



**Operating Permits Group (MD-12)**  
**Information Transfer and Program Integration Div.**  
**Office of Air Quality Planning and Standards**  
**U. S. Environmental Protection Agency**  
**Research Triangle Park, NC 27711**  
**FAX Number: (919) 541-5509**

**FAX TRANSMISSION**

Date: 9/25/96

**TO:**

NAME <i>DEAN WILSON</i>	PHONE NUMBER
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**FROM:**

NAME <i>D. DERUECK</i>	PHONE NUMBER <b>919-541-</b>
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**COMMENTS:**


Number of Pages (including cover sheet): \_\_\_\_\_

If you did not receive all the pages, please contact the following person:

NAME	PHONE NUMBER <b>919-541-</b>
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DATE ?

Richard E. Grusnick  
Chief, Air Division  
Alabama Department of Environmental Management  
1751 Congressman W. L. Dickenson Drive  
Montgomery, Alabama 36109

Dear Mr. Grusnick:

We reviewed the Prevention of Significant Deterioration (PSD) permit application and preliminary determination for Mobil Oil Exploration and Producing Southeast Incorporated's (MOEPSI) proposed modification to its existing Mary Ann and Mobile 823 gas treating facilities. The MOEPSI facility is located in south Mobile County, Alabama, approximately 75 km northeast of Breton Wilderness Area (WA), a Federal Class I air quality area administered by the U.S. Fish and Wildlife Service (FWS).

MOEPSI proposes to modify the existing facilities by increasing its sour gas sweetening capabilities. The proposed modification would emit significant amounts of sulfur dioxide and total reduced sulfur.

Our comments on the MOEPSI preliminary determination and PSD permit application are included in the attached Technical Review Document. Based on our review of the information provided to us, we recommend that the Alabama Department of Environmental Management not issue a final permit for the MOEPSI proposed modification until issues regarding modeling, source inventories, and visibility impacts at Breton Wilderness Area are resolved. Our Air Quality Branch will be happy to provide technical assistance to help MOEPSI and the State resolve these issues.

Please contact Bud Rolafson of our Air Quality Branch in Denver at (303) 969-2804 if you have any questions regarding our comments on the MOEPSI preliminary determination and PSD permit application.

Sincerely,

Noreen K. Clough  
Regional Director

Enclosure

cc:  
Jarell Harper, Chief  
Air Enforcement Branch  
Air, Pesticides and Toxic Management Division  
U.S. EPA, Region 4  
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bcc:  
FWS-REG. 4: AQC  
Baton NLR: Refuge Manager  
ARD-DEN: Bud Rolofson  
Fish and Wildlife Service - AIR  
P.O. Box 25287  
Denver, CO 80225

TECHNICAL REVIEW DOCUMENT  
ON  
ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT  
PRELIMINARY DETERMINATION AND PREVENTION OF  
SIGNIFICANT DETERIORATION PERMIT APPLICATION  
FOR A PROPOSED MODIFICATION TO THE MARY ANN AND MOBILE 823  
GAS TREATING FACILITIES  
MOBILE EXPLORATION AND PRODUCING SOUTHEAST INC.  
MOBILE COUNTY, ALABAMA

by  
Air Quality Branch  
U.S. Fish and Wildlife Service

### INTRODUCTION

The Mobile Exploration and Producing Southeast Inc. (MOEPSI) is proposing to modify its Mary Ann and Mobile 823 gas treating facilities in Mobile County, Alabama. The proposed modifications are at facilities located approximately 75 kilometers northeast of Breton Wilderness Area (WA), a mandatory Federal Class I air quality area administered by the U.S. Fish and Wildlife Service (FWS).

The proposed modification would emit significant amounts of sulfur dioxide (SO<sub>2</sub>), and total reduced sulfur.

As you know from our comments on previous permit applications for MOEPSI and other nearby sources (e.g., Exxon, Shell, Chevron), the FWS is concerned with the exceedance of Class I increments and impacts on air quality related values, including visibility, in Breton WA. Accordingly, we provide the following comments on the preliminary determination and PSD permit application.

### AIR QUALITY ANALYSIS

The air quality analysis provided is inadequate. The Offshore and Coastal Dispersion (OCD) model used for the air quality modeling dispersion analysis is an inappropriate model for this source. In addition, the source inventory for the PSD Class I increment analyses is incomplete and, therefore, does not predict the total increment consumption in Breton WA.

#### Modeling

As we have indicated in past reviews, the use of the OCD model cannot be used for onshore sources such as MOEPSI. The OCD model was designed and developed for use on offshore sources and cannot be used in reverse for onshore shores. We have discussed this issue with Mr. Joe Tikvart of the Environmental Protection Agency (EPA) Office of Air Quality Planning and Standards, Mr. Jeff Zippin of the Minerals Management Service (MMS)-Herndon Office (developer of the OCD model), and Mr. Don DiCristofaro of Sigma Research Inc. (designer of the OCD model). These gentlemen were unanimous in stating that using the OCD model to analyze onshore sources was inappropriate. More specifically:



## REGIONAL HAZE ANALYSIS

VISIBILITY

MOEPSI did not perform a regional haze analysis. We therefore ask that the applicant submit to us a regional haze analysis that complies with the guidance in the EPA document Interagency Workgroup on Air Quality Modeling (IWAQM) Phase I Report: Interim Recommendation for Modeling Long Range Transport and Impacts on Regional Visibility (EPA-454/R-93-015, April 1993). This analysis should consider the proposed increases in SO<sub>2</sub> and total reduced sulfur emissions. A visual range of 65 km should be used in the analysis. This visual range is derived from data collected from the IMPROVE (Interagency Monitoring of Protected Visual Environments) fine-particle sampler at Chassahowitzka National Wildlife Refuge in the Gulf Coast area and represents the 10 percent cleanest days at the refuge. Technical assistance to MOEPSI for this analysis is available from our Air Quality Branch.

## CONCLUSIONS

Because past permit analyses have shown that the 24-hour SO<sub>2</sub> Class I increment in Breton Wilderness Area is almost consumed, we want the Class I increment analysis submitted by MOEPSI to be as complete and accurate as possible. We request that the Alabama DEM require MOEPSI to perform a revised modeling analysis using an appropriate approved EPA model and a complete source inventory for all increment-consuming sources. We also request that MOEPSI perform a regional haze analysis using the IWAQM protocol.

We request that these analyses be performed and submitted to the FWS for review before any permit is granted for the proposed MOEPSI modifications.

# ADEM

## ALABAMA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT



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May 3, 1996

Mr. Bud Rolofson  
Refuge Manager  
Fish and Wildlife Service- ATR  
P.O. Box 25287  
Denver, CO. 80225

Dear Mr. Rolofson:

ADEM has reviewed comments made regarding the Mobil Oil Exploration and Producing Southeast Incorporated's (MOEPSI) permit application. This application details the proposed modifications to the MaryAnn and Mobile 823 gas treating facilities. Since the MOEPSI facility is located less than 100 kilometers from the Breton Wildlife Refuge, a Class I analysis was completed as part of the application. Your comments were directed towards this portion of the application. Responses to your comments on the Class I analysis are provided below.

75 km.

- We agree that the OCD model was designed and developed for use with offshore sources and cannot be used in reverse for onshore sources. However, it was assumed that all sources in the Class I inventory were over water. By initializing all plumes with overwater dispersion parameters, they are treated as if they are transported over water until they reach the Breton Wildlife Refuge. As alluded to in your comments, this would result in higher predicted concentrations since the model would disperse the plume using more stable overwater conditions throughout the entire transport distance. Therefore, we believe that the model was used in a manner consistent with its design.
- The SO<sub>2</sub> emissions inventory submitted as part of the MOEPSI PSD permit application includes all sources that could potentially impact the Breton Wildlife Refuge at the same time as MOEPSI. The inventory does include the Exxon and Shell gas sweetening plants. The Shell facility is listed in the Class I inventory as the Yellow Hammer Gas Treating facility. Likewise, the Exxon facility is listed as Mobile Bay sources 1 and 2 in the Class I inventory.

\*

Mr. Bud Rolofson

Page 2

May 3, 1996

- The SO<sub>2</sub> Class I inventory included all stationary sources that could potentially impact the Breton Wildlife Refuge at the same time as the MOEPSI facility. The methodology utilized to develop the Class I inventory involved including sources within a pie-shaped wedge defined by two lines drawn 45 degrees either side of a line from the Breton to MOEPSI. The outer limit of this pie shaped area is a radius of 100 kilometers from Breton. The high frequency of north and northeast winds in the Mobile area supports this methodology. In addition, all sources within the State of Mississippi which fall within 100 kilometers of Breton are included in the inventory including several sources which lie outside of the pie shaped wedges described above.
- ADEM Modeling Guidance does require that a visibility analysis be performed as part of a Class I analysis and it is recommended that the VISCREEN Model be used for this purpose. The document entitled "Permit Application Guidance for New Air Pollution Sources", which was prepared by your agency, states that with respect to visibility analyses, "...the federal land manager recommends that the applicant first use the VISCREEN model as recommended in the EPA "Workbook for Plume Visual Impact Screening and Analysis". However, the VISCREEN model only assesses visibility impacts for Nitrogen Oxides (NO<sub>x</sub>) and Particulate Matter less than 10 microns (PM<sub>10</sub>). The model cannot replicate the chemical conversions associated with sulfates. For this reason, a VISCREEN analysis was not required by the ADEM Air Division.
- We do recognize, however, that you are requesting that the IWAQM recommendations be followed to address regional haze. While the IWAQM recommendations are clear on how to compute extinction coefficients, it is unclear how these coefficients are used to address or evaluate the effect of a new source's emissions on regional haze. We recommend further dialogue on this issue, outside the context of a permit review, so that this issue may be addressed to our mutual satisfaction in future permitting actions by our state and other states in the Gulf region.

100-kilom modeling limit

VISCREEN NOT REQ

W/PMS

Because your comments raised no issues which indicate that the draft MOEPSI permits would violate applicable regulations, the permit has been issued.

\* PERMIT ISSUED

I would like to mention several concerns ADEM has about shortcomings in the process by which we solicit and in turn you provide comments on relevant permitting actions:

Mr. Bud Rolofson  
 Page 3  
 May 3, 1996

- It would be more appropriate that we communicate over broad concerns (example: use of the OCD model) outside the review process for a specific permit application. We attempted to do this by requesting your comments (copy of letter attached) on our modeling guidance for applicants. We did not receive a response. A permit applicant following clear guidance from ADEM for addressing Class I impact should not be adversely affected by broad concerns which are considered by ADEM to have been resolved.
- As you review applications, we would appreciate the courtesy of informal contact with ADEM staff so that your erroneous formal comments can be avoided
- Given that our regulations provide you with a minimum 30-day period for your comments before the formal public comment period begins, I urge you to utilize this period to attempt to raise issues informally through staff contact. During our review of applications we routinely identify issues that may be of concern within thirty days of receipt of the application. I would hope your Department could respond in a similar time frame in the future.

ADEM  
 REQUEST  
 FLM  
 COMMENTS

ADEM  
 REG  
 COMMENT  
 PERIOD

I look forward to working with you in the future. Please call me at (334) 271-7861 if you have questions or comments.

Sincerely,



Richard E. Grusnick, Chief  
 Air Division

REG:KWC:pkb

cc: Jewell Harper, Chief, Air Enforcement Branch  
 Jim Kaiser, Engineering Services Branch