

Initial Electronic Modeling Evaluation Workbook (EMEW) Review Response

Purpose: This form is used by the Air Dispersion Modeling Team (ADMT) to document ADMT's review of initial submittal of the EMEW and any attachments.

Date: October 18, 2024

Permit Application Number: 2167

New Source Review Project Number: 381473

ADMT Project Number: 9486

County: Harris

Assigned Modeling Staff: Jessica Borne

Modeling Staff Contact Information: Jessica.Borne@tceq.texas.gov and 512-239-1134

Review Summary

ADMT has conducted a review of the initial Electronic Modeling Evaluation Workbook (EMEW) for Houston Refining LP provided on October 10, 2024. Based on the review, ADMT has the following comments that should be addressed in the final modeling submittal. Note: if ADMT did not comment on a section of the workbook, then the applicant's approach is considered reasonable.

1. General

Administrative Information:

Include NSR Project Number 381473 for the Facility Information's Project Number and update the Modeling Date with the final submittal.

Table of Contents:

An "X" was not entered for the Speciated Emission sheet; however, this sheet was filled out. Mark this item with the final submittal.

Area Map:

According to TCEQ records, a single property line designation (SPLD) agreement exists between Houston Refining LP, Channel Energy Center LP (RN100213107), and Shell Pipeline Company LP (RN104860002). Please identify the properties of Channel Energy Center LP and Shell Pipeline Company LP on the area map.

Mark row 72 since schools are identified on the area map.

2. Additional Attachments

Single Property Line Designation, as applicable:

As noted above, an SPLD exists for the project site. Mark this section of the EMEW and provide the applicable documentation, including the Agreement, Order, and map, defining each petitioner with the final submittal.

Post Processing using Unit Impact Multipliers (UIMs):

Provide the documentation for the calculations performed with the UIMs, preferably in an Excel format, with the final submittal.

Other Attachments:

Please mark this section and identify Appendix B from the permit application that includes the proposed qualitative analysis for the NAAQS and State Property Line analyses.

Related to the proposed qualitative analyses, provide more details to support this type of analysis. These details can include a map or plot plan that shows the new sources and the ones being demolished to determine how close they are to the property boundary and a table of source parameters to see the release heights and parameters to help with comparison of the source dispersion characteristics.

3. Model Options

E. Dispersion Options:

Document the year that the population data are based on for completeness.

F. Determination of Surface Roughness:

Tree canopy, land cover, and percent impervious NLCD data are available for 2021. Update the AERSURFACE analysis with these data, if needed.

G. Meteorological Data:

Since there are two options for pre-processed surface meteorological data for Harris County, include documentation in this section on why the Houston Hobby location best represents the project site.

H. Receptor Grid:

Provide a discussion on how the SPLD was used to develop the modeled receptor grid.

There is a dock area close to the property boundary. Although modeling files were not provided at the time of application submittal to verify, if receptors over the water near the docks are removed, this approach should be documented and an explanation provided on why this is reasonable.

4. Point + Flare Source Emissions

Since pollutant-specific modeling is not being conducted, a Health Effects Pollutant data entry does not need to be included.

5. Volume Source Emissions

Since pollutant-specific modeling is not being conducted, a Health Effects Pollutant data entry does not need to be included.

6. Unit Impact Multipliers

Modeling files were not provided at the time of application submittal and the reported values could not be verified at this time. ADMT recommends submitting all available documentation and electronic files together with the initial EMEW for a more thorough review.

Since the unit emissions between source IDs FUG1 and FUG2 were split, document the reasoning for splitting the unit rate and how those results are being used and presented.

7. Health Effects Modeling Results

Modeling files were not provided at the time of application submittal and the reported values could not be verified at this time. ADMT recommends submitting all available documentation and electronic files together with the initial EMEW for a more thorough review.

8. Modeling File Names

Do not document a zip file archive extension. Please document and provide all files and file extensions with the final submittal (e.g., downwash files, plot files, etc.).

Also, document any attachments provided with the EMEW.

Please be aware that federal and state standards can change over the life of a project, therefore, the facility may be asked to update EMEW to reflect applicable changes. Any deviations or information not submitted with the initial modeling workbook could cause delay in the final modeling review. ADMT highly recommends submitting an updated initial EMEW if significant changes are made to the modeling methodologies previously reviewed.