# Permit Amendment
# Source Analysis & Technical Review

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|---|---|---|---|
| Company | **Flint Hills Resources Llc** | Permit Number | **6606** |
| City | **Ingleside** | Project Number | **327436** |
| County | **San Patricio** | Regulated Entity Number | **RN100222744** |
| Project Type | **Amendment** | Customer Reference Number | **CN605721935** |
| Project Reviewer | **Albert Mancilla** | Received Date | **April 7, 2021** |
| Site Name | **Ingleside Marine Terminal** | | |

**Project Overview**

Flint Hills Resources Ingleside, LLC (FHR) owns and operates a marine terminal handling crude oil and condensate in Ingleside, Texas. Flint Hills proposed as-built changes to the original permit amendment application dated January 2019 (TCEQ Project Number [No.] 284633) for the Expansion Project to include: crude oil annual throughput increases, calculation and wording corrections, and incorporate Permit by Rule (PBR) 161673.

**Emission Summary**

| Air Contaminant | Current Allowable Emission Rates (tpy) | Proposed Allowable Emission Rates (tpy) | Change in Allowable Emission Rates (tpy) | Project Changes at Major Sources (Baseline Actual to Allowable)* |
|---|---|---|---|---|
| PM | 6.34 | 8.54 | 2.20 | 2.20 |
| $PM_{10}$ | 6.34 | 8.54 | 2.20 | 2.20 |
| $PM_{2.5}$ | 6.34 | 8.54 | 2.20 | 2.20 |
| VOC | 128.21 | 118.39 | -15.37 | 34.54 |
| $NO_X$ | 19.80 | 26.56 | 8.81 | 6.76 |
| CO | 25.28 | 34.09 | 8.81 | 8.81 |
| $SO_2$ | 35.42 | 38.12 | 2.70 | 38.1 |
| HAPs | 1.24 | 1.16 | -0.09 | 0.22 |

*Add discussion of netting results if netting is triggered.

**Compliance History Evaluation - 30 TAC Chapter 60 Rules**

| | |
|---|---|
| A compliance history report was reviewed on: | May 19, 2021 |
| Site rating & classification: | 0.17 / Satisfactory |
| Company rating & classification: | 0.17 / Satisfactory |
| Has the permit changed on the basis of the compliance history or rating? | No |
| Did the Regional Office have any comments? If so, explain. | N/A |

**Public Notice Information**

| Requirement | Date |
|---|---|
| Legislator letters mailed | 4/9/2021 |
| Date 1st notice published | April 9, 2021 |
| Publication Name: | |

| Requirement | Date |
|---|---|
| Pollutants: carbon monoxide, hydrogen sulfide, nitrogen oxides, organic compounds, particulate matter including particulate matter with diameters of 10 microns or less and 2.5 microns or less and sulfur dioxide. | |
| Date 1st notice Alternate Language published | |
| Publication Name (Alternate Language): | |
| 1st public notice tearsheet(s) received | 05/10/2021 |
| 1st public notice affidavit(s) received | |
| 1st public notice certification of sign posting/application availability received | |
| SB709 Notification mailed | |
| Date 2nd notice published | |
| Publication Name: | |
| Pollutants: | |
| Date 2nd notice published (Alternate Language) | |
| Publication Name (Alternate Language): | |
| 2nd public notice tearsheet(s) received | |
| 2nd public notice affidavit(s) received | |
| 2nd public notice certification of sign posting/application availability received | |

**Public Interest**

| | |
|---|---|
| Number of comments received | |
| Number of meeting requests received | |
| Number of hearing requests received | |
| Date meeting held | |
| Date response to comments filed with OCC | |
| Date of SOAH hearing | |

**Federal Rules Applicability**

| Requirement |
|---|
| Subject to NSPS? |
| Subparts & |
| Subject to NESHAP? |
| Subparts & |
| Subject to NESHAP (MACT) for source categories? |
| Subparts & |
| Nonattainment review applicability: |

| Requirement |
| --- |
| PSD review applicability: |

**Title V Applicability - 30 TAC Chapter 122 Rules**

| Requirement |
| --- |
| Title V applicability:<br>The site is subject to Title V [Number]. |
| Periodic Monitoring (PM) applicability:<br>The site is subject to Title V; therefore, the PM is as follows: |
| Compliance Assurance Monitoring (CAM) applicability:<br>The site is subject to Title V; therefore, CAM is as follows: |

**Process Description**

The terminal receives crude oil and condensates by pipeline and marine vessel, and stored in internal floating roof (IFR) or external floating roof (EFR) storage tanks. Other types of refined fuel products can be stored in the storage tanks. However, the current project will not modify the annual throughput of additional materials.

The material is stored in the storage tanks until required by the customer. The material is transferred via marine vessels. The marine vessels are control by one of three marine loading vapor combustion units (VCUs).

**Project Scope**

The following changes are being made as part of this amendment:

- Correct tank calculations,
- Remove storage tanks 28091, 28092, 28063, 28064, 28070
- Increase hourly throughput to storage tanks and marine loading dock
- Increase annual throughput to marine loading dock
- Correction of number of new fugitive piping components
- Implementation of 28VHP LDAR monitoring program
- Addition of existing $SO_2$ emissions at the MVCUs
- Decrease of annual averaging $H_2S$ concentration in the crude oil and condensate loaded at the dock from 19 to 15 ppmw based on sampling of $H_2S$ in the crude oil

| Item No. | Current CND | Draft CND | Draft Changes (Note: The changes described do not take effect until the issuance of permit associated with Project No.327436 .) |
| --- | --- | --- | --- |
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**Best Available Control Technology**

| Source Name | EPN | Best Available Control Technology Description |
|---|---|---|
| IFR Storage Tanks | TK-28067, TK-28070R & TK-28077 | Equipped with a mechanical seal primary seal and rime mounted secondary seal. The exterior surface are uninsulated and painted white. Material stored is less than 11.0 pound per square inch atmosphere (psia). |
| EFR Storage Tanks | TK-28068, TK-28069, TK-28071, TK-28072, TK-28073, TK-28074, TK-28075, TK-28076, TK-28080 & TK-28066 | Equipped with a mechanical shoe primary seal and rim mounted secondary seal, and gasketed slotted guide poles with floats, pole wipers and pole sleeves. The exterior surface are uninsulated and painted white. Material stored is less than 11.0 psia. |
| Marine VCU | MVCU1-3 | The VCUs meet a 99-percent VOC destruction efficiency control (DRE). The site maintains maintain good combustion practices including monitoring the combustion chamber temperature and perform an initial operation stack test. $H_2S$, $SO_2$ and particulate matter emissions are minimizing through via sampling $H_2S$ concentration of the crude oil feed upstream and using natural gas fuel (5 grains of sulfur/100dscf). |
| Ships | DOCK | 99-percent capture efficiency. Route to MVCUs when loading VOC with a true vapor pressure (TVP) of 0.5 psia. Vessels are required to pass annual vapor tightness test and adhere to AVO checks and monitoring requirements per *Marine Terminal Guidance* dated September 21, 2021. |
| Barges | | 100-percent capture efficiency with vacuum. Route to MVCUs when loading VOC with a true vapor pressure (TVP) of 0.5 psia. Vessels are required to pass annual vapor tightness test and adhere to AVO checks and monitoring requirements per *Marine Terminal Guidance* dated September 21, 2021. |
| Fugitives | FUG-1 | Adhere 28VHP LDAR. |

**Permits Incorporation**

| Permit by Rule (PBR) / Standard Permit / Permit Nos. | Description (include affected EPNs) | Action (Reference / Consolidate / Void) |
|---|---|---|
| **161673** | **Storage tank 28070R authorization** | **Void** |

**Impacts Evaluation**

Was modeling conducted? Type of Modeling:

Is the site within 3,000 feet of any school?

Additional site/land use information:

*Reference ADMT memo document number with paragraph explaining no impacts.*

*For MERA and Screen, include table with results and brief/condensed explanation.*

*Toxicology Review (if applicable), describe Toxicology results.*

| Project Reviewer | Date | Team Leader | Date |
|---|---|---|---|
| Albert Mancilla | | Samuel Harris | |