Overwater Modeling Breakout Session Summary

EPA RSL Workshop

U.S. EPA / OAQPS / Air Quality Modeling Group

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Overwater Modeling Breakout Summary

- **Purpose of Breakout Session:** Have an open discussion among co-regulators, related to specific challenges and needs associated with offshore modeling including compliance issues, model usage, met processing, guidance needs, etc.
- **Questions to jumpstart discussion:**
  - What are the biggest compliance challenges when working with companies on offshore projects (State/Local perspective)?
  - Are most overwater permits issued as minor or major source permits?
  - What model is primarily being used?
  - Do most offshore modeling projects include platforms (platform downwash concern)? Overland receptors?
  - What are the greatest modeling challenges (e.g., model set-up, acquiring met, met processing)?
  - What is the primary source of meteorological data and how is being processed (e.g., NWS, buoy data, prognostic)?
  - What tools are needed to improve process?
  - Where are there gaps in the modeling guidance for offshore projects?

Overwater Modeling Breakout Summary

Construction Projects

- Large geographic areas
- Short duration of high emissions during construction
- Sources move around during construction – difficult to model
- Challenges beyond 50 km vs near-field – long-range transport is still important – more difficult with the removal of CALPUFF from Appendix W.

Meteorology

- Meteorology – water temperatures and temperature deltas between water and air are important
- Use of WRF/MMIF helps solve this problem, but relies on good WRF output that is representative
- Not a lot of collocated data – need a good assessment of data representativeness

Shoreline Fumigation

- AERSCREEN is being used to screen for shoreline fumigation to determine if it is important to consider in refined modeling but may be too conservative
- Concern about overlap of onshore and offshore sources as we transition from OCD to AERMOD. Will AERMOD handle that?
- FLMs not using AERMOD – does worry about fumigation and water temp representativeness – always worried about fumigation as plume comes onshore

Platform Downwash

- Platform downwash important for NAAQS

Miscellaneous

- Concern expressed about land-sea breeze effects. This is an important feature that has not been talked about with respect to addressing overwater modeling issues.
- Suggestion to consider making updates to OCD in the interim while working to replace OCD with AERMOD