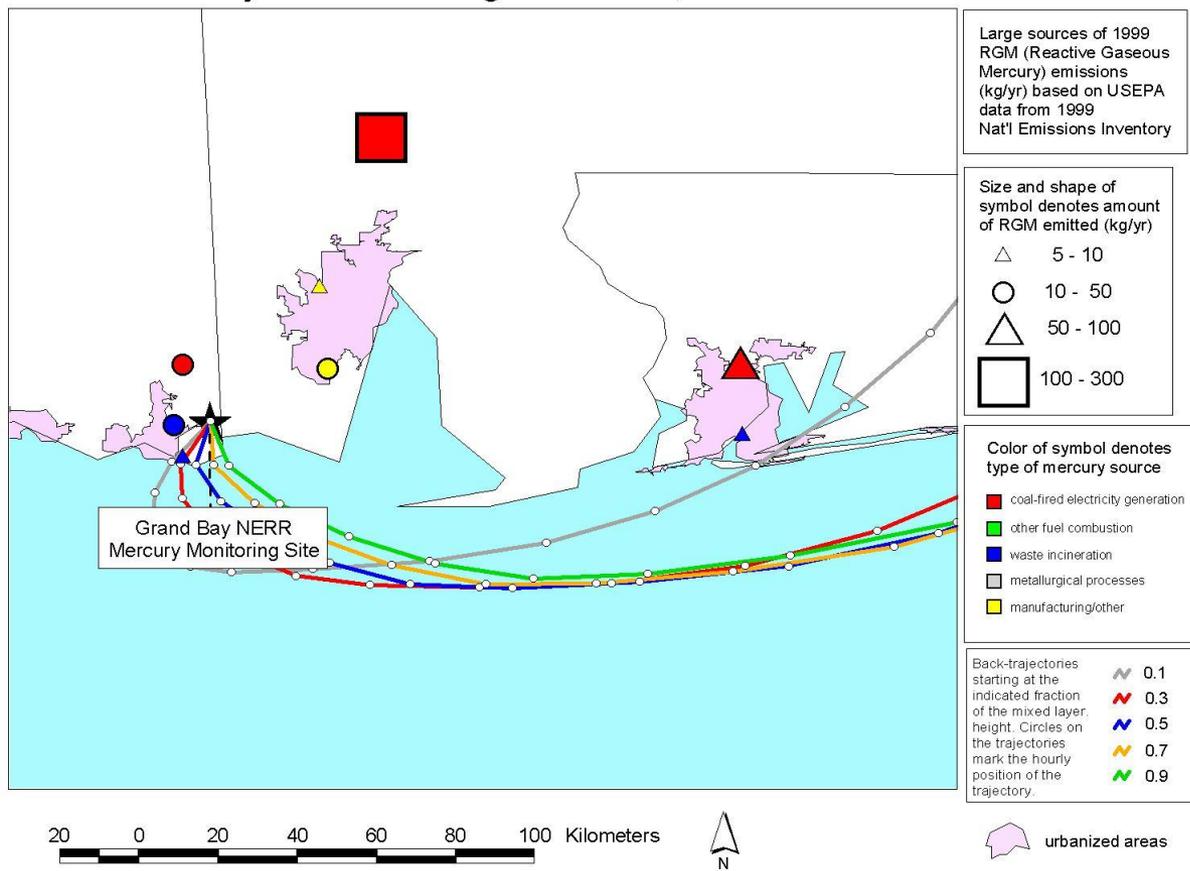
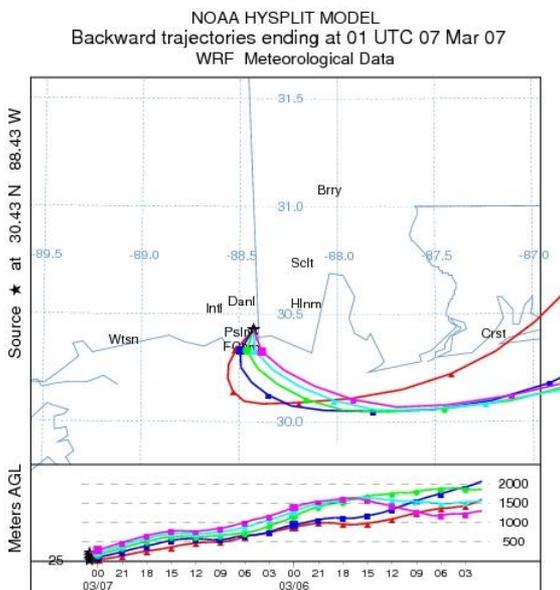
**Back Trajectories Arriving at March 6, 2007 18:00 CST**

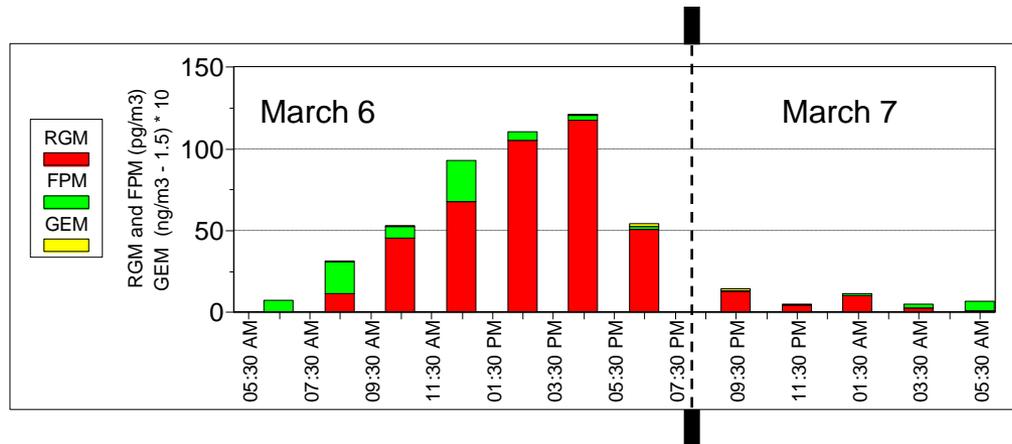
NOAA HYSPLIT MODEL  
 Backward trajectories ending at 00 UTC 07 Mar 07  
 WRF Meteorological Data





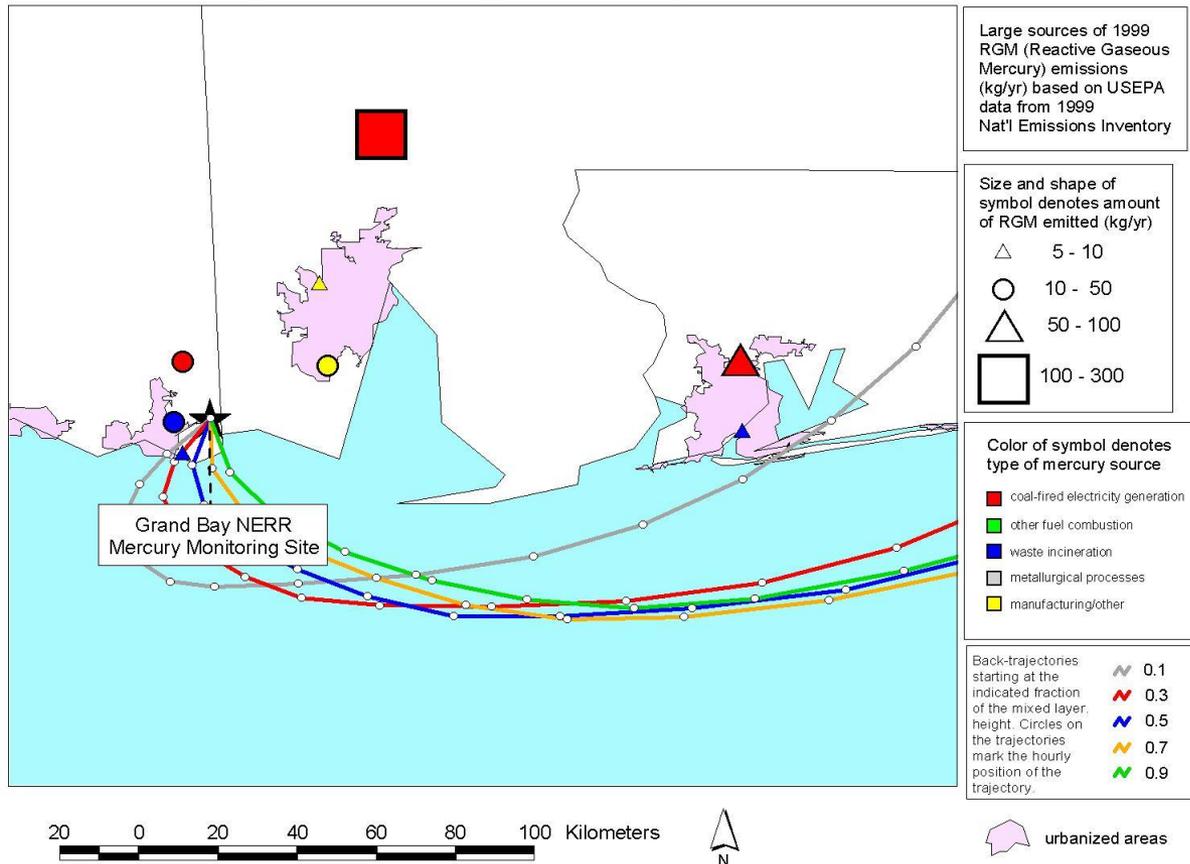
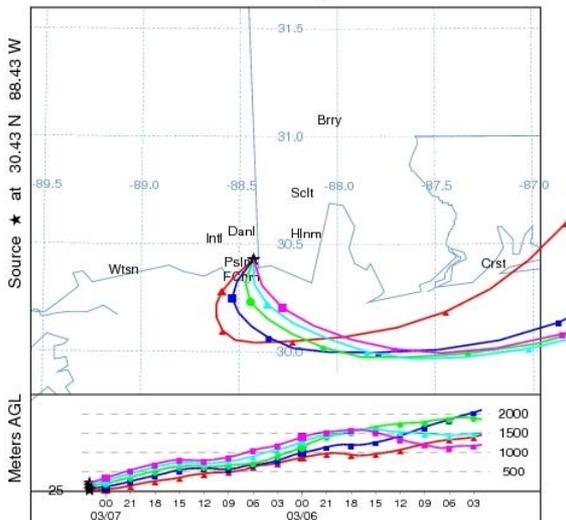
**Back Trajectories Arriving at March 6, 2007 19:00 CST**

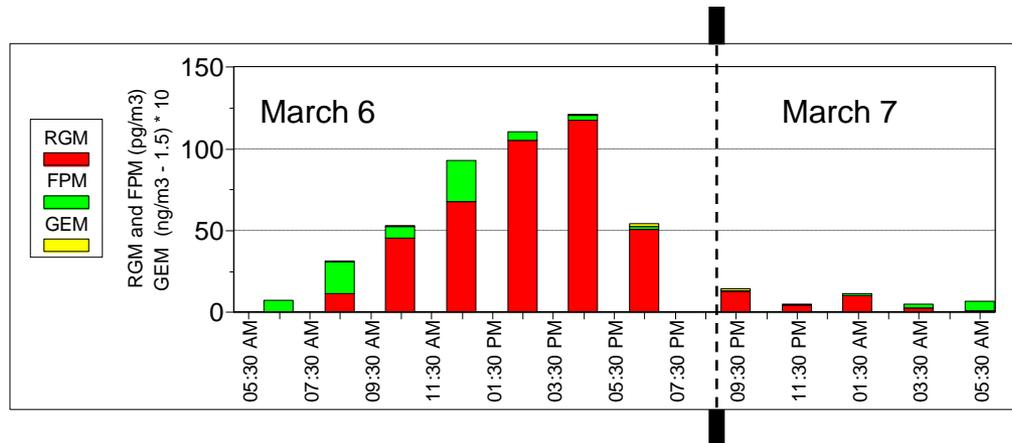




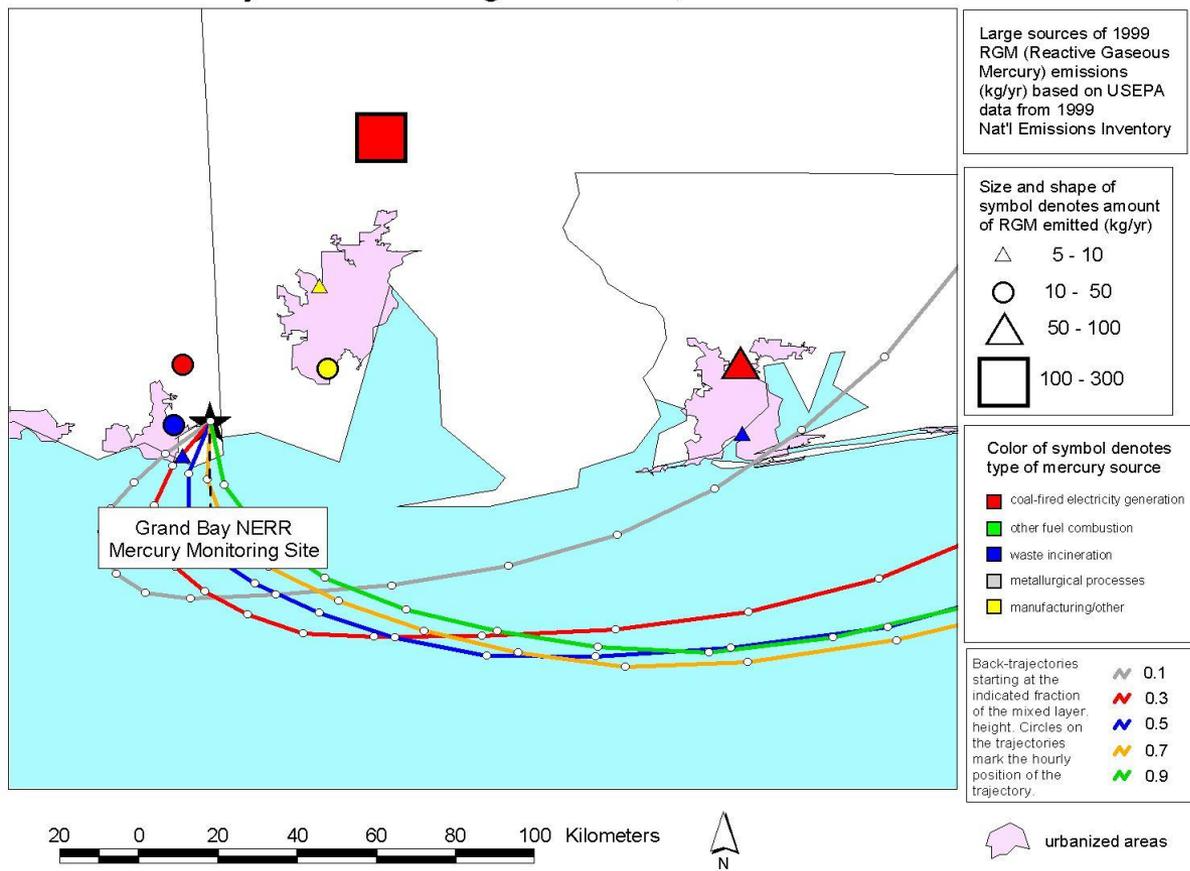
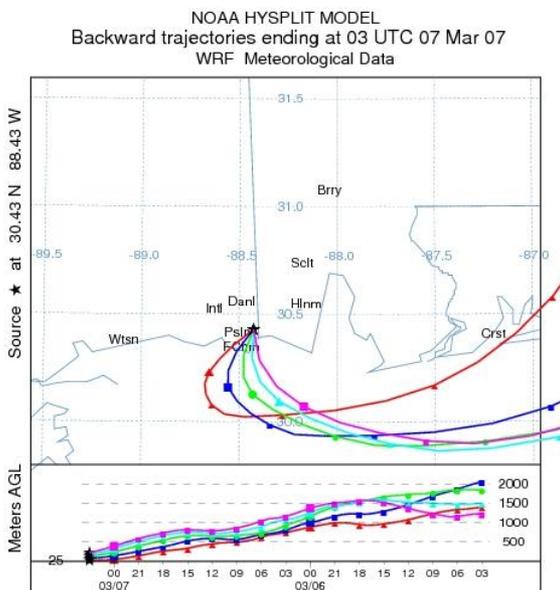
### Back Trajectories Arriving at March 6, 2007 20:00 CST

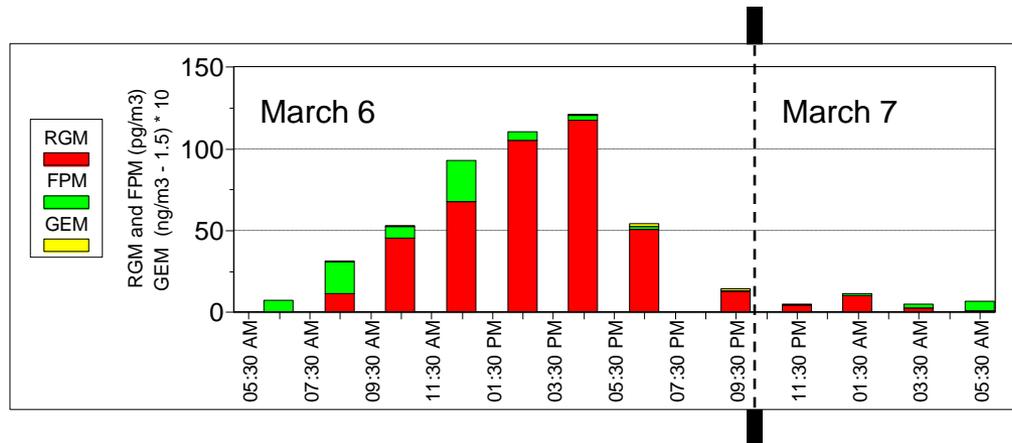
NOAA HYSPLIT MODEL  
 Backward trajectories ending at 02 UTC 07 Mar 07  
 WRF Meteorological Data



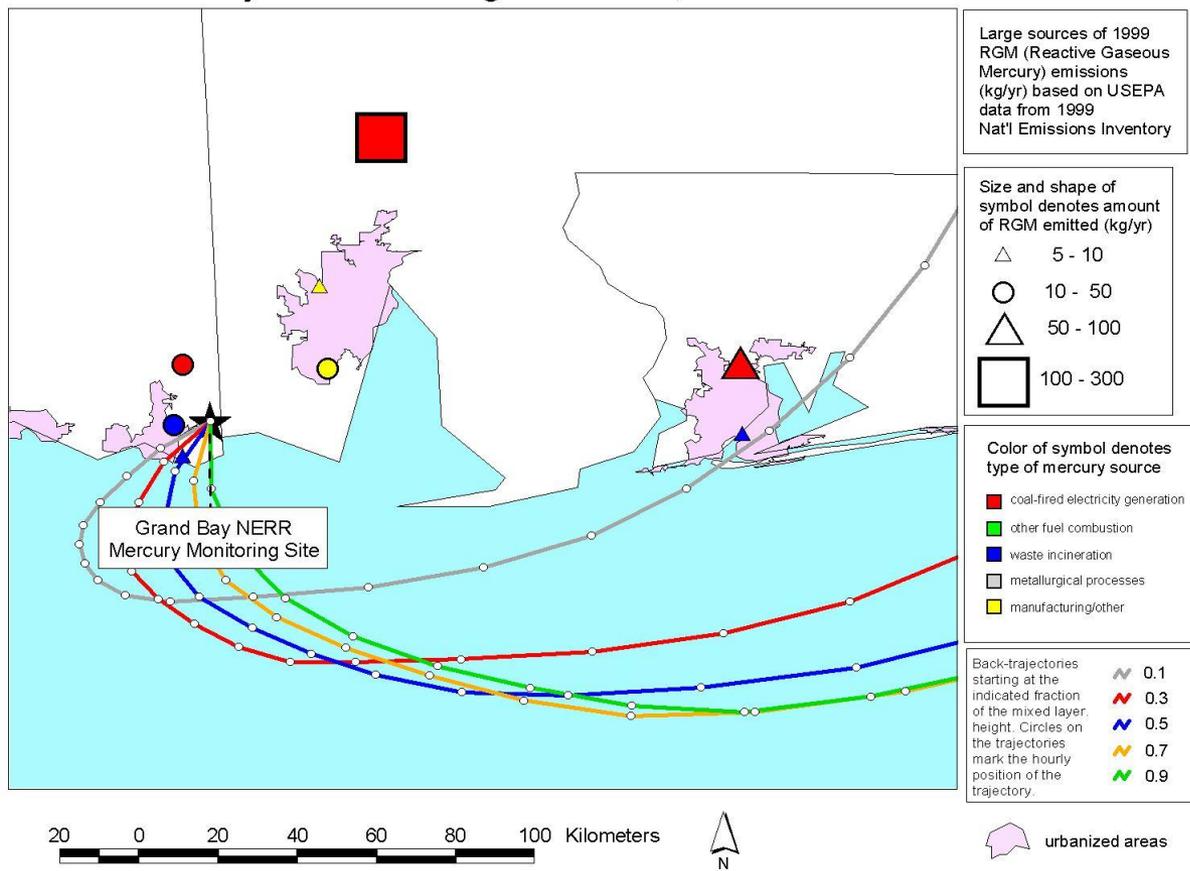
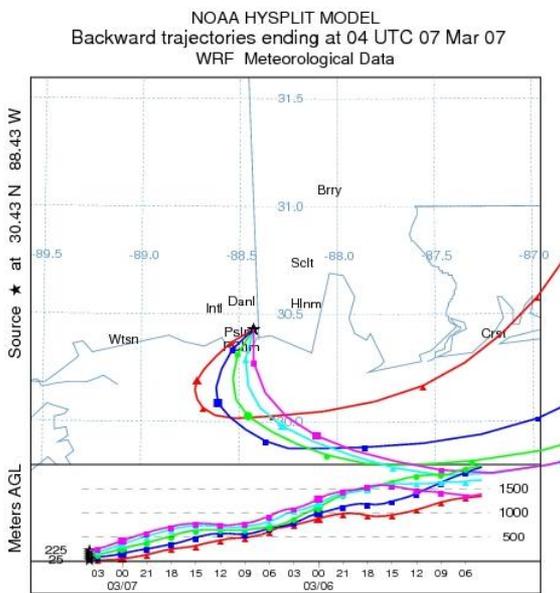


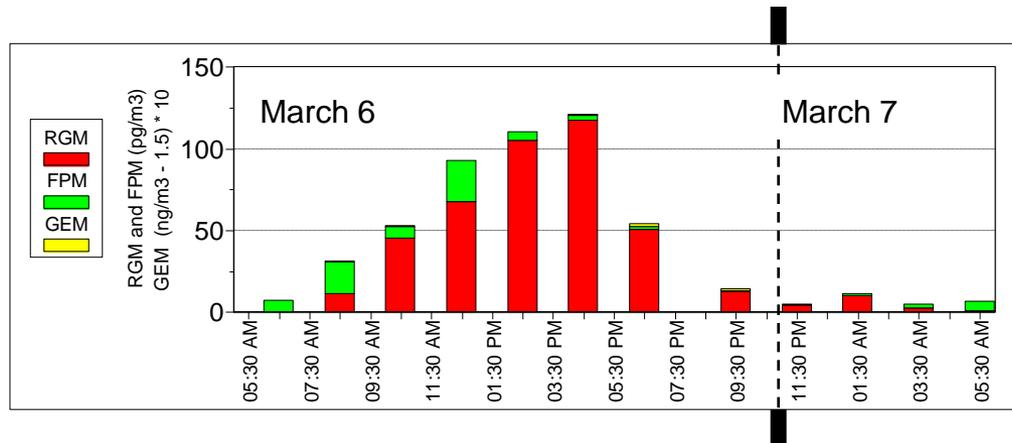
**Back Trajectories Arriving at March 6, 2007 21:00 CST**



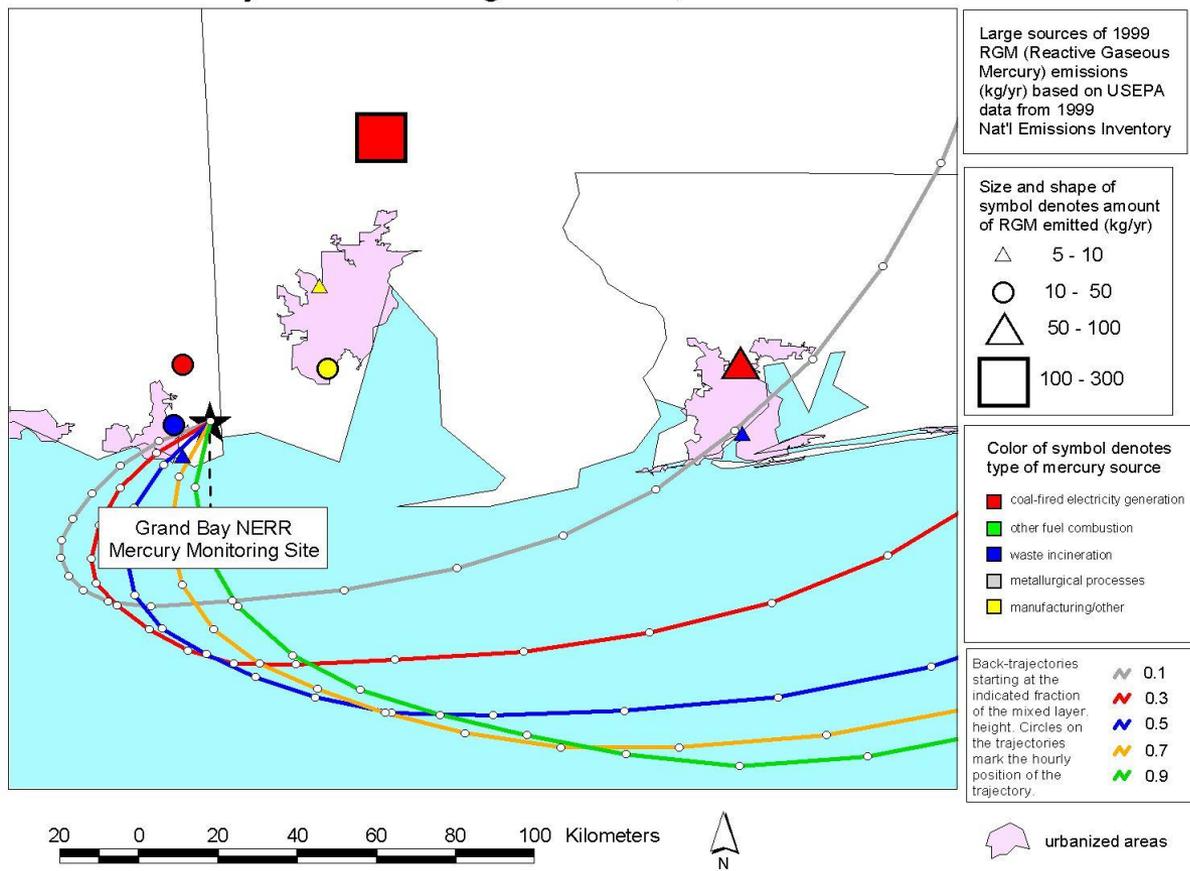
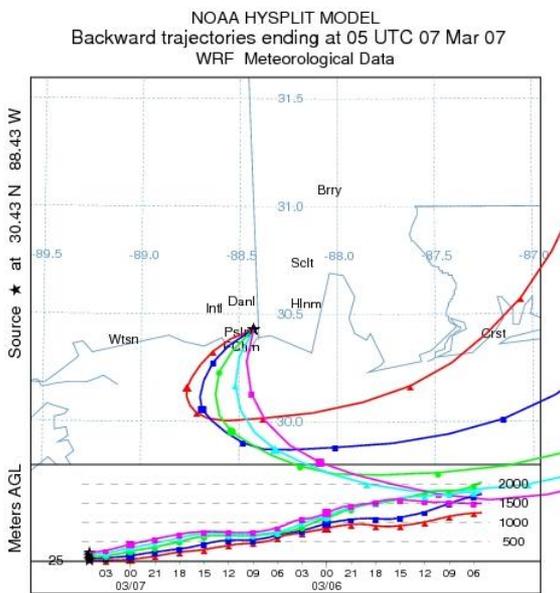


**Back Trajectories Arriving at March 6, 2007 22:00 CST**

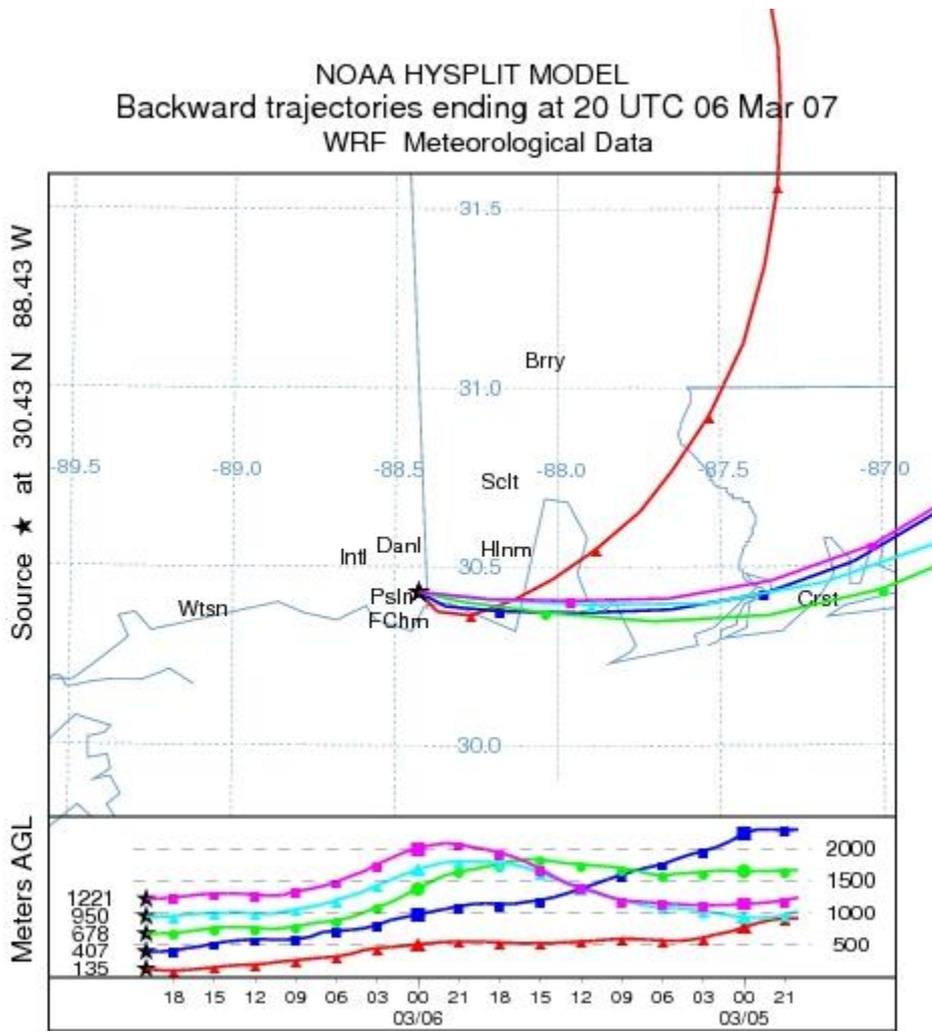




### Back Trajectories Arriving at March 6, 2007 23:00 CST

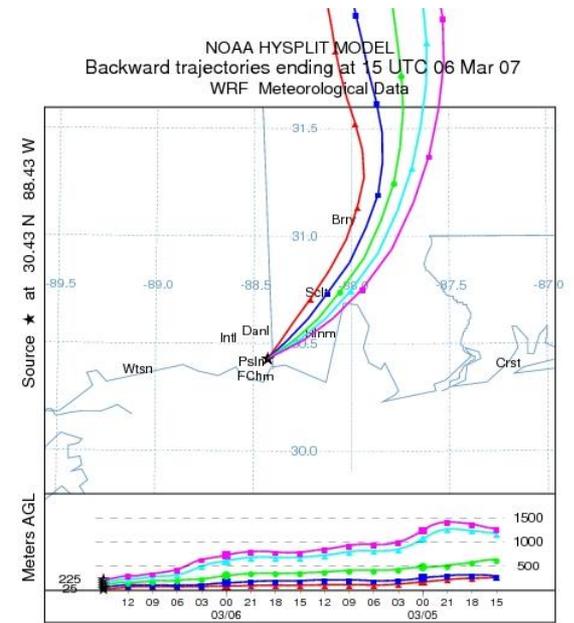
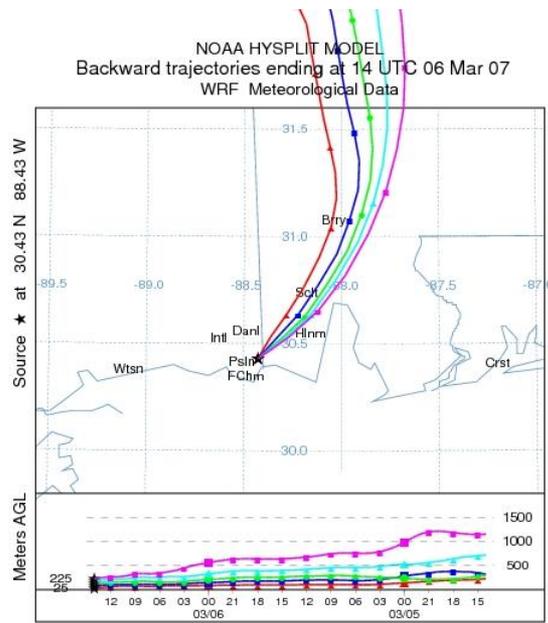
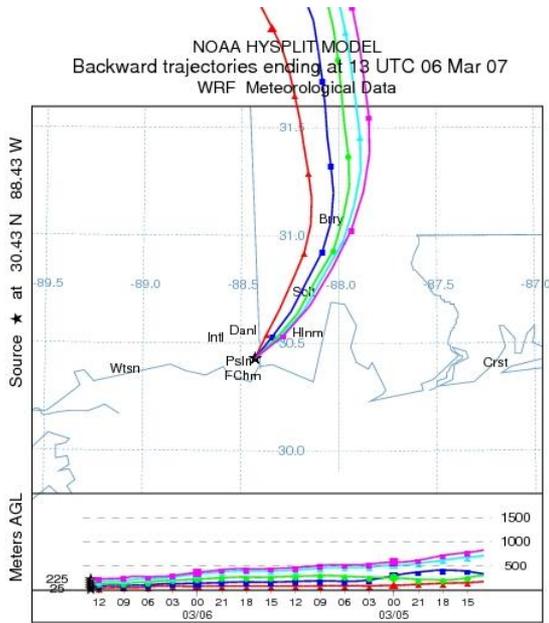


additional information  
regarding this episode

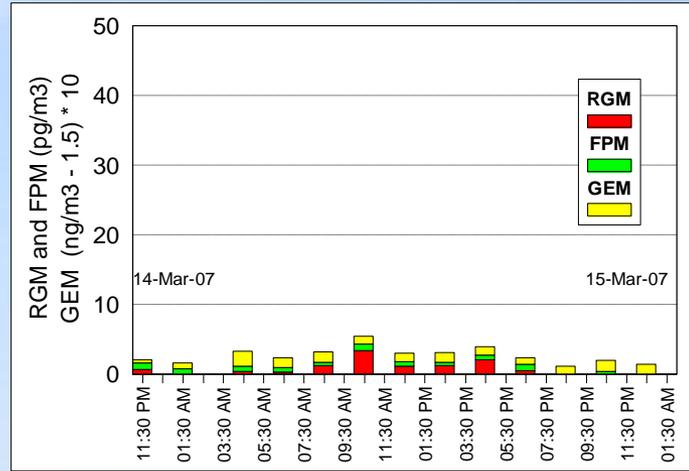


- ❑ Back trajectories simulated with the NOAA HYSPLIT model using meteorological on a 12 km grid
- ❑ Trajectories started from the Grand Bay site (marked with a star on the map) at 5 different heights representing different positions in the mixed layer (0.1, 0.3, 0.5, 0.7, 0.9)
- ❑ Note that the times are represented in UTC (Universal Time Coordinate) which is 6 hours later than Central Standard Time, e.g., 20 UTC = 14:00 Central Standard Time
- ❑ Large mercury emissions sources are indicated on the map, including:
  - **Wtsn** = Watson coal-fired power plant
  - **FChm** = First Chemical hazardous waste incin / Chevron refinery
  - **Pslrn** = Pascagoula municipal waste incinerator
  - **Brry** = Barry coal fired power plants
  - **Danl** = Daniel coal fired power plant
  - **Hlnm** = Holnam cement plant
  - **Intl** = International Paper
  - **Sclt** = Scott Paper and International Paper

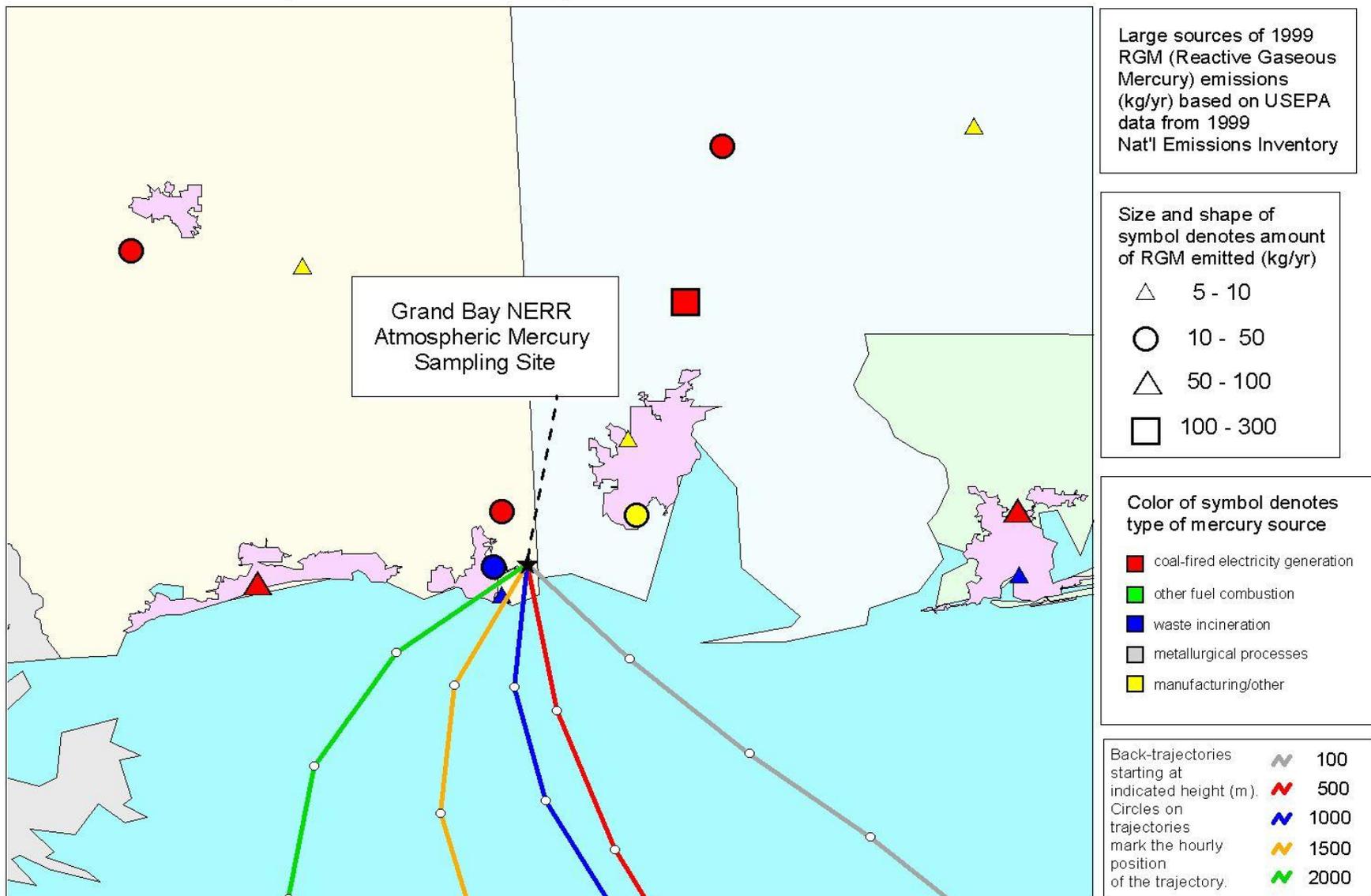
# Additional trajectories immediately before period shown in slides above



Grand Bay "Episode"  
March 14, 2007  
(very low  
concentrations)



# Back Trajectories Arriving at 3/14/2007 14:00 CST

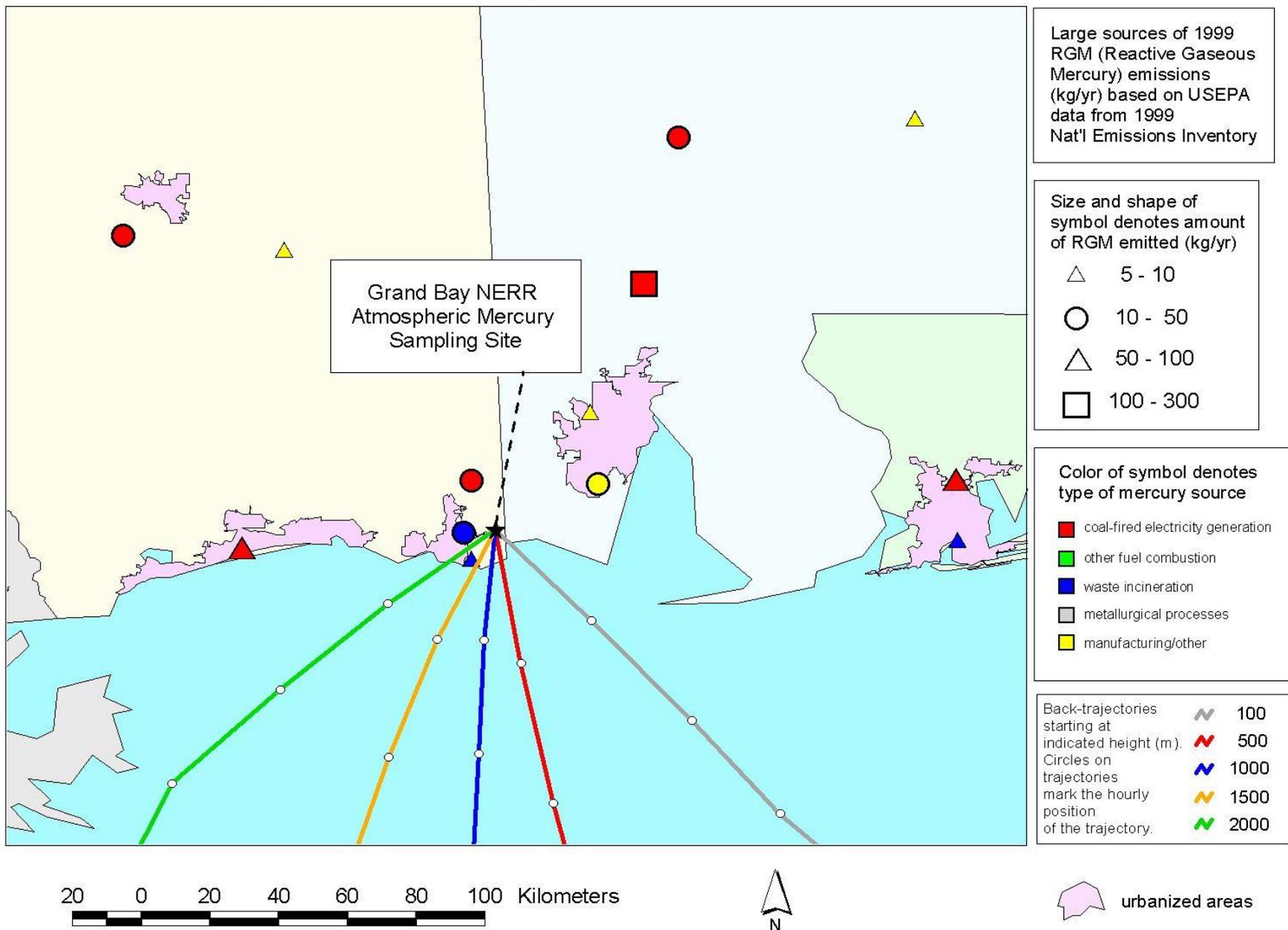


20 0 20 40 60 80 100 Kilometers

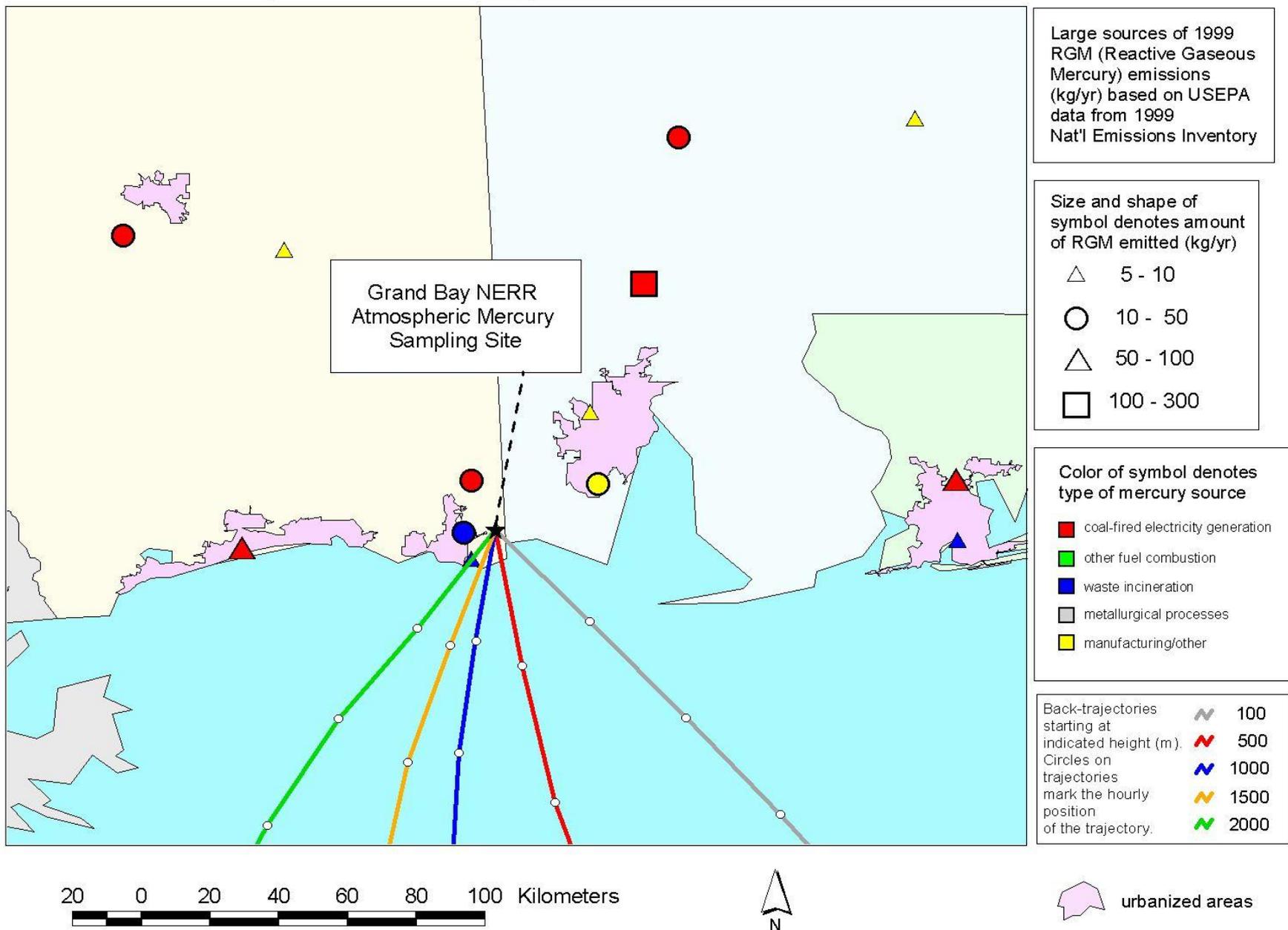


 urbanized areas

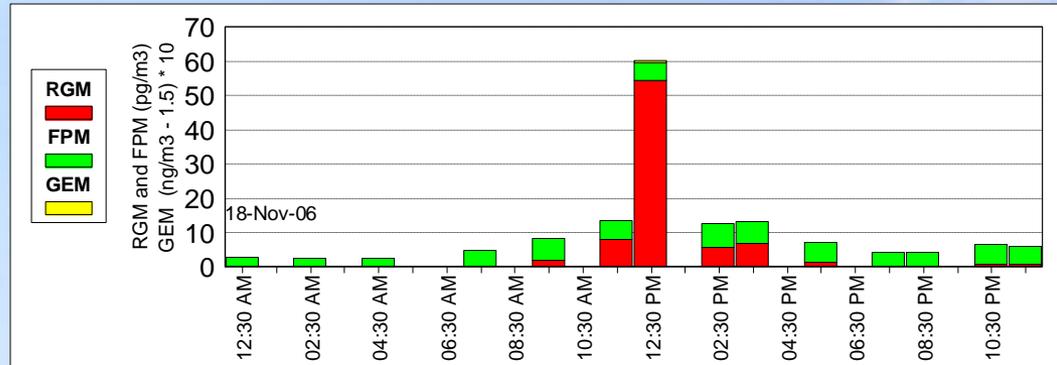
# Back Trajectories Arriving at 3/14/2007 16:00 CST

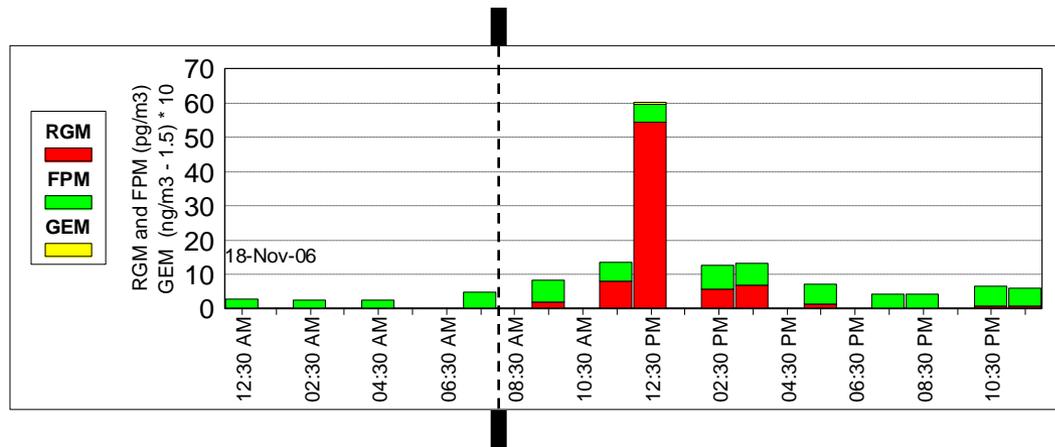


# Back Trajectories Arriving at 3/14/2007 18:00 CST

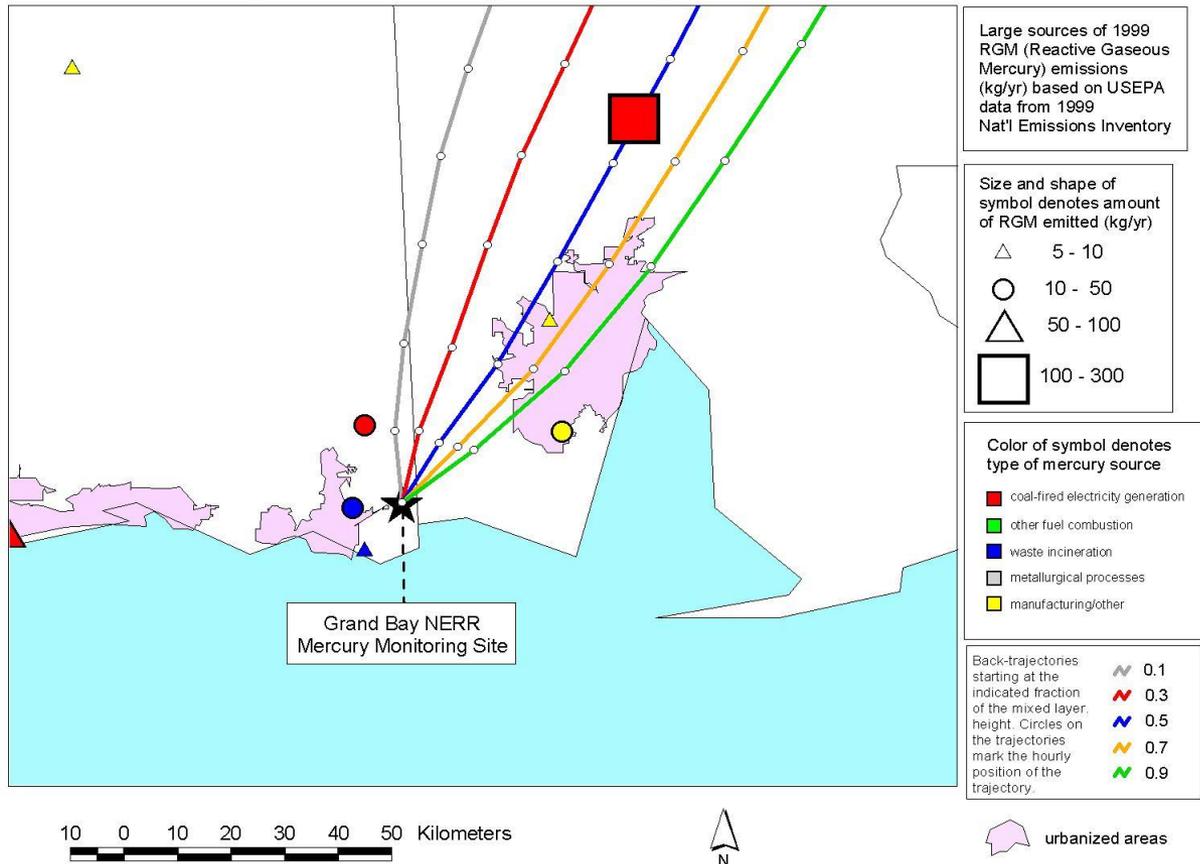
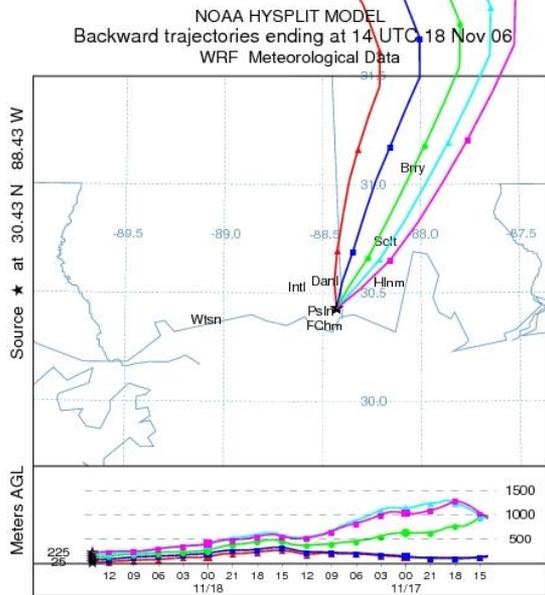


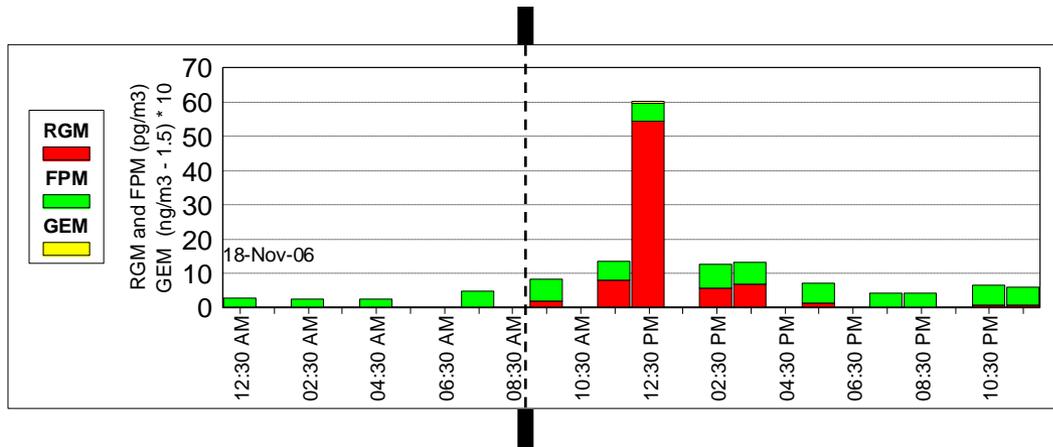
# Grand Bay Episode Nov 18, 2006



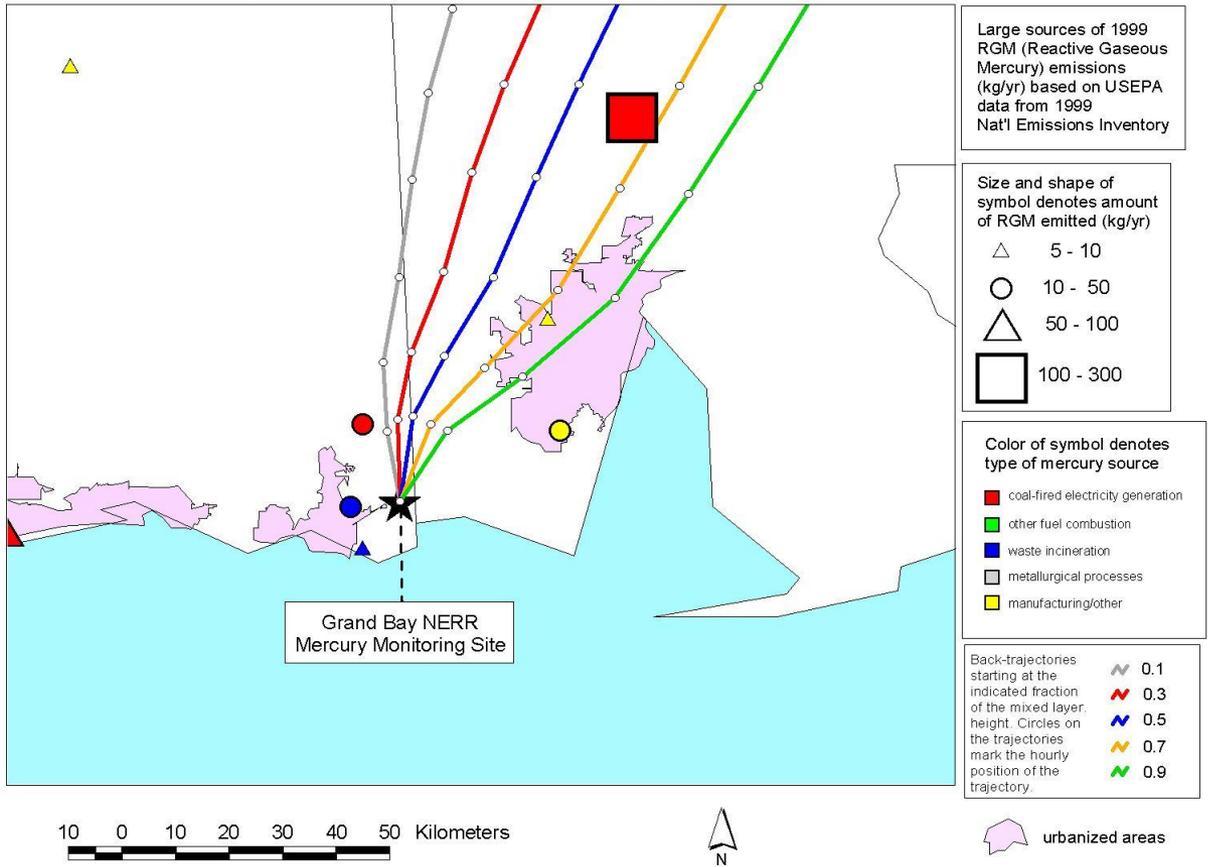
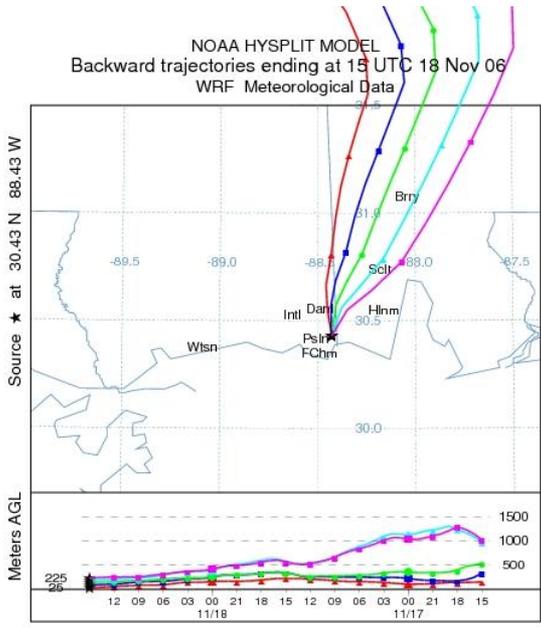


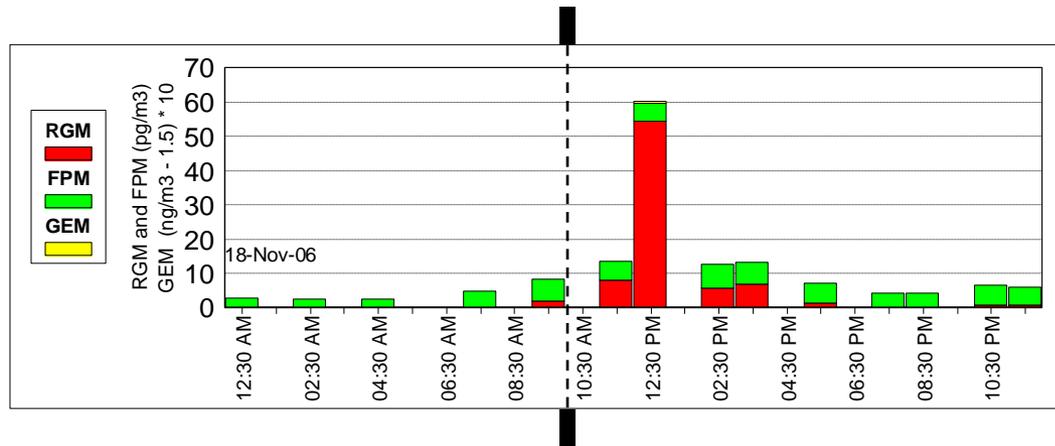
Back Trajectories Arriving at Nov 18, 2006 08:00 CST



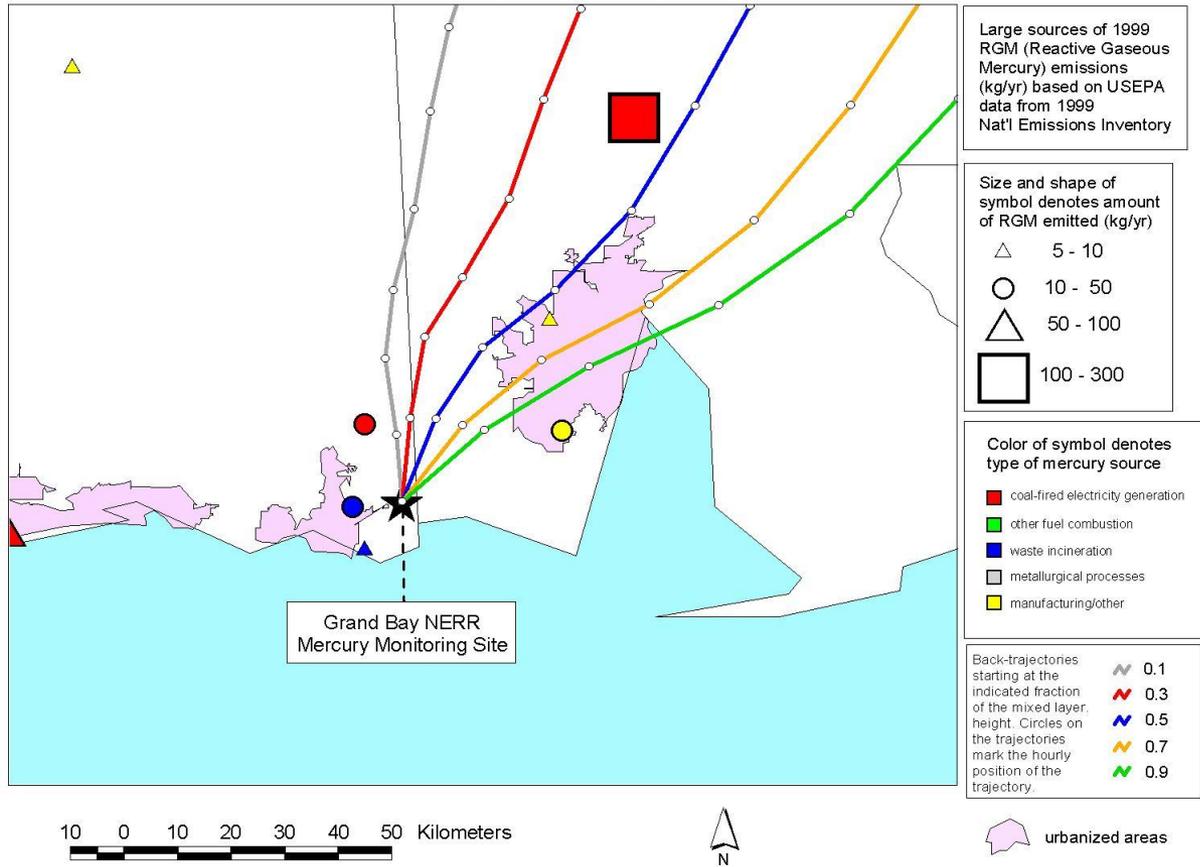
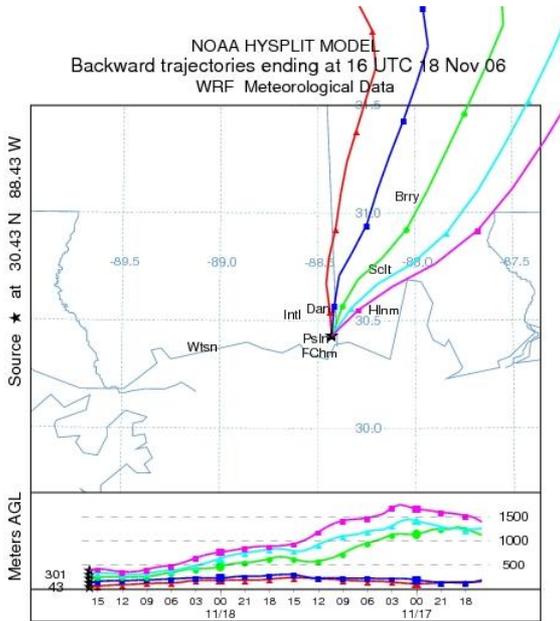


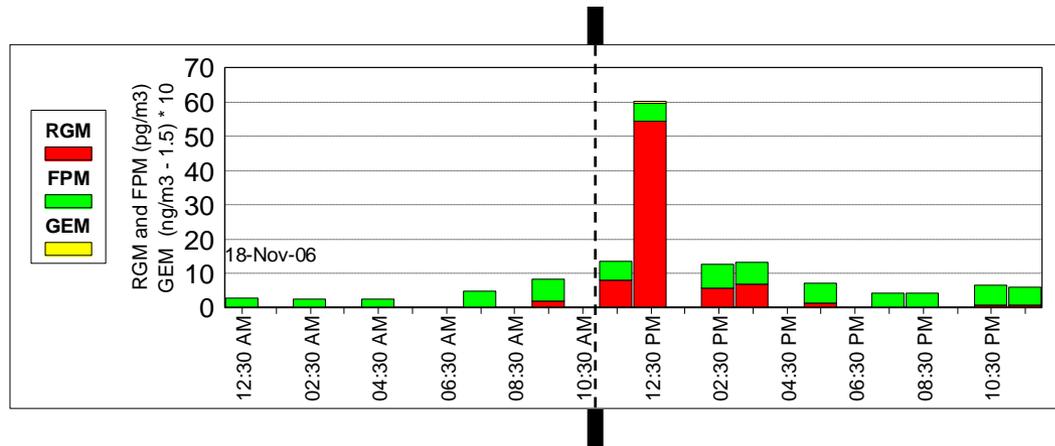
Back Trajectories Arriving at Nov 18, 2006 09:00 CST



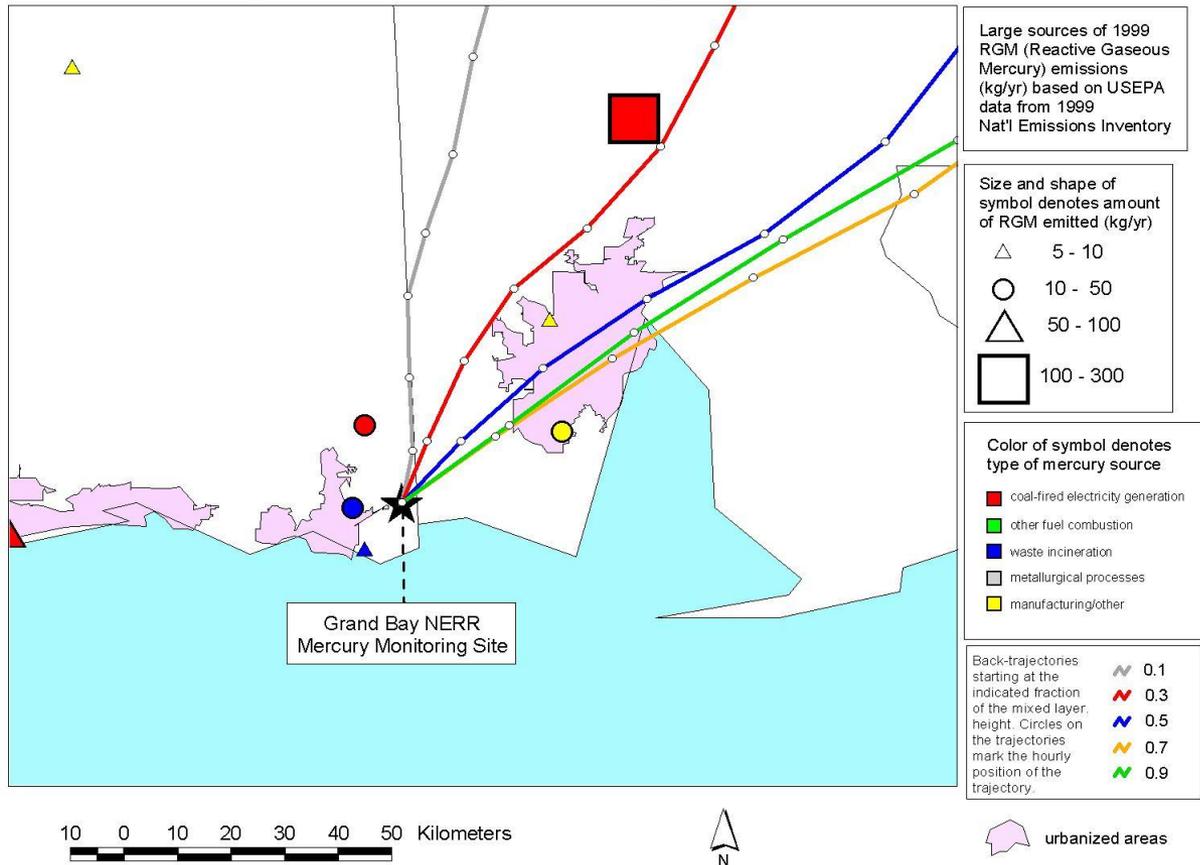
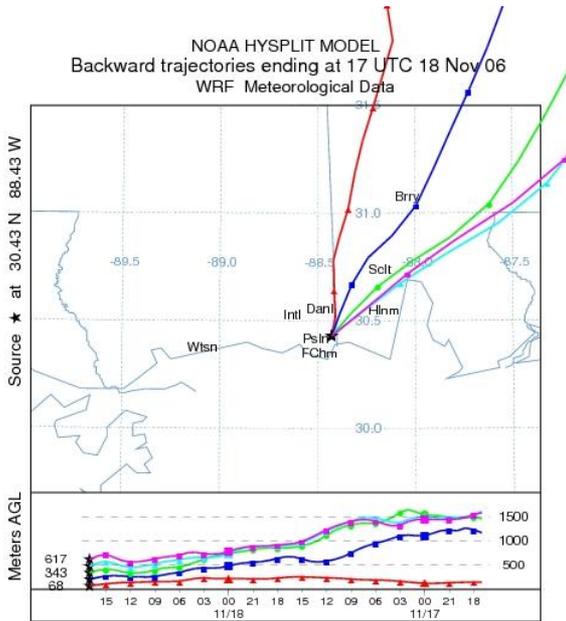


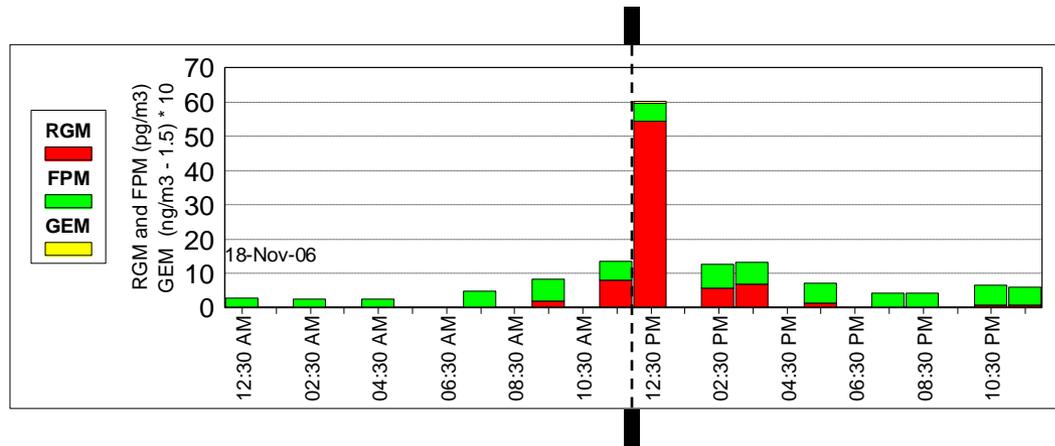
Back Trajectories Arriving at Nov 18, 2006 10:00 CST



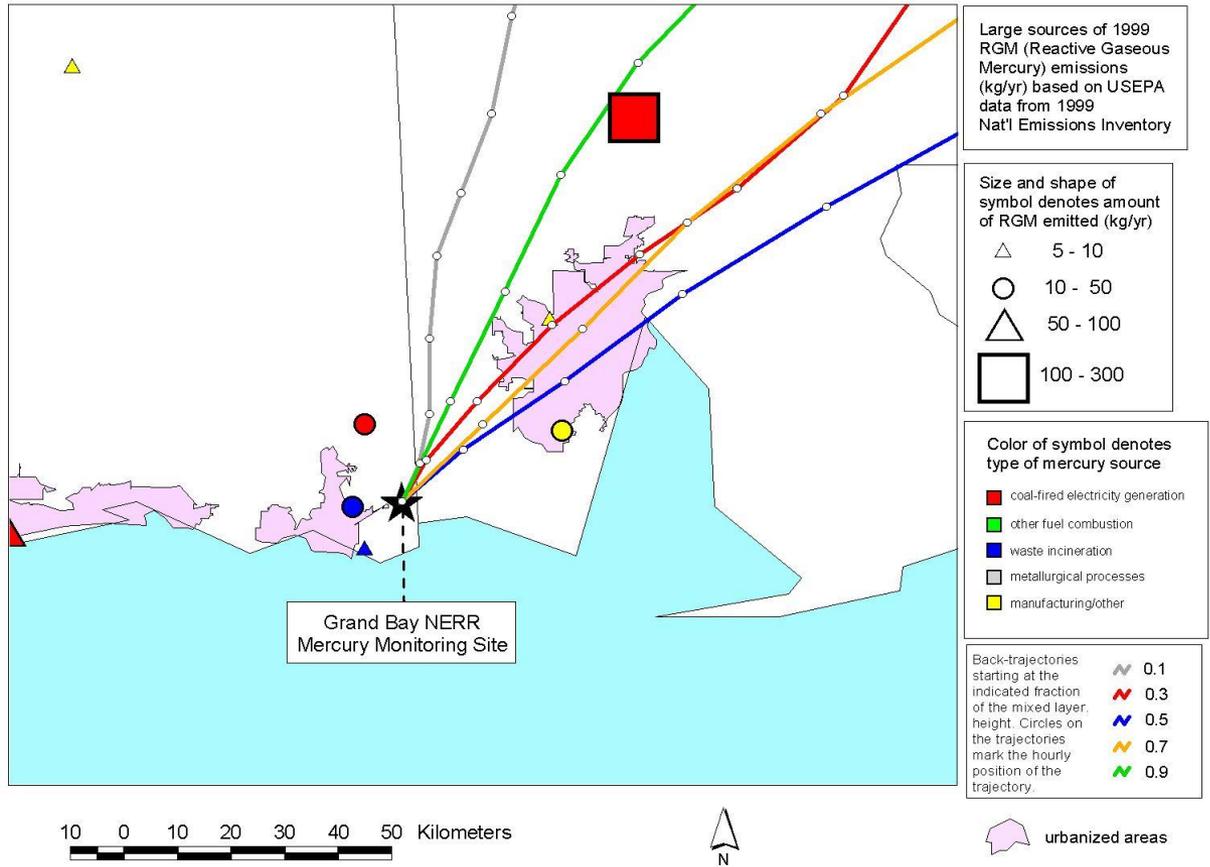
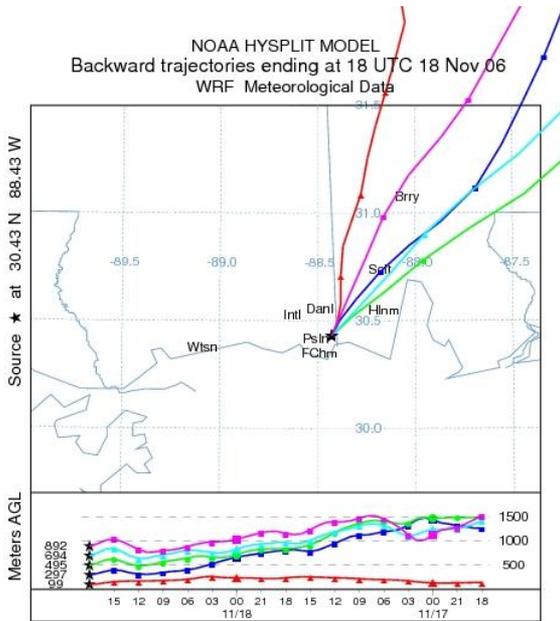


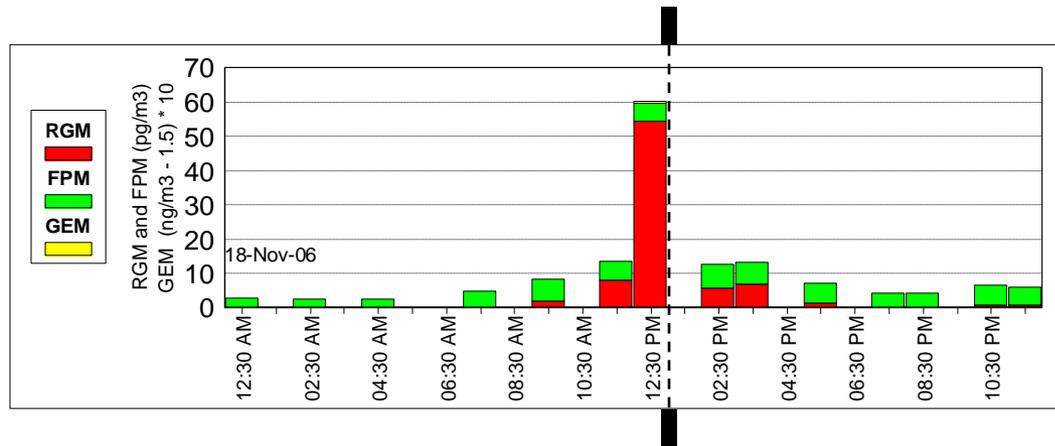
Back Trajectories Arriving at Nov 18, 2006 11:00 CST



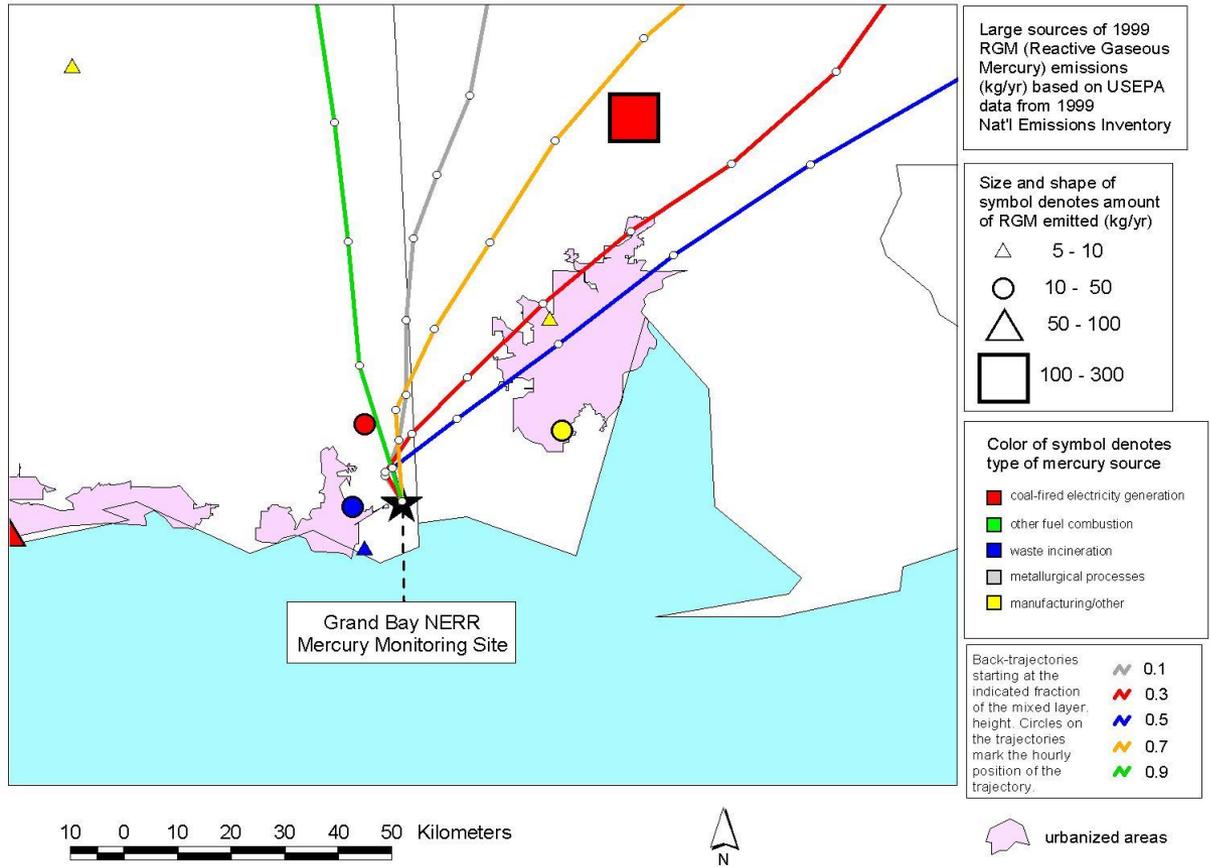
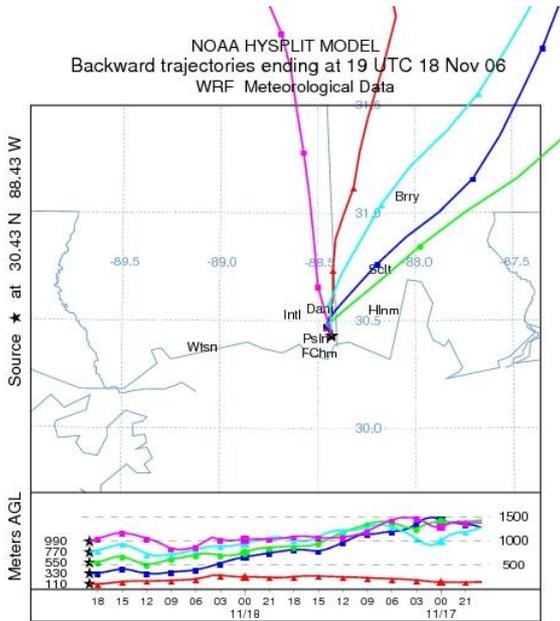


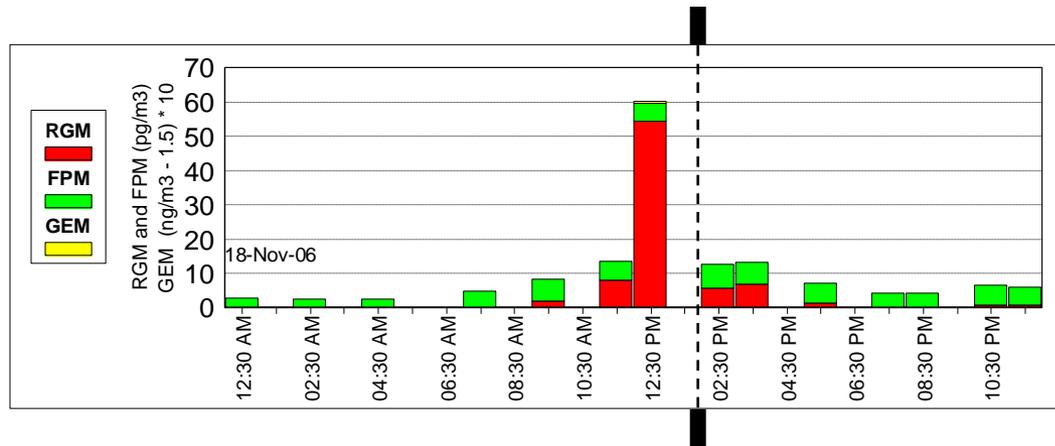
Back Trajectories Arriving at Nov 18, 2006 12:00 CST



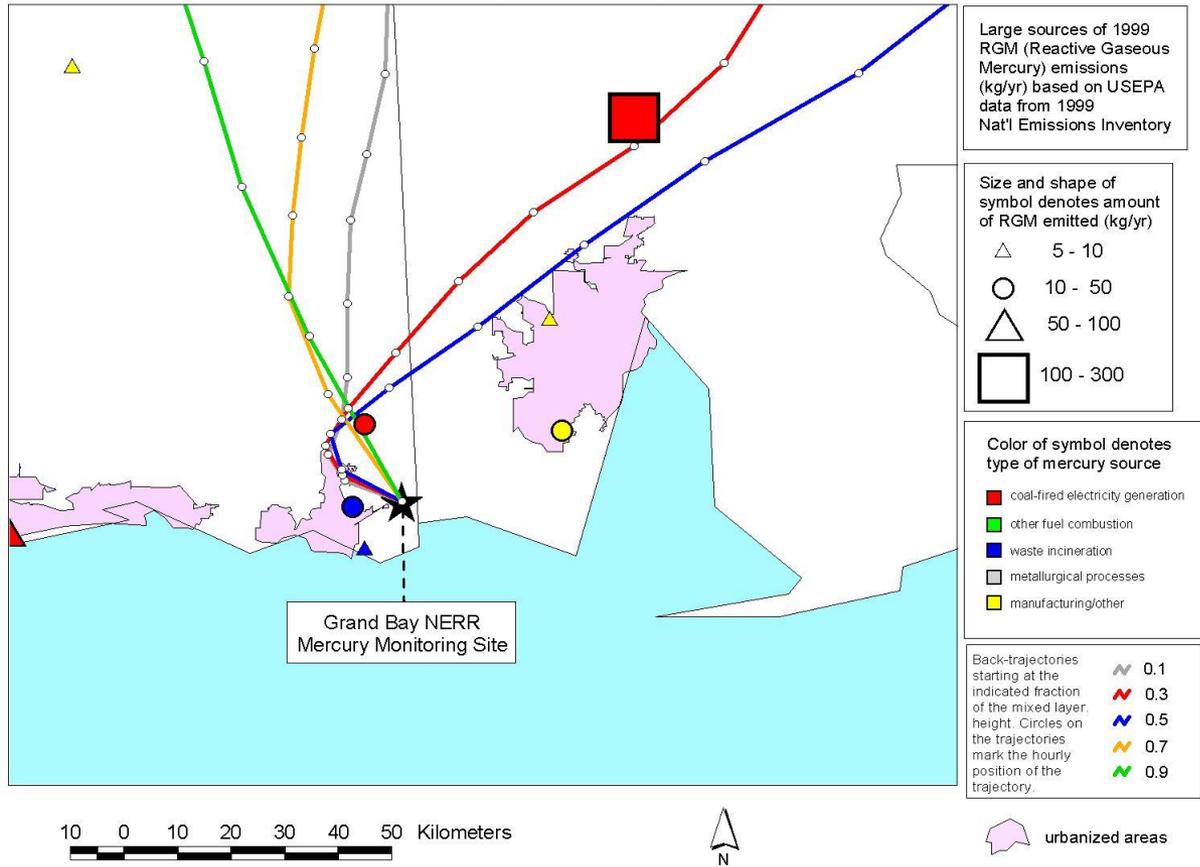
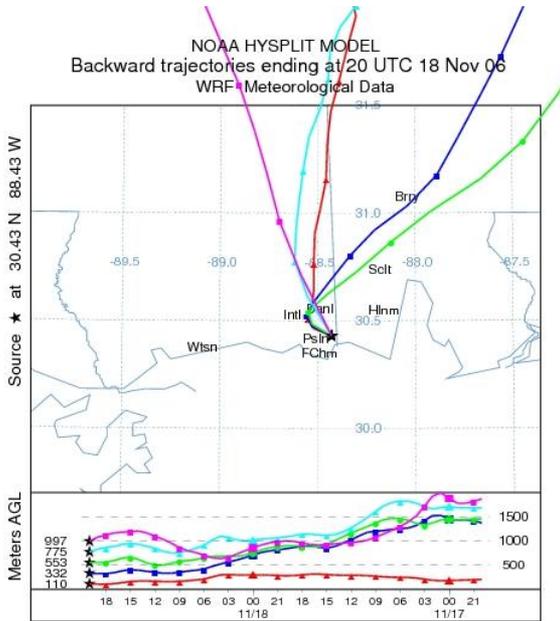


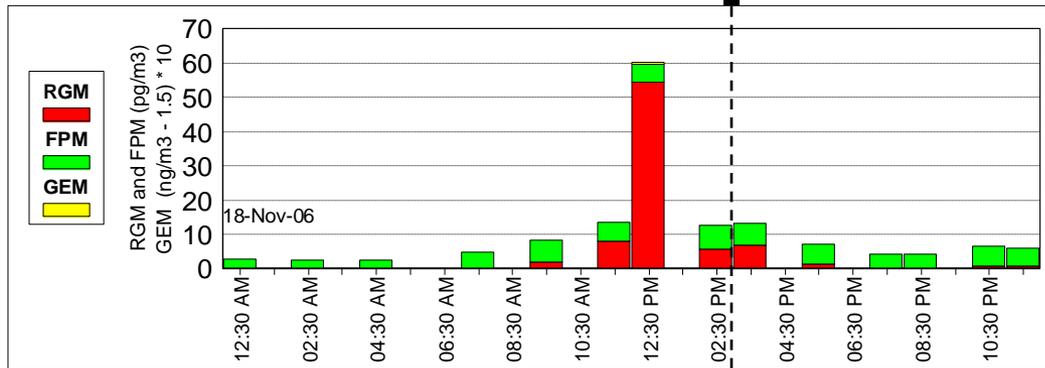
Back Trajectories Arriving at Nov 18, 2006 13:00 CST



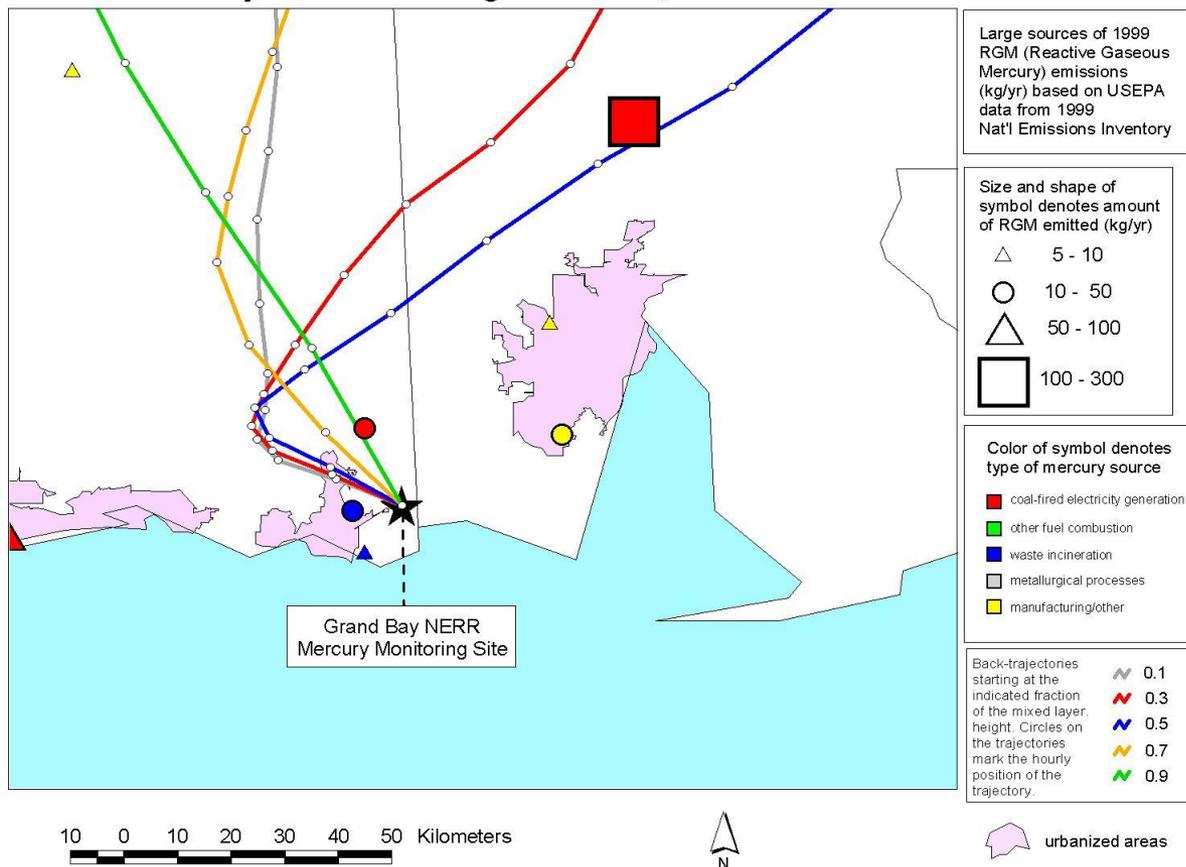
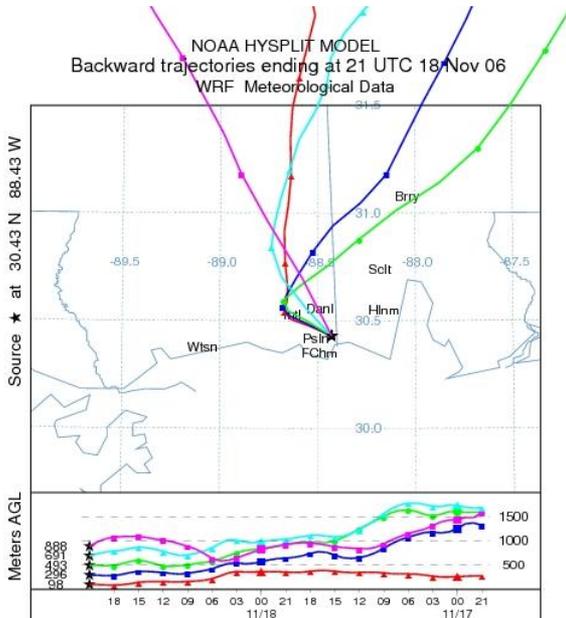


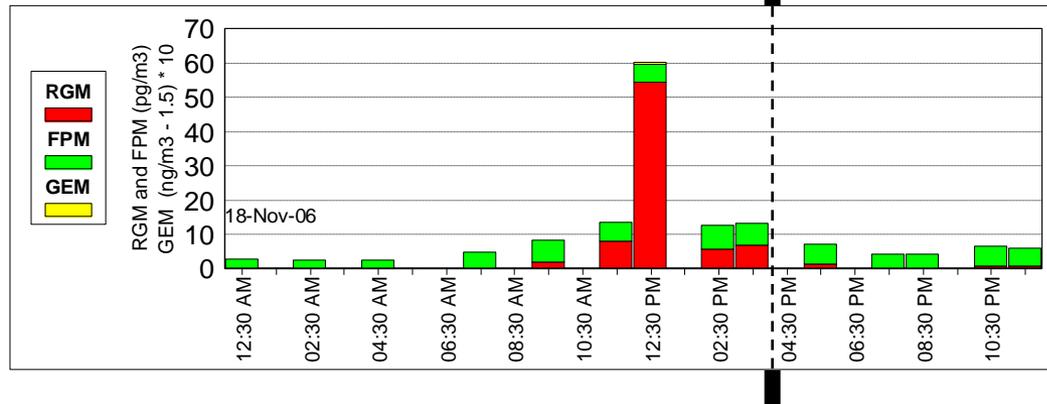
### Back Trajectories Arriving at Nov 18, 2006 14:00 CST



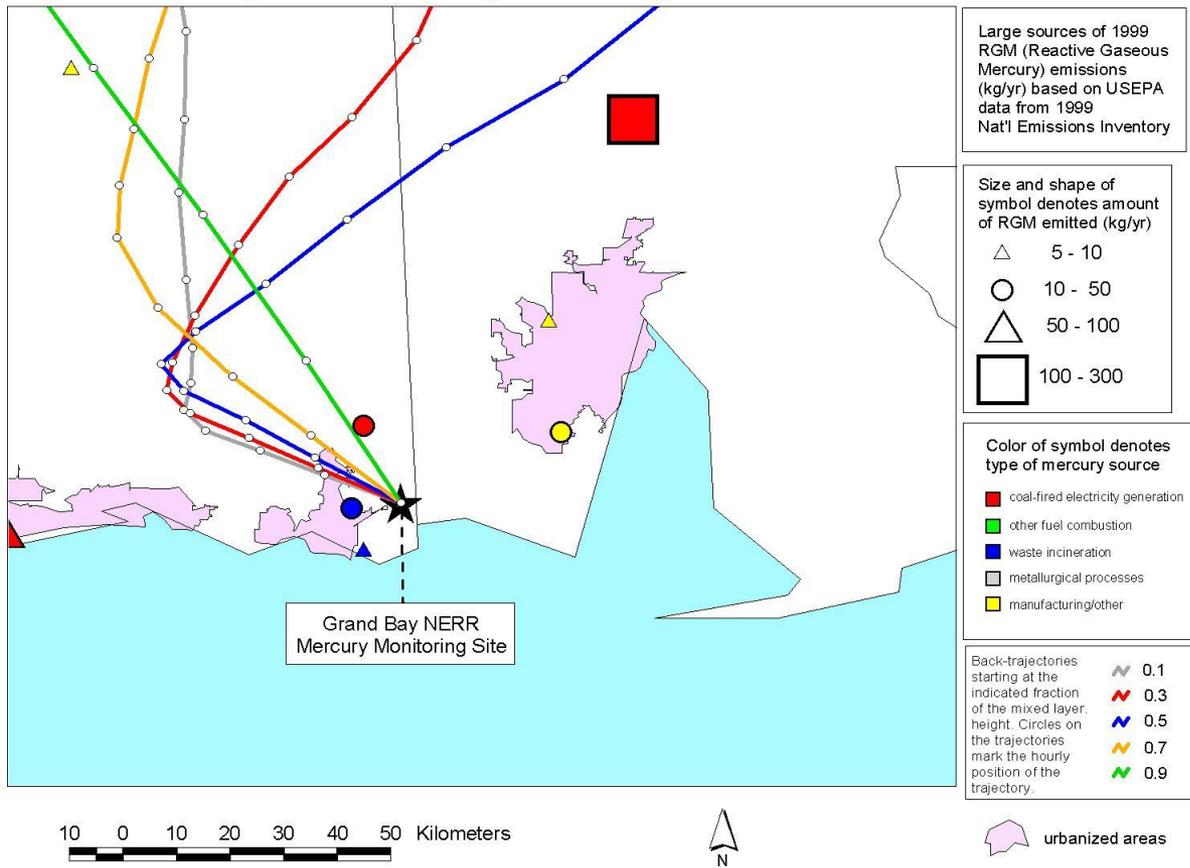
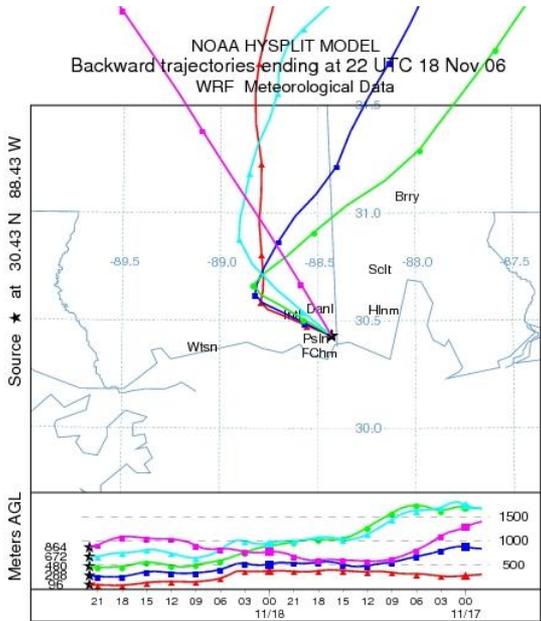


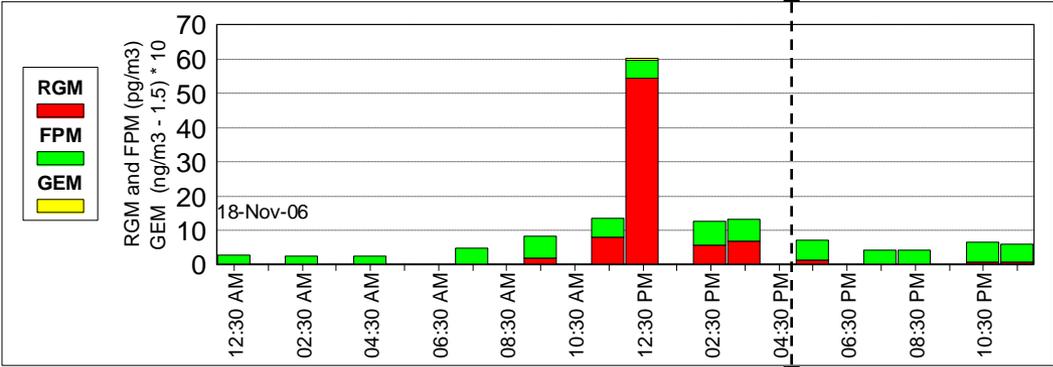
Back Trajectories Arriving at Nov 18, 2006 15:00 CST



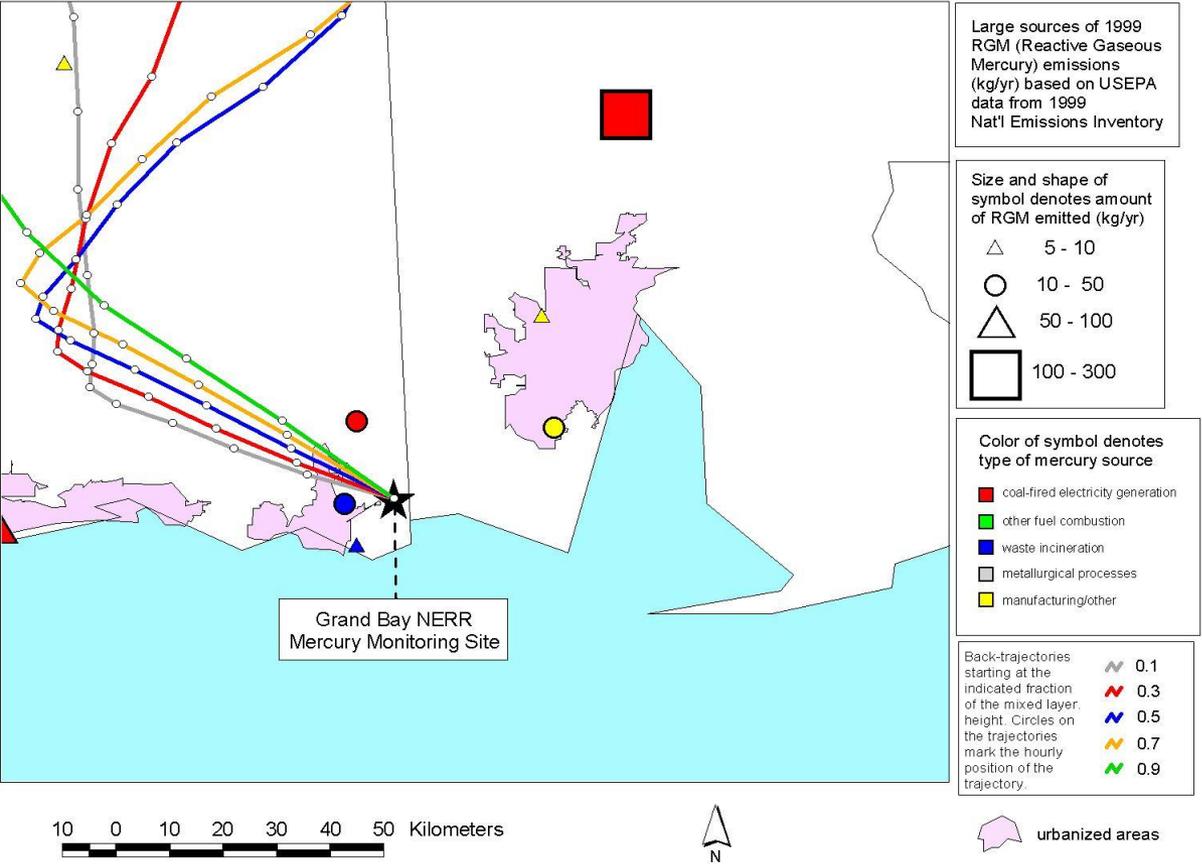
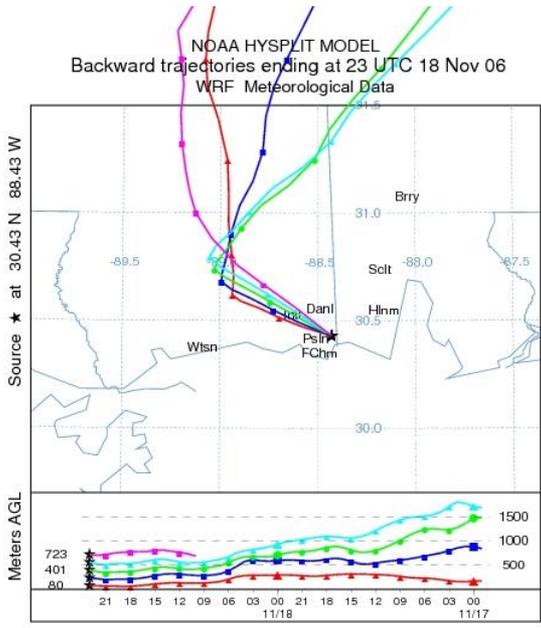


### Back Trajectories Arriving at Nov 18, 2006 16:00 CST

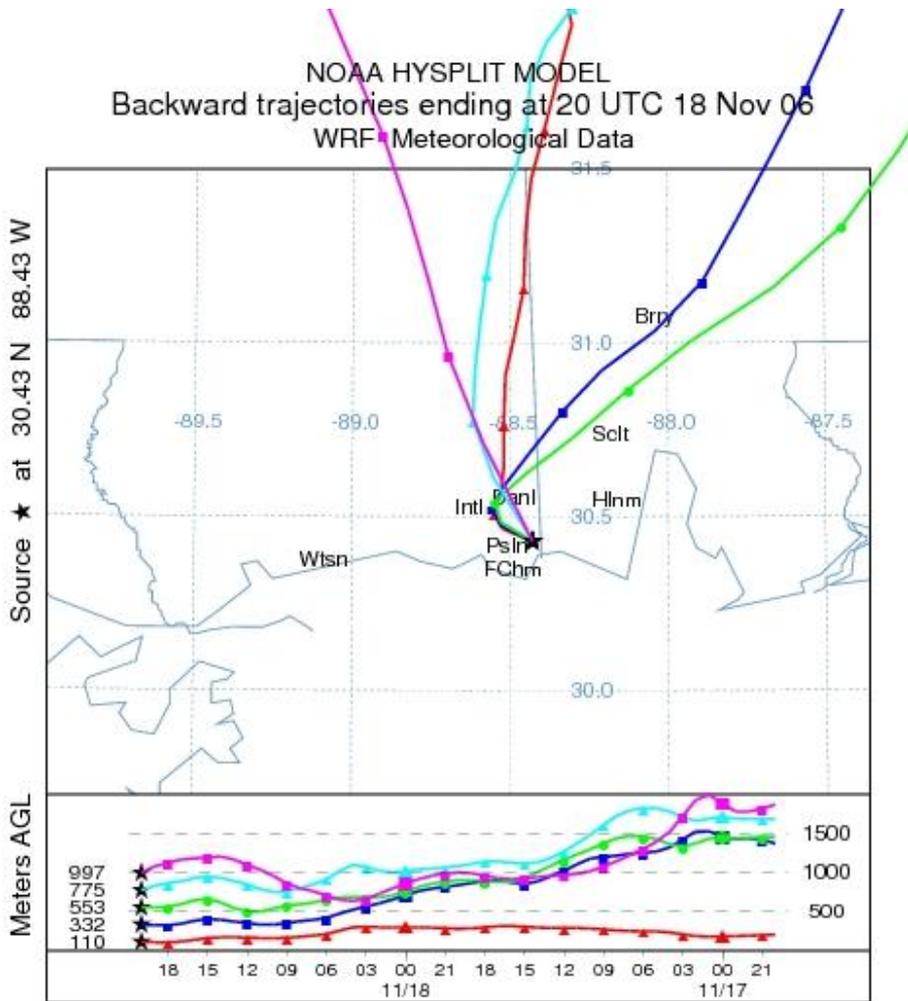




Back Trajectories Arriving at Nov 18, 2006 17:00 CST

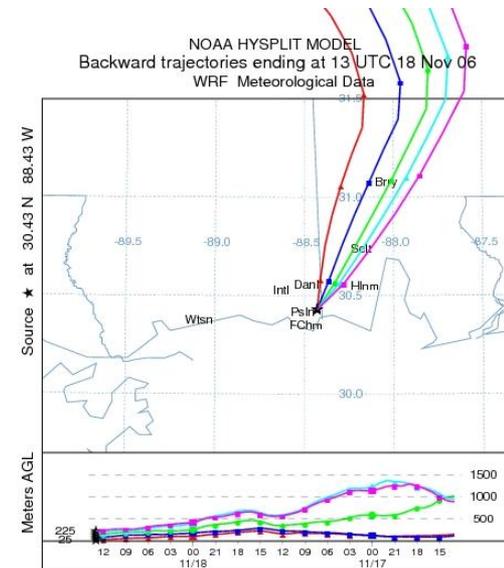
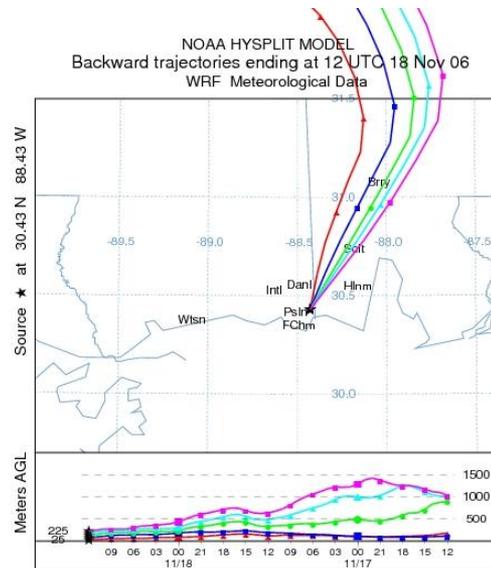
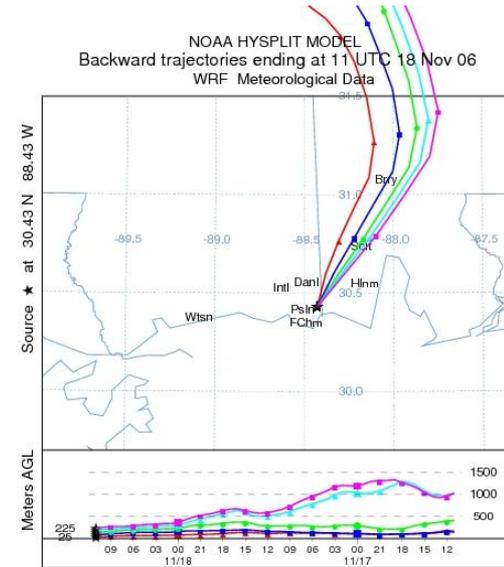
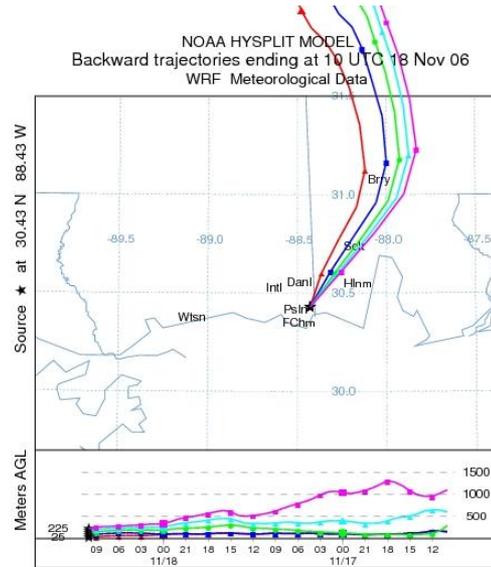


additional information  
regarding this episode

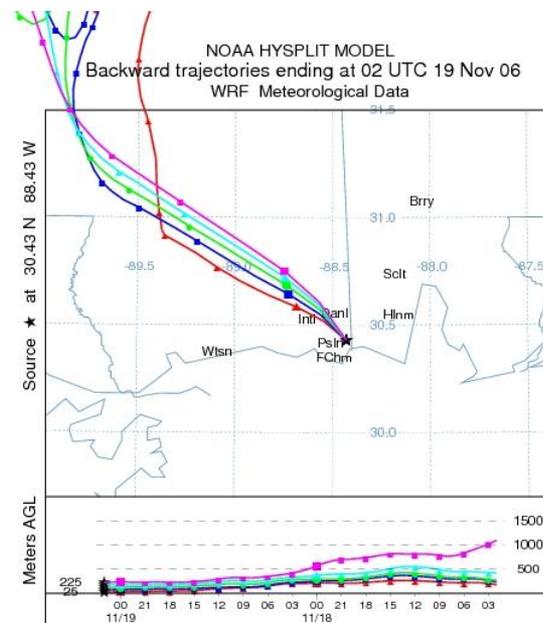
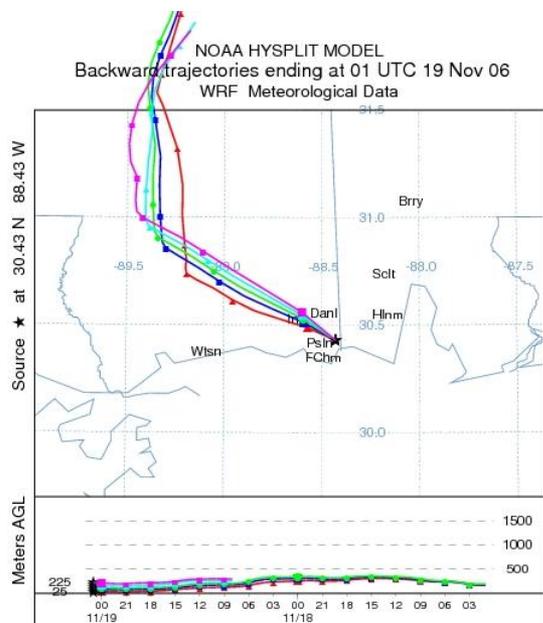
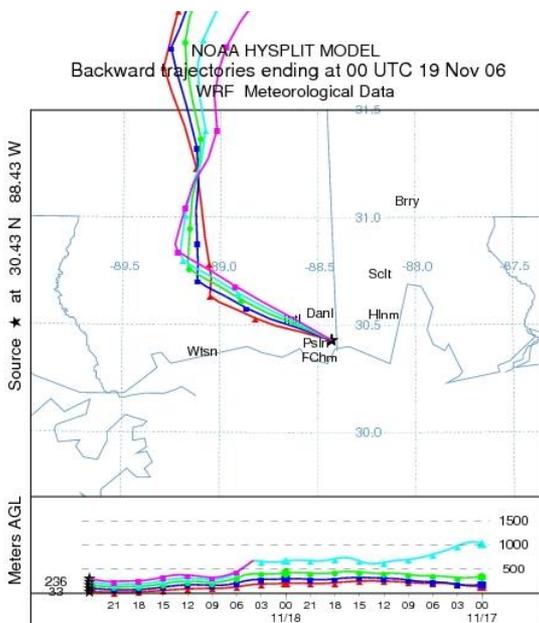


- ❑ Back trajectories simulated with the NOAA HYSPLIT model using meteorological on a 12 km grid
- ❑ Trajectories started from the Grand Bay site (marked with a star on the map) at 5 different heights representing different positions in the mixed layer (0.1, 0.3, 0.5, 0.7, 0.9)
- ❑ Note that the times are represented in UTC (Universal Time Coordinate) which is 6 hours later than Central Standard Time, e.g., 20 UTC = 14:00 Central Standard Time
- ❑ Large mercury emissions sources are indicated on the map, including:
  - **Wtsn** = Watson coal-fired power plant
  - **FChm** = First Chemical hazardous waste incin / Chevron refinery
  - **Psln** = Pascagoula municipal waste incinerator
  - **Brny** = Barry coal fired power plants
  - **Danl** = Daniel coal fired power plant
  - **Hlnm** = Holnam cement plant
  - **Intl** = International Paper
  - **Sclt** = Scott Paper and International Paper

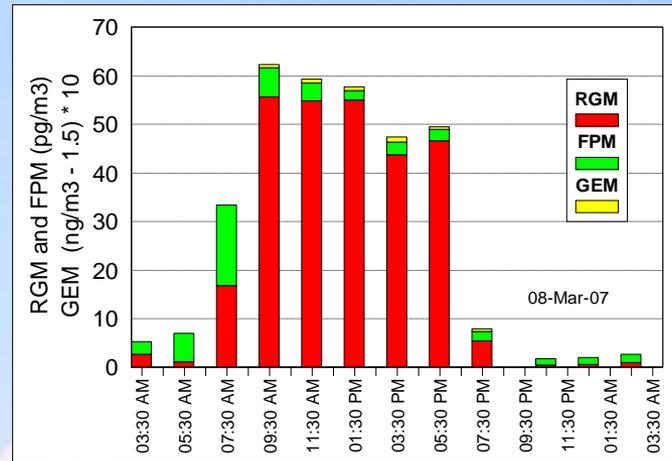
Additional trajectories immediately before period shown in slides above



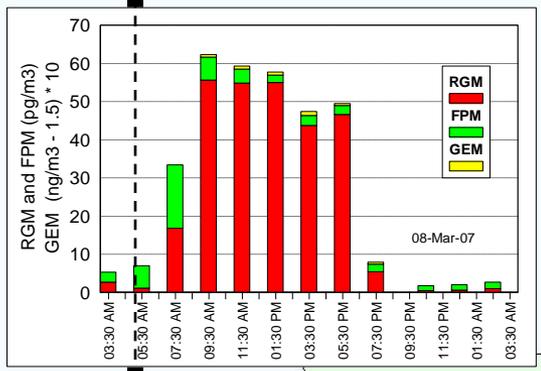
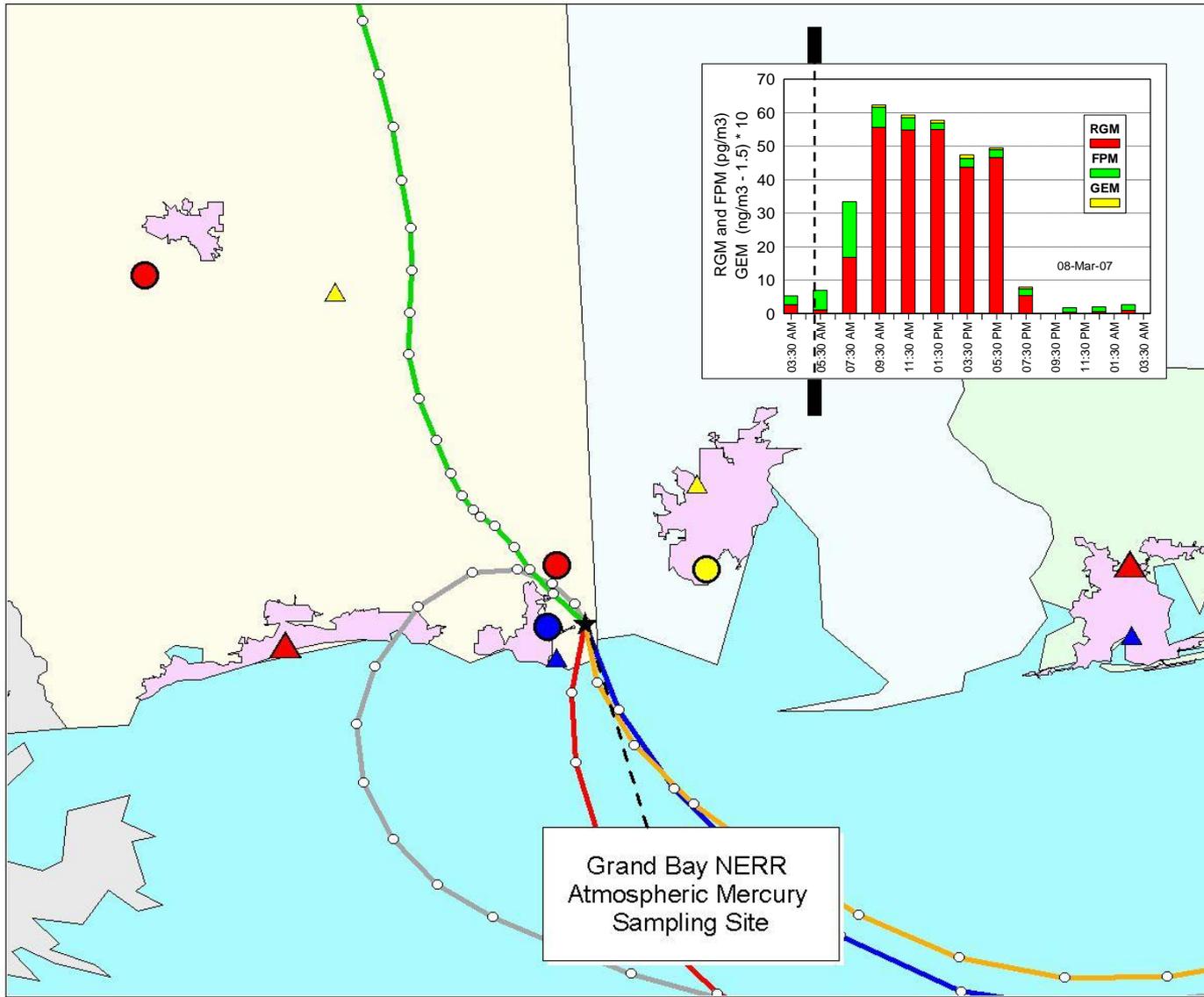
# Additional trajectories immediately after period shown in slides above



# Grand Bay Episode March 7, 2007



# Back Trajectories Arriving at 3/07/2007 05:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

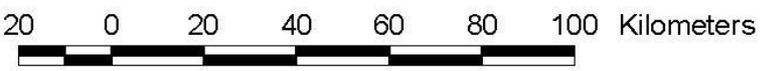
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

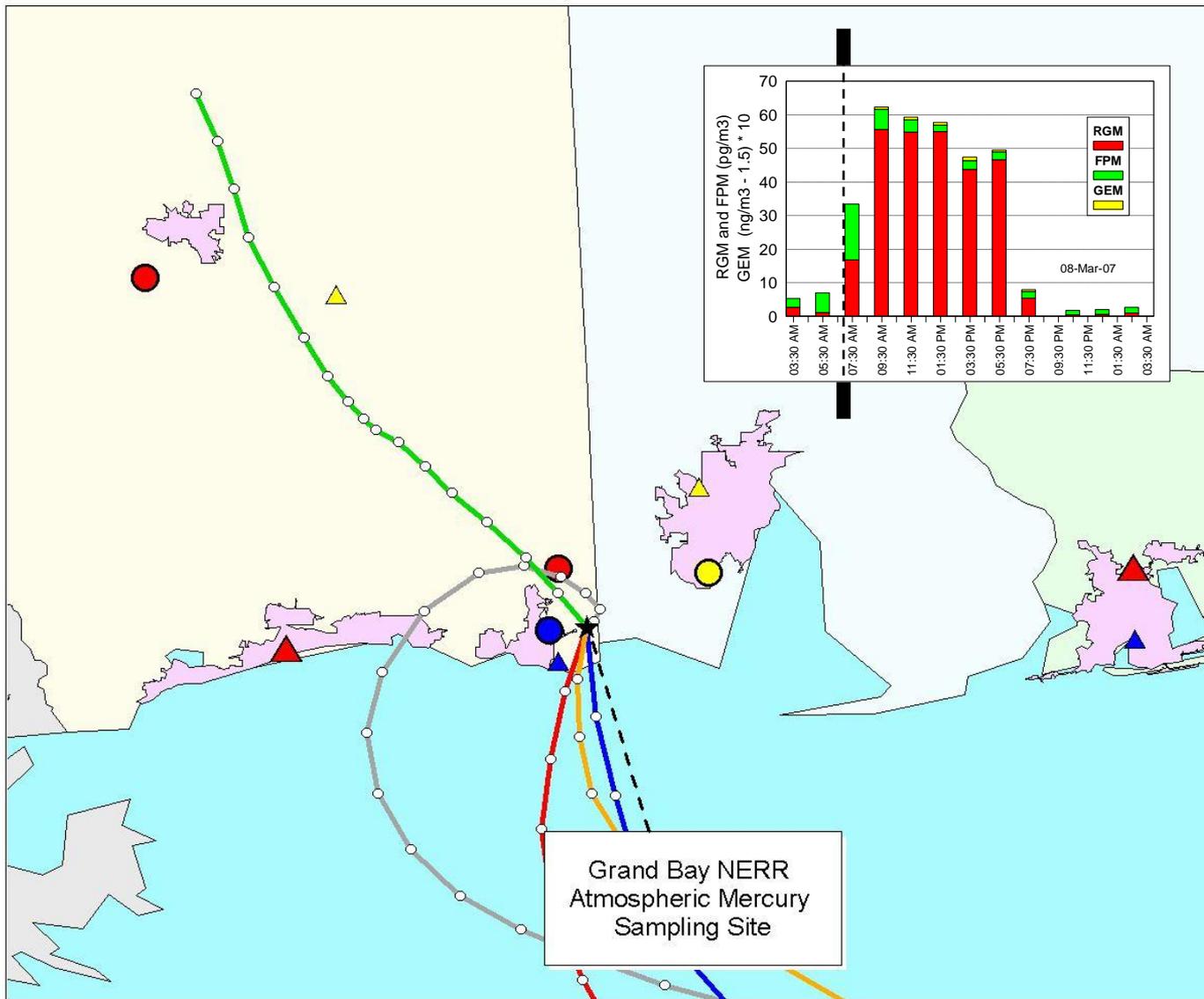
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



urbanized areas

# Back Trajectories Arriving at 3/07/2007 07:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

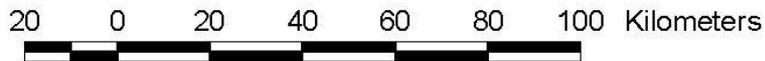
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

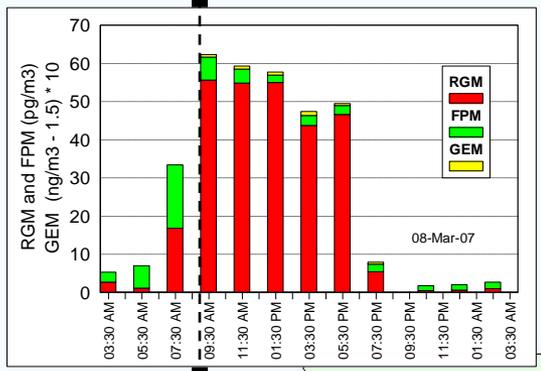
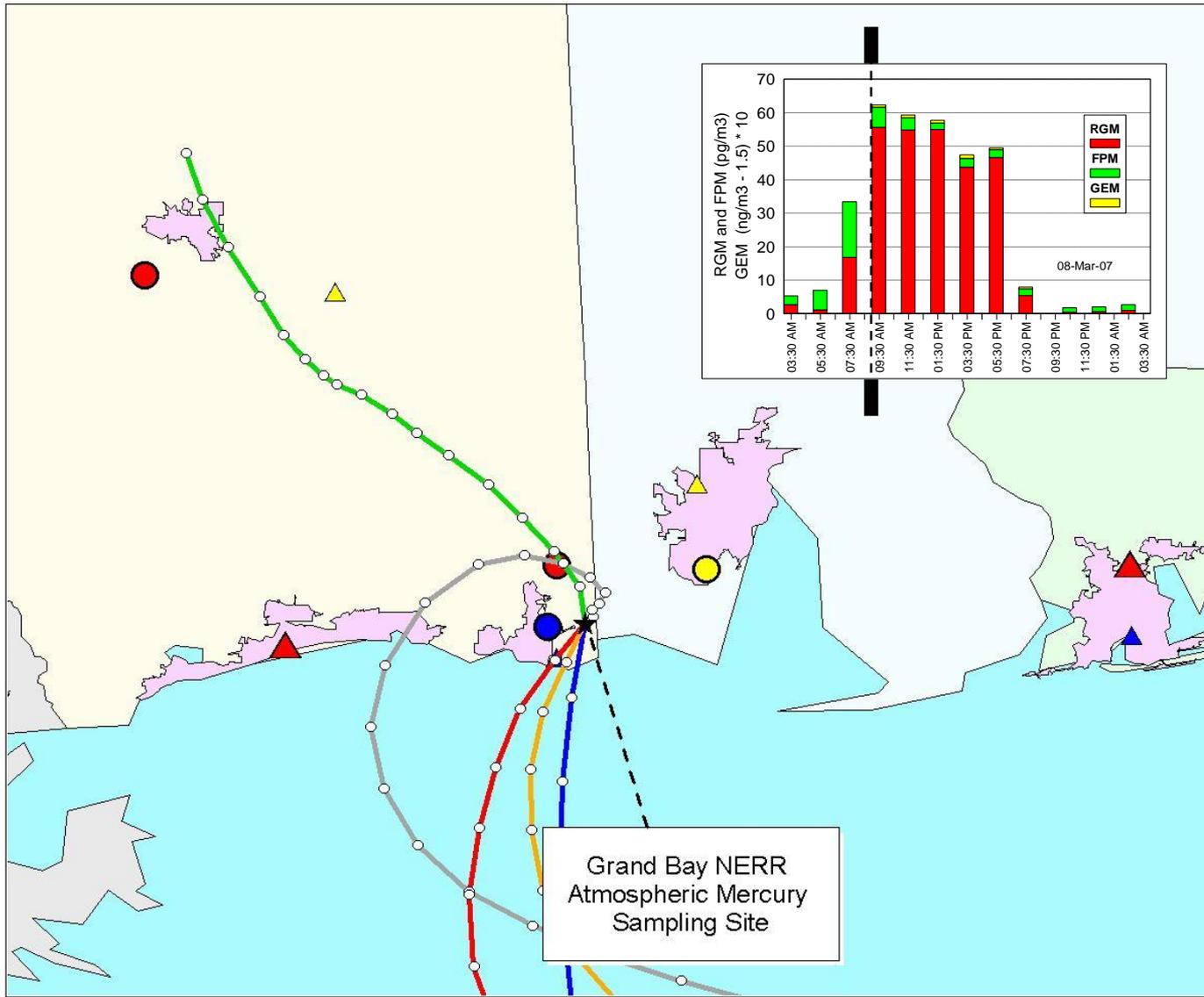
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 09:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

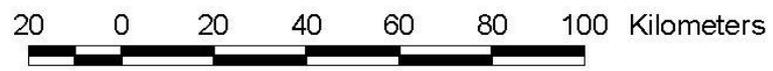
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

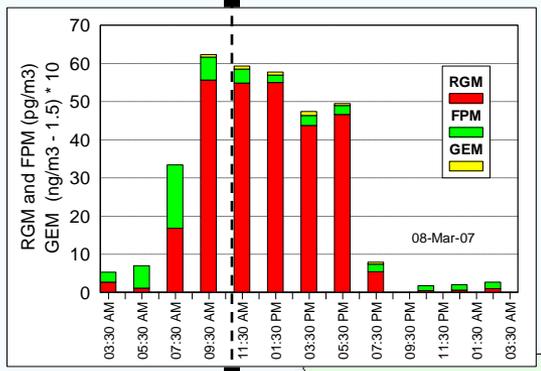
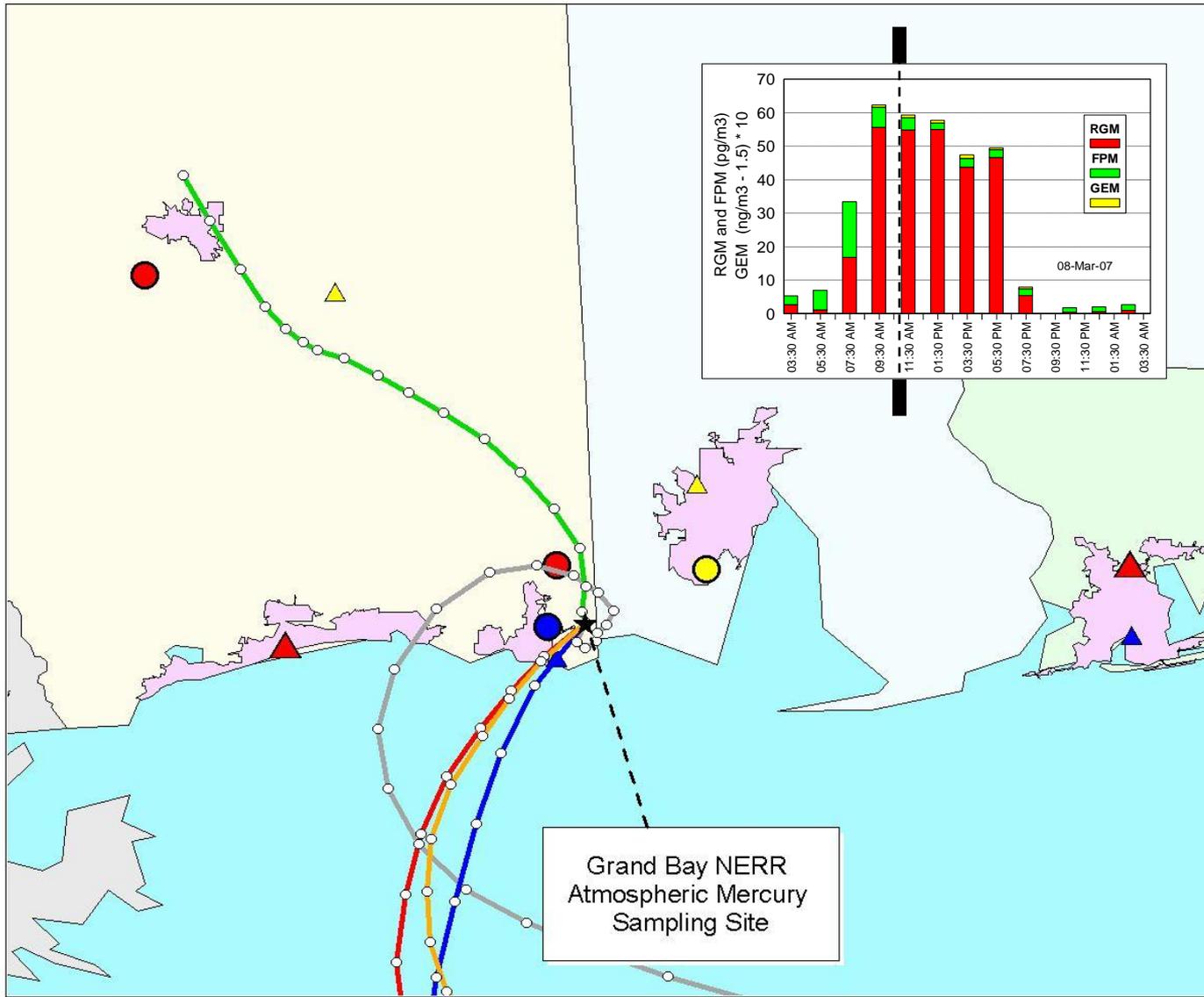
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 11:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

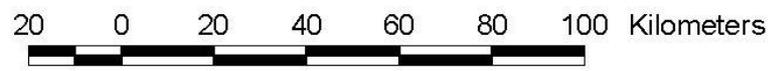
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

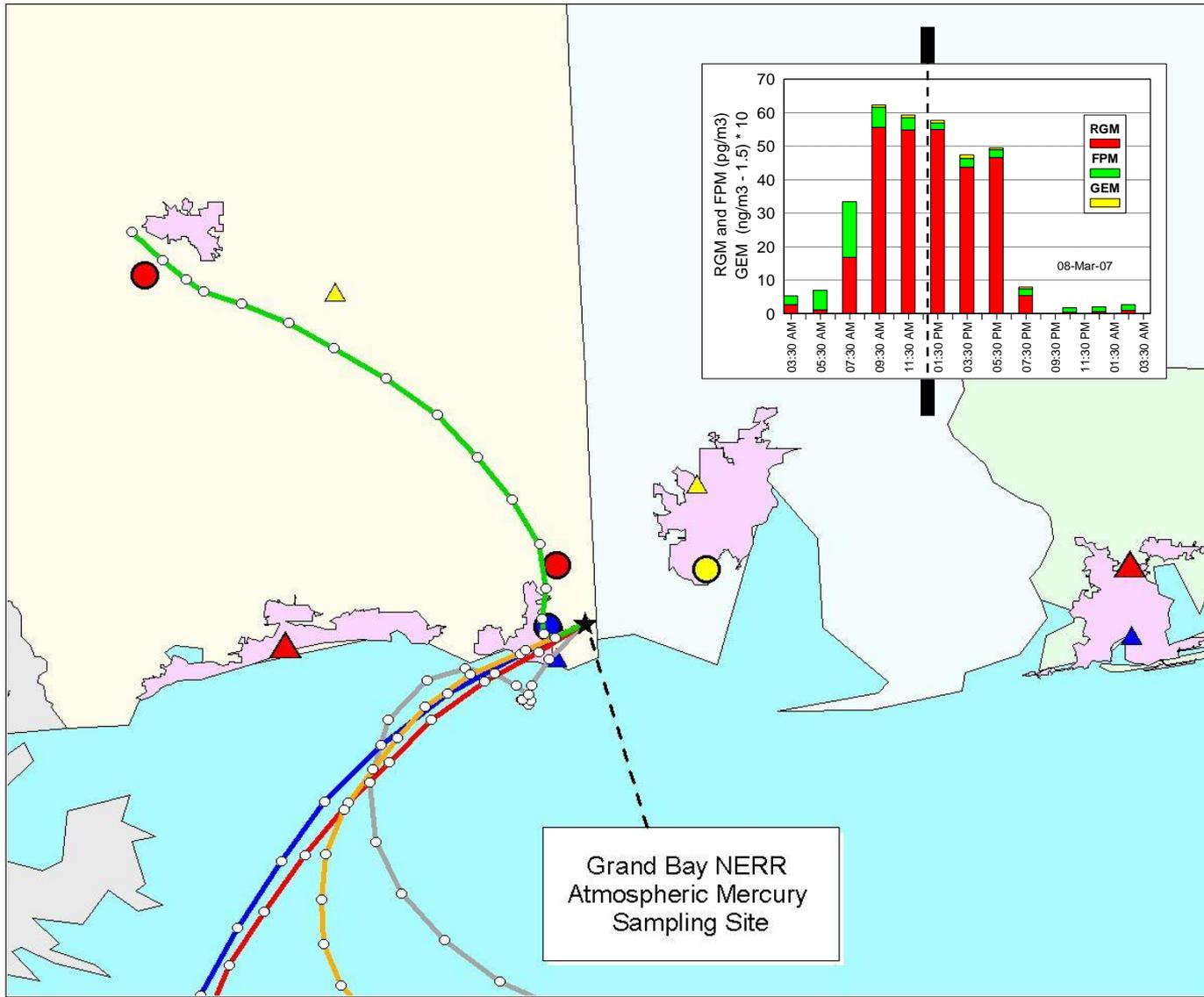
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 13:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

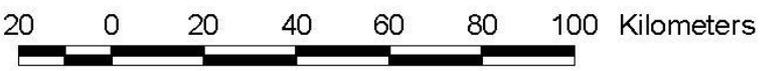
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

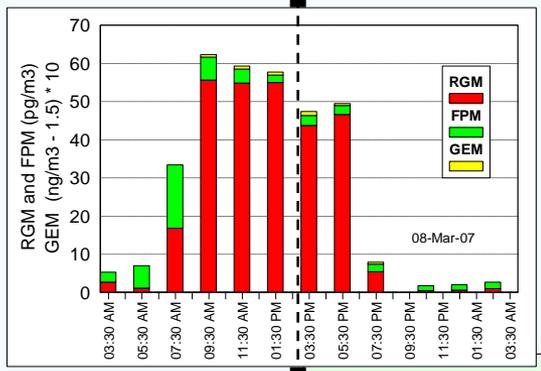
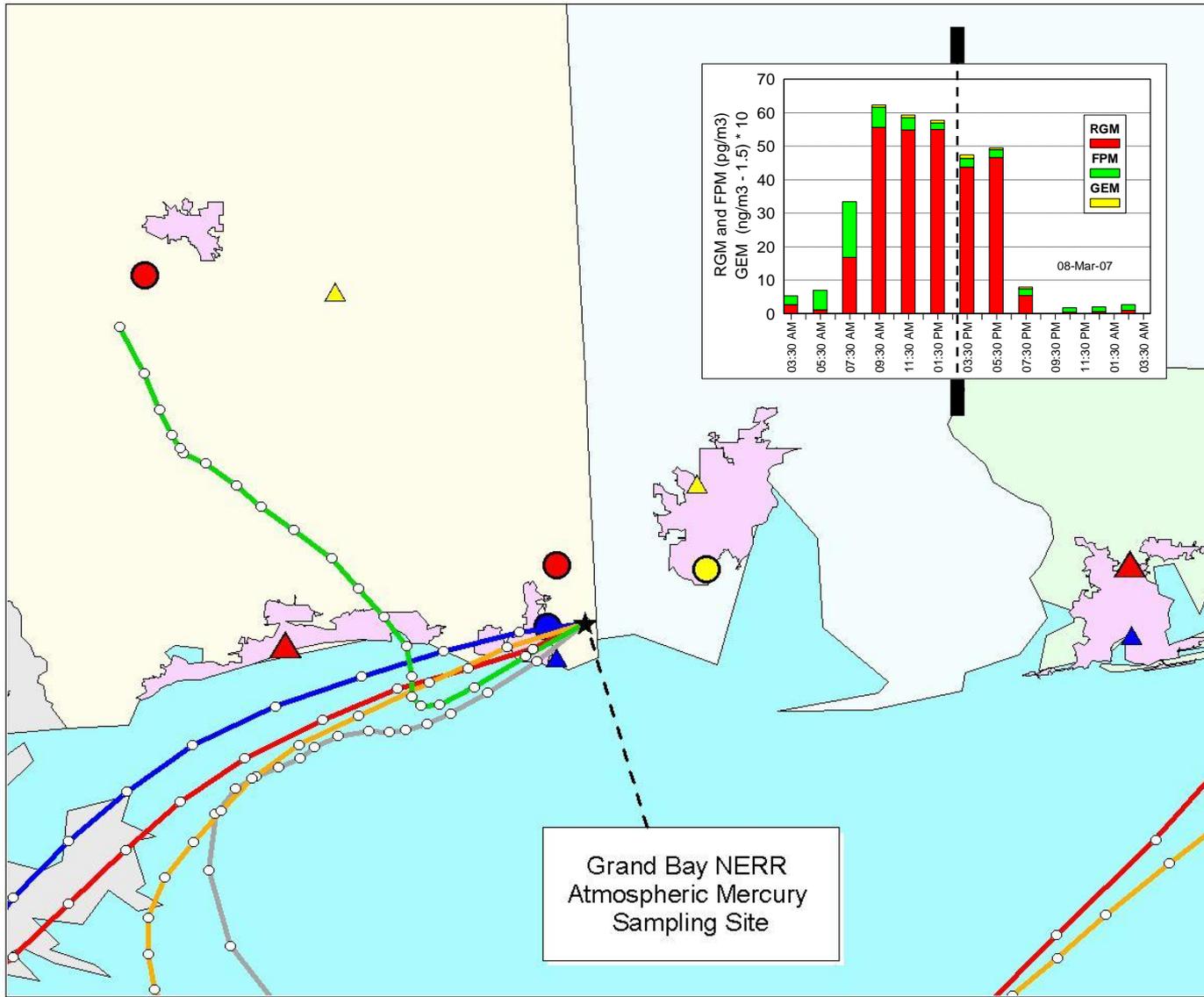
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 15:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

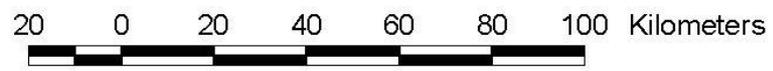
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

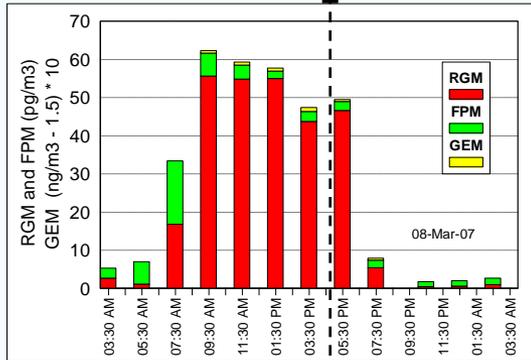
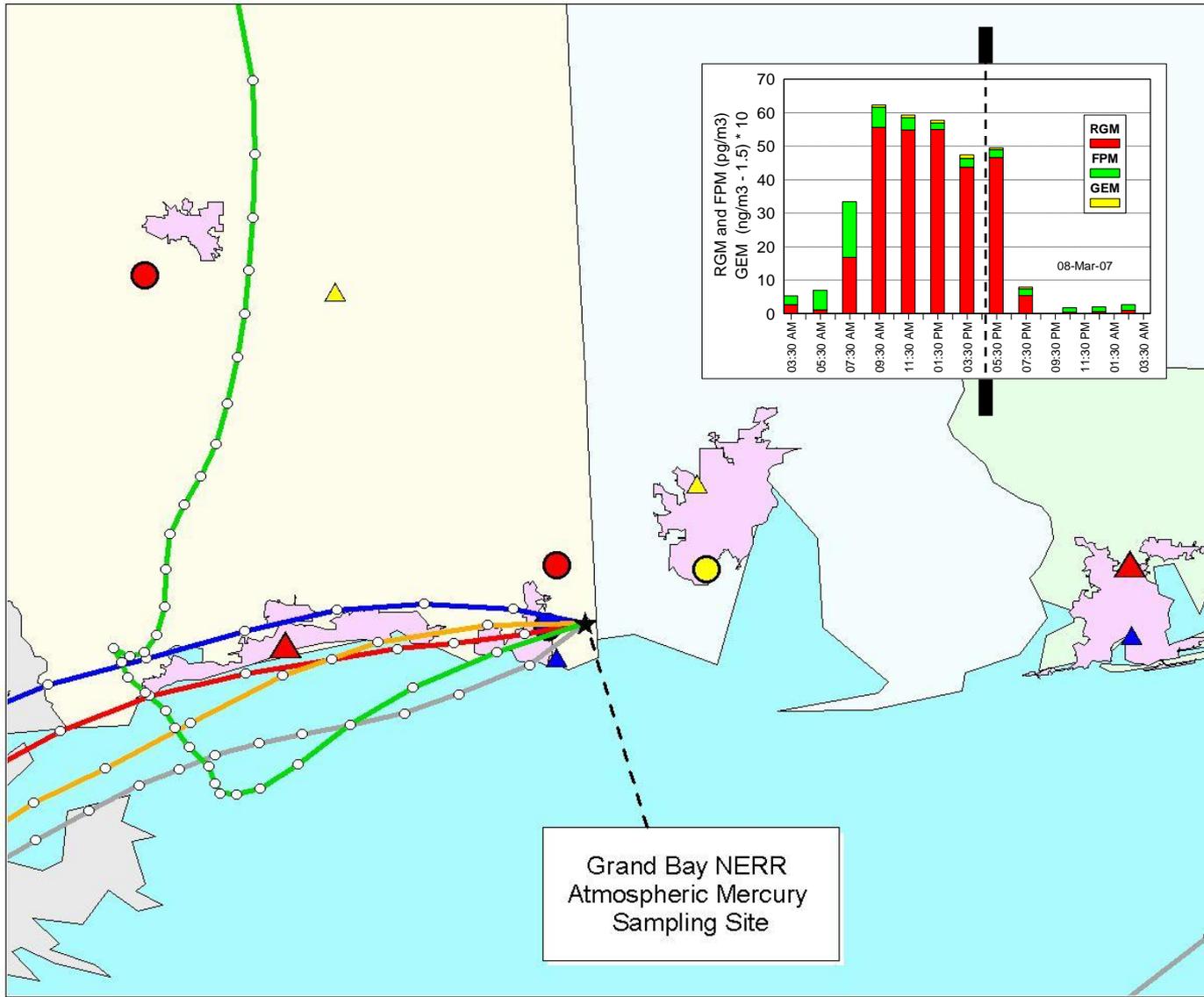
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 17:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

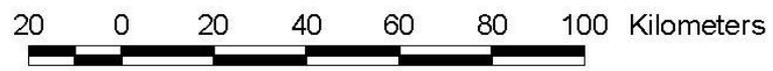
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

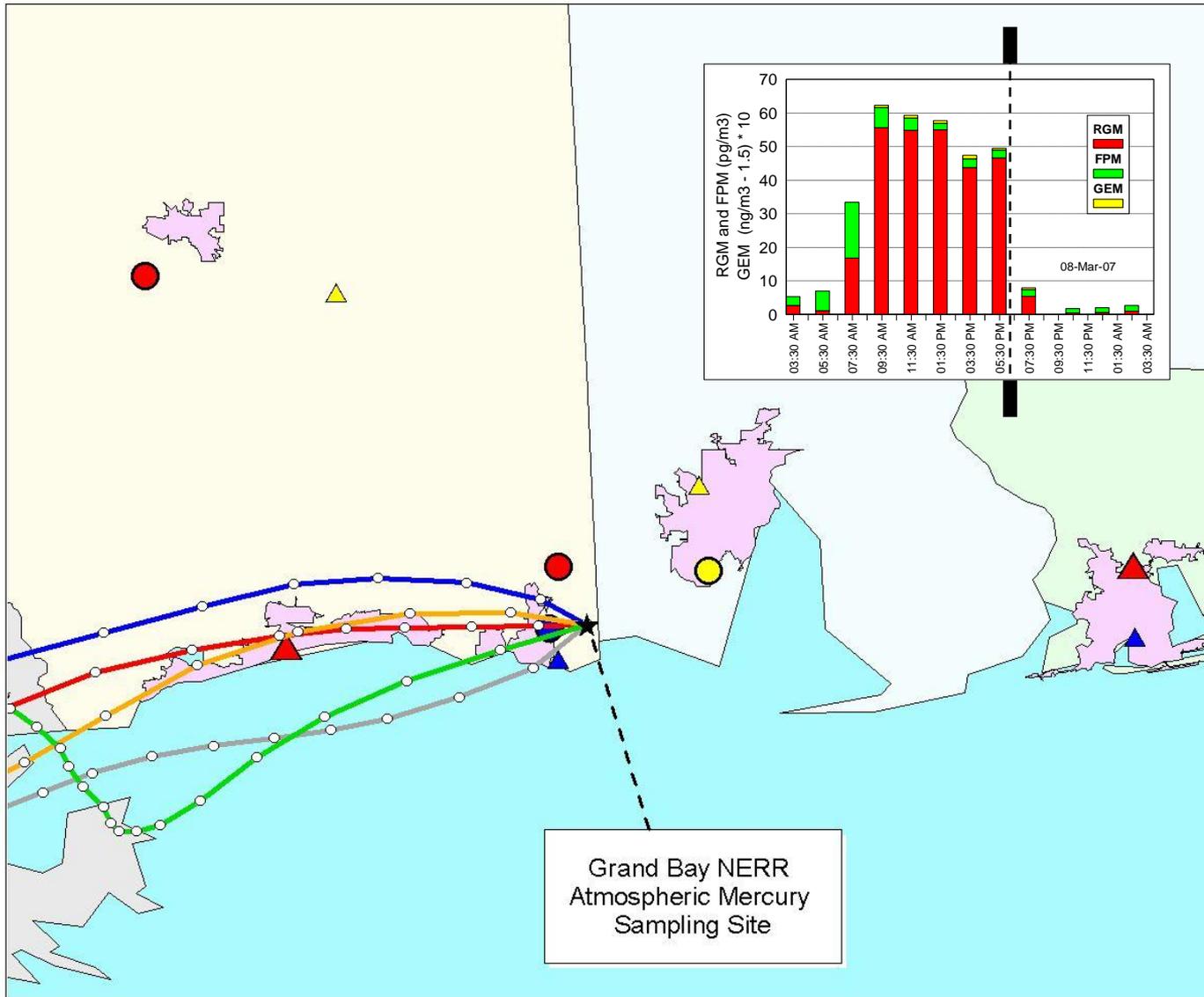
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 18:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

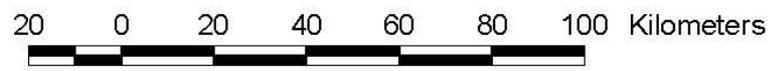
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

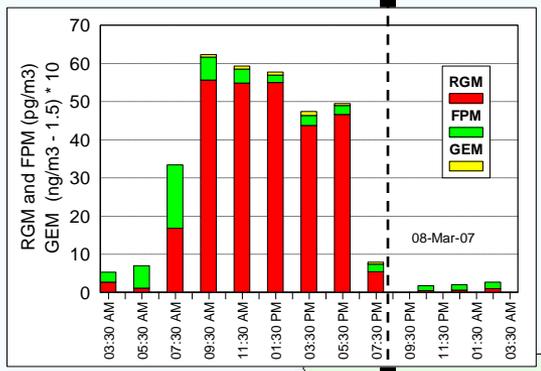
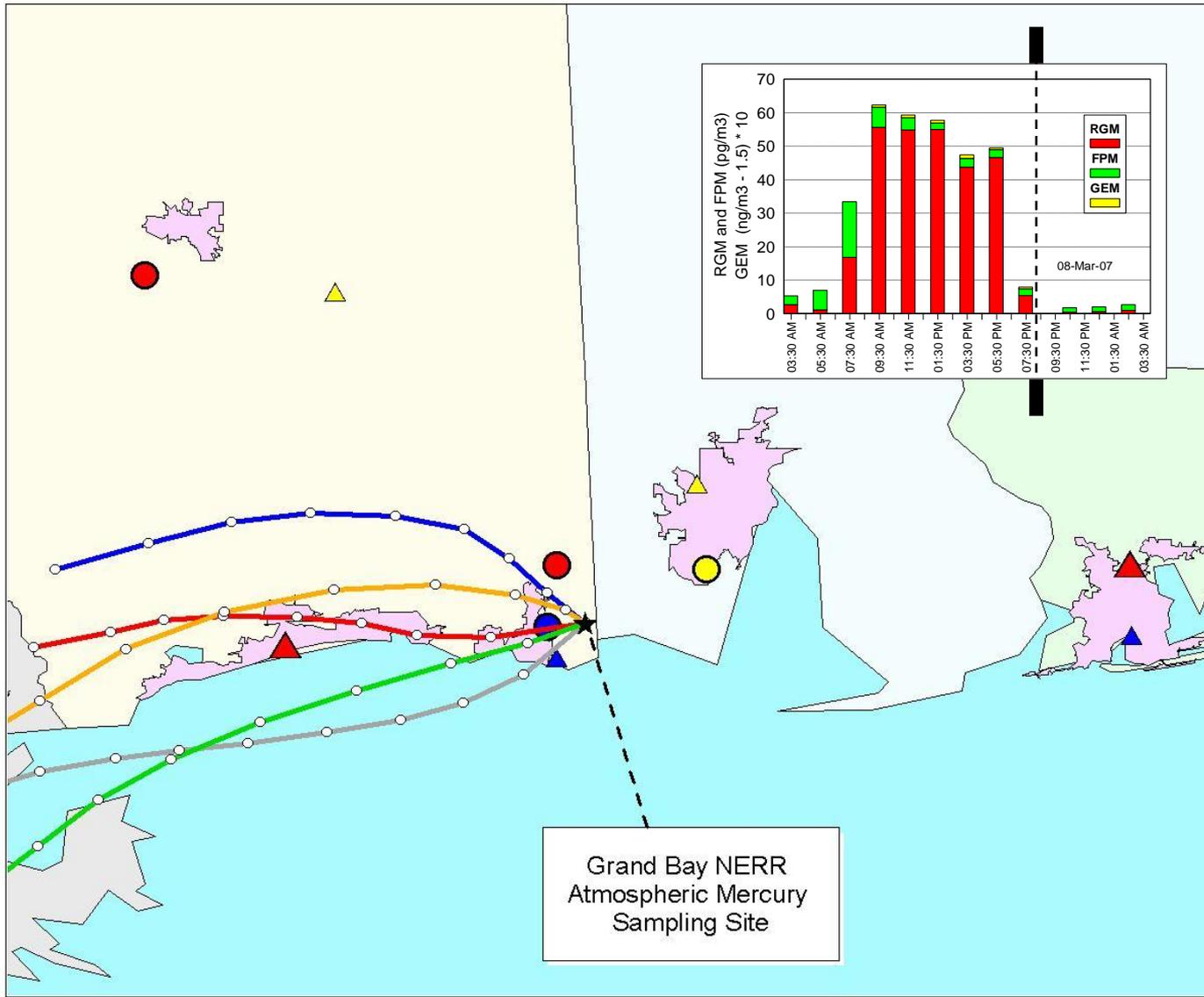
Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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# Back Trajectories Arriving at 3/07/2007 20:00 CST



Large sources of 1999 RGM (Reactive Gaseous Mercury) emissions (kg/yr) based on USEPA data from 1999 Nat'l Emissions Inventory

Size and shape of symbol denotes amount of RGM emitted (kg/yr)

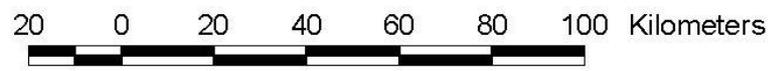
- △ 5 - 10
- 10 - 50
- △ 50 - 100
- 100 - 300

Color of symbol denotes type of mercury source

- coal-fired electricity generation
- other fuel combustion
- waste incineration
- metallurgical processes
- manufacturing/other

Back-trajectories starting at indicated height (m). Circles on trajectories mark the hourly position of the trajectory.

- ~ 100
- ~ 500
- ~ 1000
- ~ 1500
- ~ 2000



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