

## **EIA-810 MONTHLY REFINERY REPORT INSTRUCTIONS**

### **1. QUESTIONS?**

If you have any questions about Form EIA-810 after reading the instructions, please contact the Form Manager at (202) 586-5994.

### **2. PURPOSE**

The Energy Information Administration (EIA) Form EIA-810, "Monthly Refinery Report," is used to collect data on the operations of all petroleum refineries located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam and other U.S. possessions. The data appear on EIA's website at [www.eia.doe.gov](http://www.eia.doe.gov) and in numerous government publications.

### **3. WHO MUST SUBMIT**

Form EIA-810 is mandatory pursuant to Section 13(b) of the Federal Energy Administration Act of 1974 (Public Law 93-275) and must be completed by the operators of all operating and idle petroleum refineries located in the 50 States, District of Columbia, Puerto Rico, the Virgin Islands, Guam and other U.S. possessions.

Section 9 explains the possible sanctions for failing to report.

### **4. WHEN TO SUBMIT**

Form EIA-810 must be filed with the EIA by the 20<sup>th</sup> calendar day following the end of the report period (e.g., the Form EIA-810 covering the January 2004 report period must be received by February 20, 2004).

### **5. WHERE TO SUBMIT**

Survey forms may be submitted by facsimile, e-mail, or electronically.

This form may be submitted to the EIA by fax, e-mail, or secure file transfer. Should you choose to submit your data via e-mail or facsimile, we must advise you that e-mail and facsimile are insecure means of transmission because the data are not encrypted, and there is some possibility that your data could be compromised. You can also send your Excel files to EIA using a secure method of transmission: HTTPS. This is an industry standard method to send information over the web using secure, encrypted processes. (It is the same method that commercial companies communicate with customers when transacting business on the web.) To use this service, we recommend the use of Microsoft Internet Explorer 5.5 or later or Netscape 4.77 or later. Send your surveys using this secure method at: <https://idc.eia.doe.gov/upload/noticeoog.jsp>.

Fax completed forms to: **(202) 586-6323 or (202) 586-1076**

E-mail completed forms to: [OOG.SURVEYS@eia.doe.gov](mailto:OOG.SURVEYS@eia.doe.gov)

Electronic Filing Option: The PC Electronic Data Reporting Option (PEDRO) is a Windows-based application that will enable you to enter data interactively, import data from your own database, validate your data online, and transmit the encrypted data electronically to EIA via the Internet or a dial-up modem. If you are interested in receiving this free software, contact the Electronic Data Collection Support Staff at **(202) 586-9659**.

### **6. COPIES OF SURVEY FORMS, INSTRUCTIONS AND DEFINITIONS**

Copies in portable document format (PDF) and spreadsheet format (XLS) are available on EIA's website at:

[www.eia.doe.gov/oil\\_gas/petroleum/survey\\_forms/pet\\_survey\\_forms.html](http://www.eia.doe.gov/oil_gas/petroleum/survey_forms/pet_survey_forms.html)

You may also access the materials by following the steps below:

- Go to EIA's website at [www.eia.doe.gov](http://www.eia.doe.gov)
- Place a cursor on *By Fuel* near the center of the page and click on *Petroleum* from the drop down menu
- Click on *Survey Forms* on the left side of the page
- Select the materials you want.

Files must be saved to your personal computer. Data cannot be entered interactively on the website.

### **7. HOW TO COMPLETE THE SURVEY FORM**

#### **PART A. RESPONDENT IDENTIFICATION**

- Enter the 10-digit EIA ID Number. If you do not have a number, submit your report leaving this field blank. EIA will advise you of the number.
- Enter the name and mailing address of the reporting company. If there has been a change since the last report, enter an "X" in the box to the right.
- Enter the refinery or blending plant site name.
- Enter the name, title, telephone number, fax number, and e-mail address of the person to contact concerning information shown on the report. The person listed should be the person most knowledgeable of the specific data reported. Check the box provided if the contact information is different from the prior month.

## Report Period

Enter the month and year (e.g., January 2004 is: Month 01 Year 2004).

The monthly report period begins at 12:01 a.m. EST on the first day of the month and ends midnight of the last day of the month.

## Resubmission

A resubmission is required whenever an error greater than 5 percent of a previously reported value is discovered by a respondent or if requested by the EIA.

Enter "X" in the resubmission box if you are correcting information previously reported.

Enter only those data cells which are affected by the changes. You are not required to file a complete form when you resubmit.

## PART B. REFINERY INPUT AND CAPACITY

Definitions of petroleum products and other terms are available on our website. Refer to Section 6 for details. Please refer to these definitions before completing the survey form.

**Gross Input to Atmospheric Crude Oil Distillation Units** (Code 990) - Report the sum of the various components of refinery input to atmospheric crude oil distillation units. Do not include inputs to downstream units such as vacuum distillation units, catalytic cracking units, and coking units. Any processing equipment upstream of the actual atmospheric distillation tower/furnace, such as preflash drums/towers, prefractionators and outboard flash towers, should be considered part of the atmospheric distillation unit for capacity reporting purposes. Fresh feed inputs to selected downstream units are reported in codes 491, 492, and 493. The following components of refinery input to atmospheric crude oil distillation units should be included in Code 990:

- **Crude Oil** - Report the total amount of crude oil (including lease condensate and liquid hydrocarbons produced from tar sands, gilsonite, and oil shale) of both foreign and domestic origin that is charged to the atmospheric crude oil distillation units. Exclude crude oil charged to units other than the atmospheric crude oil distillation units (e.g., coking unit) from Code 990.
- **Products of Natural Gas Processing Plants** - Report all quantities of natural gas plant liquids (i.e., ethane, propane, normal butane, isobutane, and pentanes plus) charged to the atmospheric crude oil distillation units. Include inputs of unfractionated streams and mixtures of liquefied petroleum gases. Exclude products of natural gas plants blended or charged to units other than the atmospheric crude oil distillation units from Code 990.
- **Unfinished Oils** - Report all unfinished oils charged to the atmospheric crude oil distillation units (e.g., unfinished naphthas, gas oil, virgin naphtha, topped crude, cracking stocks, and slop oil). Exclude unfinished oils charged to units other than the atmospheric crude oil distillation units (e.g., cracking units) from Code 990.
- **All Other Oils** - Report any finished petroleum products (e.g., distillate fuel oil and residual fuel oil) charged to the atmospheric crude oil distillation units for further processing.

Include raw materials such as coal tar derivatives, hydrogen, and gilsonite. Exclude oils charged to units other than the atmospheric crude oil distillation units (e.g., cracking units) from Code 990.

**Fresh Feed Input to Downstream Processing Units** (Codes 491, 492, and 493) - Report the fresh feed input to catalytic cracking units, catalytic hydrocracking units, and delayed and fluid coking units. Exclude recycled feeds. For Code 493, include fresh feed input to flexicoking units.

**Operable Capacity of Atmospheric Crude Oil Distillation Units on the First Day of the Month** - Report in **barrels per calendar day** the Operating, Idle, and Total Operable Capacities in the appropriate spaces. The capacity for an individual unit must be either idle or operating **on the first day of the month**. Do not report percentages of capacity based on monthly inputs.

- **Operating Capacity** (Code 399) - Report the component of Total Operable Capacity that is in operation on the first day of the month.
- **Idle Capacity** (Code 400) - Report the component of Total Operable Capacity that is not in operation and not under active repair, but capable of being placed in operation within 30 days; and capacity not in operation but under active repair that can be placed in operation within 90 days.
- **Total Operable Capacity** (Code 401) - Report the amount of capacity that on the first day of the month, is either in operation; not in operation, and not under active repair but capable of being placed in operation within 30 days; or not in operation but under active repair that can be placed in operation within 90 days. Total Operable Capacity is the sum of the Operating and Idle Capacity Code 399 and Code 400).

**Barrels per calendar day** is defined as the amount of input that a distillation facility can process under usual operating conditions. The amount is expressed in terms of capacity during a 24-hour period and reduces the maximum processing capability of all units at the facility under continuous operation to account for the following limitations that may delay, interrupt, or slow down production:

- The capability of downstream processing units to absorb the output of crude oil processing facilities of a given refinery. No reduction is necessary for intermediate streams that are distributed to other than downstream facilities as part of a refinery's normal operation;
- The types and grades of inputs to be processed;
- The types and grade of products expected to be manufactured;
- The environmental constraints associated with refinery operations;
- The reduction of capacity for scheduled downtime due to such conditions as routine inspection, maintenance, repairs, and turnaround; and
- The reduction of capacity for unscheduled downtime due to such conditions as mechanical problems, repairs and slowdowns.

## PART C. SULFUR CONTENT AND API GRAVITY OF CRUDE OIL

Indicate the sulfur content and the API gravity of Crude Oil (Code 050) reported either as refinery receipts or inputs. **Do not report sulfur content and API gravity for both refinery receipts and inputs.**

Weighted Average Sulfur Content is the percentage of sulfur in domestic and foreign crude oil. Report to the nearest one hundredth of one percent.

Weighted Average API Gravity is gravity at 60 degrees Fahrenheit (°F) of domestic and foreign crude oil. Report to the nearest hundredth of a degree.

The following is an example of how to calculate and report weighted average API gravity:

Operator inputs 100,000 barrels of 27.5 API gravity oil (at 60°F) and 200,000 barrels of 33.5 API gravity oil (at 60°F).

- $$\begin{array}{rcl} 100,000 \text{ barrels} & \times & 27.5 = 2,750,000 \\ \underline{200,000 \text{ barrels}} & \times & 33.5 = \underline{6,700,000} \\ 300,000 \text{ barrels} & & 9,450,000 \end{array}$$
- 9,450,000 divided by 300,000 = 31.50
- The weighted average API gravity would be reported as 31.50.

## PART D. COMMENTS

Explain any unusual or substantially different aspects of your reporting month's operations that affect the data reported.

## PART E. REFINERY OPERATIONS

Definitions of petroleum products and other terms are available on our website. Refer to Section 6 for details. Please refer to these definitions before completing the survey form.

EIA ID Number and Report Period: Enter the EIA identification number and report period on each page.

Resubmission: If this is a resubmission to correct previously submitted data, check the appropriate box.

Quantities: Report using the following criteria.

- Report all quantities to the nearest whole number in **thousand barrels** (42 U.S. gallons/barrel). Quantities ending in 499 or less are rounded down, and quantities ending in 500 or more are rounded up (e.g., 106,499 barrels are reported as 106 and 106,500 barrels are reported as 107).
- Report data for only those lines which are applicable to your operation. If there are no data for a specific line, leave the entire line blank. Shaded cells on the form are those in which data are not currently required to be reported.

- For each product, report beginning and end-of-month stocks, receipts, inputs, production, shipments, and refinery fuel use and losses during the month, except where shaded.
- Most reporting categories must balance across: Beginning Stocks + Receipts - Inputs + Production - Shipments - Fuel Use/Losses must equal Ending Stocks.**
- Do not report negative quantities.

### Stocks (Beginning and End of Month)

- Report all stocks in the **custody** of the refinery regardless of ownership. Reported stock quantities should represent actual measured inventories.
- Report stocks as of midnight of the last day of the report month, corrected to 60°F less basic sediment and water (BS&W).
- Report all domestic and foreign stocks held at refineries and in transit thereto, except crude oil in transit by water from Alaska or any crude oil or product in transit by pipeline. Crude oil in transit by pipeline and Alaskan crude oil in transit by water are reported on Form EIA-813, "Monthly Crude Oil Report." Petroleum products in transit by pipeline are reported by pipeline operators on Form EIA-812, "Monthly Product Pipeline Report." Include foreign stocks only after entry through Customs. Exclude stocks of foreign origin held in bond.

For purposes of this report, "after entry through Customs" is said to occur on:

- the "entry date" specified on the U.S. Customs Form CF7501, "Entry Summary;" or
- the "date of withdrawal conditionally free of duty" specified on U.S. Customs Form CF 7501, "Entry Summary;" or
- the "import date" specified on the U.S. Customs Form 214, "Application for Foreign Trade Zone Admission and/or Status Designation;" or
- the "date of exportation" specific on the U.S. Department of Commerce Form 7525-V, "Shipper's Export Declaration," for shipments from Puerto Rico to the 50 States and the District of Columbia.

Exclude stocks in underground storage associated with the refinery when reporting liquefied petroleum gas and liquefied refinery gas. Effective January 2004 these data are reported on Form EIA-811, "Monthly Bulk Terminal Report".

Include stocks of oxygenates held at oxygenate production facilities which are either located within or adjacent to the refinery complex whose oxygenates are dedicated for use by this refinery complex. (Captive Oxygenate Plants).

Exclude stocks of unfinished oils held at terminals offsite of the refinery that are intended for future processing at the refinery. Effective January 2004, these data are reported on Form EIA-811, "Monthly Bulk Terminal Report."

## Receipts During Month

Report all receipts at the refinery and in transit thereto, using the same criteria as those used for reporting stocks. Receipts of Alaskan Crude Oil (Code 011) should be included in receipts of Crude Oil, Domestic (Code 010).

Crude Oil, Total (Code 050) is the sum of Domestic (Code 010) and Foreign (Code 020) Crude Oil.

Do not include natural gas plant liquids received via crude oil pipelines as receipts of crude oil. Report these liquids separately as individual components of natural gas plant liquids.

Liquefied gases received at a refinery are reported as receipts of liquids from natural gas processing plants (Codes 110, 231, 232, 233, 220) if their origin is unknown.

Receipts of Liquefied Refinery Gases (Codes 621, 622, 623, and 615) and Still Gas (Code 045) include both fuel use and petrochemical feedstock use.

Oxygenates received from sources outside the refinery (Merchant Plants), as well as, oxygenates **produced** at the refinery (Captive Plants) should be reported as **receipts** of Other Hydrocarbons, Hydrogen, and Oxygenates (Code 090).

Hydrogen received from sources outside the refinery, as well as, hydrogen produced at hydrogen plants within the refinery should be reported as receipts. Do not include natural gas used as a feedstock to produce hydrogen at the refinery in receipts. Do not include natural gas received at the refinery for use as a fuel.

## Inputs During Month

Report the volume of crude oil, unfinished oils, natural gas liquids, other hydrocarbons, hydrogen, oxygenates, and liquefied refinery gases input to refinery processing units for the purpose of producing finished petroleum products.

Report **gross** refinery input for each item identified on the survey form except where shaded. Do not “net out” the inputs by reporting the difference between inputs and production.

Oils that have undergone prior refinery processing **should not** be reported as inputs of Crude Oil (Code 050). Such oils should be reported as inputs of intermediate product (typically, unfinished oils or motor gasoline blending components) or finished product. An “Input” of a finished product, such as a finished motor gasoline or distillate fuel oil, represents a reclassification of a finished product (see Reclassification of Inventory on page 5).

Inputs of product used to manufacture finished petrochemicals should be excluded. Input of natural gas to produce hydrogen should be excluded. Input of feedstock to manufacture oxygenates should be excluded. Inputs of finished petroleum products are explained under “Reclassification of Inventory” on page 5.

All inputs of products, such as butane, pentanes plus (plant condensate or natural gasoline), and unfinished oils, must be reported as individual products even if they are commingled with crude oil before they are received by the refinery.

Include oxygenates (e.g., fuel ethanol, ethyl tertiary butyl ether, methanol, methyl tertiary butyl ether, tertiary amyl methyl ether, tertiary butyl alcohol) in Other Hydrocarbons, Hydrogen, and Oxygenates (Code 090).

## Production During Month

Report gross refinery production during the month for each item identified on the survey except where shaded.

Do not “net out” the production by reporting the difference between inputs and production.

Report the volume of petroleum products produced from processing of crude oil, unfinished oils, liquefied petroleum gases, other hydrocarbons, hydrogen, and oxygenates. Report the volume of petroleum products produced from blending operations of motor gasoline and aviation blending components.

The production of olefins (Codes 631, 632, 633, and 634) should represent only that portion of liquefied refinery gases that are shipped from the refinery as a finished refinery product (e.g., olefins shipped to petrochemical facilities).

Report the production of aromatics (e.g., benzene, toluene, and xylene) based upon intended use. Aromatics to be used for blending or compounding into finished aviation or motor gasoline should be reported production of aviation or motor gasoline blending components. Aromatics used as petrochemical feedstocks should be reported as production of Naphtha less than 401°F (Code 822).

## Shipments During Month

Report all shipments, including intracompany shipments to other refineries, storage facilities, chemical plants or fractionating facilities. Inputs to onsite petrochemical plants should be reported as shipments from the refinery.

## Refinery Fuel Use and Losses During Month

Report all nonprocessing losses (e.g., spills, fire losses, contamination, etc.) by product. Include crude oil and petroleum products used as fuel at the refinery. Exclude refinery processing gains and losses. Exclude fuel use at petrochemical facilities located at the same site as the refinery.

## Additional Information

### Gasoline Blending Components

Exclude normal butane, butylene, isobutane, isobutylene, and pentanes plus from motor gasoline blending components. These products are reported as individual components under product codes 232, 233, 220, 623, 633, 615, and 634.

### Inputs (Gain) or Production (Loss)

Report the **net** processing gain or loss that occurred during the refining process. Exclude losses which do not take place during the refining process (e.g., spills, fire losses, and contamination during blending, transportation, or storage). Report those losses by product under the “Refinery Fuel Use and Losses” column.

A refinery processing gain represents the volumetric amount by which total refinery production is greater than input for the report period. A refinery processing loss represents the volumetric

amount by which total refinery production is less than input for the report period. These differences are due to the processing of crude oil and other inputs into products which in total have less volume or more volume than the inputs processed. Therefore, the total production of products is greater or less than input.

Report a processing gain in the "Input" column or a processing loss in the "Production" column (Code 911). These entries are positive numbers and are used to balance the total input and total production columns for Code 999.

### Liquefied Gases

Report all mixes of natural gas plant liquids (including unfractionated streams) and liquefied refinery gases by individual components as determined by chemical analysis, (e.g., ethane, propane, normal butane, isobutane, pentanes plus for gas plant liquids, and ethane/ethylene, propane/propylene, normal butane/butylene, and isobutane/isobutylene for liquified refinery gases).

Liquefied Petroleum Gases (LPG) extracted from natural gas liquids streams originating at natural gas processing plants, and received by the refinery for processing into finished products are reported by component under codes 110, 231, 232, 233, and 220.

Liquefied Refinery Gases (LRG) that are fractionated from crude oil or produced from downstream processes, such as catalytic cracking, and result in a finished LRG (liquefied gases production that are subsequently stored or shipped as a LRG are reported on codes 621, 631, 622, 632, 623, 633, 615, and 634.

### Lubricants

Report only lubricant base oils produced at the refinery. Do not include finished lubricants produced at lube plants. Exclude byproducts of lubricating oil refining such as aromatic extracts derived from solvent extraction or tars derived from deasphalting. Reporting categories include:

Paraffinic. Includes all grades of bright stock and neutrals with a Viscosity Index >75.

Naphthenic. Includes all lubricating oil base stocks with a Viscosity Index <75.

*Note:* The criterion for categorizing lubricants is based solely on the Viscosity Index of the stocks and is independent of crude sources and type of processing used to produce the oils.

*Exceptions:* Lubricating oil base stocks that have been historically classified as naphthenic or paraffinic by a refiner may continue to be so categorized irrespective of the Viscosity Index criterion (e.g., Unextracted paraffinic oils that would not meet the Viscosity Index test).

### Oxygenates

Report oxygenates on an individual basis in product codes 141, 142, and 144. All other oxygenates (Code 445) includes other aliphatic alcohols and ethers (e.g., TAME, TBA) intended for motor gasoline blending.

Include stocks held at oxygenate production facilities, located within or adjacent to the refinery complex (captive plants).

Do not report oxygenates as motor gasoline blending components unless they have been commingled with motor gasoline blending components.

Report gross inputs of oxygenates. Do not "net out" oxygenate inputs by reporting the difference between oxygenate inputs and production.

### Petrochemical Feedstocks

Report petrochemical feedstock. Do not report finished petrochemicals.

Deliveries of feedstock to petrochemical units within your refinery, chemical or rubber manufacturing plants are reported as shipments. Report return streams of petrochemical feedstocks as a receipt and input of petrochemical feedstocks and as a production in the product category of intended use.

Do not report natural gas liquids (NGL) or liquefied refinery gases (LRG) as petrochemical feedstock. These products are reported by component as ethane, ethylene, propane, propylene, normal butane, butylene, isobutane, isobutylene, and pentanes plus (Codes 110, 231, 232, 233, 220, 621, 631, 622, 632, 623, 633, 615, and 634).

### Pipeline Interface

Pipeline interface consists of petroleum products which have become mixed during pipeline transport. Pipeline interface is to be excluded from volumes reported on the Form EIA-810. The input of pipeline interface and finished petroleum products produced from processing of pipeline interface are also excluded.

### Reclassification of Inventory

If a finished product is reclassified as a different finished product or as an unfinished oil, the quantity of the original product is reported in the "Input" column and the reclassified product is reported in the "Production" column.

For example, if you produce 10,000 barrels of kerosene during January and have it in storage at the end of the month, this quantity is to be reported as "Production" and "Stocks" of Kerosene (Code 311) on the January report. If during February the intended use of the 10,000 barrels of kerosene is changed to Kerosene-Type Jet Fuel, report this reclassification by reporting the 10,000 barrels as an "Input" of Kerosene (Code 311) and as a "Production" of Kerosene-Type Jet Fuel (Code 213).

### Residual Fuel Oil by Percent of Sulfur Content

Report refinery input and production during the month and end-of-month stocks of residual fuel oil by sulfur content. Product Codes 508, 509, and 510 must sum to the total for Residual Fuel Oil (Code 511).

### Still Gas

Still gas shipped to petrochemical facilities should be reported as a shipment in Code 045, less the amount of such streams

returned to the producing refinery. Still gas used as a fuel at the refinery should be reported as a fuel use/loss.

Report still gas in thousand fuel oil equivalent barrels. The conversion factor is 6 million BTU's per fuel oil equivalent barrel (higher heating value).

### **Synthetic Hydrocarbons**

Report synthetic hydrocarbons such as shale oil, tar sands oils, etc., with Crude Oil (Codes 050 and 990).

## **8. PROVISIONS REGARDING CONFIDENTIALITY OF INFORMATION**

The information reported on this form will be kept confidential and not disclosed to the public to the extent that it satisfies the criteria for exemption under the Freedom of Information Act (FOIA), 5 U.S.C. §552, the DOE regulations, 10 C.F.R. §1004.11, implementing the FOIA, and the Trade Secrets Act, 18 U.S.C. §1905. The Energy Information Administration (EIA) will protect your information in accordance with its confidentiality and security policies and procedures.

The Federal Energy Administration Act requires the EIA to provide company-specific data to other Federal agencies when requested for official use. The information reported on this form may also be made available, upon request, to another component of the Department of Energy (DOE); to any Committee of Congress, the General Accounting Office, or other Federal agencies authorized by law to receive such information. A court of competent jurisdiction may obtain this information in response to an order. The information may be used for any nonstatistical purposes such as administrative, regulatory, law enforcement, or adjudicatory purposes.

Company specific data are also provided to other DOE offices for the purpose of examining specific petroleum operations in the context of emergency response planning and actual emergencies.

Disclosure limitation procedures are not applied to the statistical data published from this survey's information. Thus, there may be some statistics that are based on data from fewer than three respondents, or that are dominated by data from one or two large respondents. In these cases, it may be possible for a knowledgeable person to estimate the information reported by a specific respondent.

## **9. SANCTIONS**

The timely submission of Form EIA-810 by those required to report is mandatory under Section 13(b) of the Federal Energy Administration Act of 1974 (Public Law 93-275), as amended. Failure to respond may result in a civil penalty of not more than \$2,750 each day for each violation, or a fine of not more than \$5,000 for each willful violation. The government may bring a civil action to prohibit reporting violations which may result in a temporary restraining order or a preliminary or permanent injunction without bond. In such civil action, the court may also issue mandatory injunctions commanding any person to comply with these reporting requirements.

## **10. FILING FORMS WITH THE FEDERAL GOVERNMENT AND ESTIMATED**

## **REPORTING BURDEN**

Respondents are not required to file or reply to any Federal collection of information unless it has a valid OMB control number. Public reporting burden for this collection of information is estimated to average 4 hours and 45 minutes per response. This includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information including suggestions for reducing this burden to: Energy Information Administration, Statistics and Methods Group, EI-70, 1000 Independence Avenue, S.W., Washington, D.C. 20585; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503.