



STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

*PO Box 47600 • Olympia, WA 98504-7600 • 360-407-6000*

*711 for Washington Relay Service • Persons with a speech disability can call 877-833-6341*

Nathaniel Biletznikoff  
Shell Oil Co.  
Shell Puget Sound Refinery  
8505 S Texas Rd  
Anacortes, WA 98221-9643

RE: Order Docket No. 15580  
Clean Air Rule Baseline Establishment Order

Dear Nathaniel Biletznikoff:

Attached is the Clean Air Rule Baseline Establishment Order for Shell Puget Sound Refinery. You are receiving this order because the reported covered emissions of greenhouse gas (GHG) from your operations covered by the Clean Air Rule during the reporting years 2012-2016 were greater than 100,000 metric tons of carbon dioxide equivalent (CO<sub>2</sub>e) per year. These are the emissions that would be emitted from the complete combustion or oxidation of the products supplied in the state of Washington, and not the process emissions from the production of these products. Those emissions are covered in a separate baseline establishment order.

This order includes your emissions reduction requirements and other compliance, recordkeeping, and reporting requirements that you must follow.

You have the right to appeal this order. The requirements to file an appeal are contained in Condition 20 of the order.

If you have any questions about this order, please contact me by phone at (360) 407-7624 or email at [ben.blank@ecy.wa.gov](mailto:ben.blank@ecy.wa.gov). You may also contact Chris Conn by phone at (360) 407-6519 or email at [chris.conn@ecy.wa.gov](mailto:chris.conn@ecy.wa.gov).

Sincerely,

Ben Blank  
Climate Policy Section Manager  
Air Quality Program  
State of Washington Department of Ecology



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CLEAN AIR RULE BASELINE ESTABLISHMENT ORDER

Issued To:

Shell Oil Co.  
Shell Puget Sound Refinery  
8505 S Texas Rd  
Anacortes, WA 98221-9643

Date Order Issued:  
December 18, 2017

Regulatory Order Number:  
15580

Date(s) Order Revised:  
N/A

This Clean Air Rule Baseline Establishment Order is issued under the authority of the:

- Washington State Clean Air Act, Chapter 70.94 Revised Code of Washington.
- Washington State Department of Ecology regulations for the Reporting of Emissions of Greenhouse Gases as set forth in Chapter 173-441, Washington Administrative Code
- Washington State Department of Ecology regulations for the Clean Air Rule as set forth in Chapter 173-442, Washington Administrative Code.

REVIEWED BY:

/s/ Christopher Conn  
Christopher Conn, P.E.  
Industrial Engineering Specialist  
chris.conn@ecy.wa.gov, (360) 407-6519

Date: December 18, 2017

APPROVED BY:

/s/ Ben Blank  
Ben Blank  
Climate Policy Section Manager  
ben.blank@ecy.wa.gov, (360) 407-7624

Date: December 18, 2017

**Table of Contents**

Findings.....	4
Baseline Emissions .....	4
Emission Reduction Requirement.....	4
Demonstrating Compliance .....	5
Recordkeeping .....	5
Third-Party Verification.....	5
General Conditions .....	5
Right to Appeal this Order.....	7

## Findings

- A. Shell Oil Co. operates a petroleum products producer, Shell Puget Sound Refinery, in the state of Washington and is a covered party as defined in Washington Administrative Code (WAC) 173-442-020.
- B. The covered party is subject to the greenhouse gas (GHG) emissions reporting requirements of WAC Chapter 173-441.
- C. This order only addresses CO<sub>2</sub> emissions that would result from the complete combustion or oxidation of supplied products as defined in WAC 173-442-020. This order does not include process-related emissions from the production of products.
- D. During the period of 2012-2016 Shell Puget Sound Refinery had reported annual GHG emissions that averaged above 100,000 metric tons of carbon dioxide equivalent (CO<sub>2</sub>e). The covered party is therefore subject to the requirements of WAC Chapter 173-442.
- E. The covered party does not meet the criteria in WAC 173-442-020 to be defined as an energy intensive and trade exposed (EITE) covered party.

## Baseline Emissions

1. Ecology has determined the baseline emissions for Shell Puget Sound Refinery are 10,029,653 metric tons CO<sub>2</sub>e/year. The calculations of the baseline emissions are described in the support documentation for this order.

## Emission Reduction Requirement

2. The emission reduction requirement is defined as a covered party's GHG emissions limit for a compliance period as defined in WAC 173-442-020.
3. The GHG emissions from Shell Puget Sound Refinery must be limited to the baseline emissions in the first year of the first compliance period.
4. The GHG emissions from Shell Puget Sound Refinery must be limited to a reduction from the baseline emissions of an average reduction rate of 1.7% per year starting in the second year of the first compliance period.
5. The reduction rate for Shell Puget Sound Refinery, starting in the second year of the first compliance period is 170,504 MT CO<sub>2</sub>e/year.
6. At the end of each compliance period, covered GHG emissions from Shell Puget Sound Refinery must be below the limits listed in Table 1.

Table 1: Emission Reduction Requirement

Compliance Period (Calendar Years)	Three Year Total Emissions Limit (MT CO <sub>2</sub> e)
2017-2019	29,577,448
2020-2022	28,042,911
2023-2025	26,508,374
2026-2028	24,973,837
2029-2031	23,439,300

Compliance Period (Calendar Years)	Three Year Total Emissions Limit (MT CO <sub>2</sub> e)
2032-2034	21,904,763
2035 and every three years thereafter	20,881,738

## Demonstrating Compliance

7. The compliance obligations are calculated per the methods defined in WAC 173-442-200.
8. Covered parties must demonstrate compliance by submitting:
  - a. Actual emission reductions as exhibited in annual GHG reporting data as defined in WAC chapter 173-441 by required date as defined in WAC 173-441-050;
  - b. Banked Emission Reduction Units (ERUs) as defined in WAC 173-442-120 by required date as defined in WAC 173-442-250; or
  - c. A combination of (a) and (b) of this subsection that achieves a level meeting the compliance obligation.
9. Covered parties must document compliance consistent with the requirements in WAC 173-442-210.

## Recordkeeping

10. Covered parties must monitor emissions and other parameters as required in WAC 173-441-050 and in methodologies adopted by reference in WAC 173-441-120.
11. Emissions data, evidence of emissions reductions, and ERU records must be retained per the requirements in WAC 173-441 and WAC 173-442.
12. Monitoring and recordkeeping data required to complete the emission reports and compliance reports required by WAC 173-441 and WAC 173-442 must be available for inspection by ecology inspectors and authorized third party verifiers consistent with the requirements in WAC 173-441-050.

## Third-Party Verification

13. Annual emissions reports are subject to the third-party verification processes in WAC 173-441-085.
14. Compliance reports are subject to third-party verification requirements of WAC 173-442-220.
15. Projects used to generate ERUs must meet the requirements contained within WAC 173-442-160. Projects must meet the third-party verification requirements in WAC 173-442-220.

## General Conditions

16. Right of Entry  
Chapter 70.94, Revised Code of Washington, and WAC 173-400-105(3) provide authorized representatives of Ecology certain rights to enter and inspect the source. Refusal by the covered party to allow such entry and inspection may be a violation of

state law subject to penalty as provided in the statute. Pursuant to this statute, authorized representatives of Ecology, upon the presentation of credentials:

- A. Have a right of entry to, upon, or through any premises of the covered party or any premises in which any records required by the covered party to maintain are located.
- B. Have the right, during normal business hours, to access and copy any records the covered party is required to maintain.
- C. Have the right, at reasonable times, to inspect any monitoring equipment or method required by the covered party to determine emissions and compliance.
- D. Have the right, at reasonable times, to sample any emissions that the covered party is required to sample to determine greenhouse gasses emitted by the covered party.

#### 17. Revisions to this Order

This order may be revised on request of the covered party. The request must be in writing and provide a full explanation of what revision is requested, any and all necessary calculations to support the request, the provision of WAC 173-442 or WAC 173-441 that allows for the change, and the covered party's interpretation of the effects of the change on the covered party's baseline emissions and emission reduction requirement.

This order may be revised by Ecology based on findings in verification reports, changes to emissions calculation methodologies, correction of errors, or assigned emissions levels per WAC 173-441-086.

If Ecology agrees with the covered party or determines that a revision is required, Ecology will issue a revised Order.

#### 18. Transfer of Ownership

- A. In the event of any changes in control or ownership of the covered party or facility, the requirements of this Order will be binding on all subsequent owners and operators. The covered party must notify the succeeding owner and operator of the existence of this Order and its conditions by letter. A copy of the letter must be forwarded to Ecology at the same time it is sent to the succeeding owner or operator.
- B. If this order has been incorporated into an Air Operating Permit issued pursuant to chapter WAC 173-401, the provisions for amending that Air Operating Permit to change ownership or operational control shall apply in place of the notification provisions above.
- C. The new owner of the covered party or facility must update its certificate of representation required by WAC 173-441 to reflect the new ownership of the covered

Order No. 15580  
Issued: December 18, 2017

party or facility and establish new designated representatives in conjunction with the new ownership.

19. Correspondence

A. Mailing Address:

Clean Air Rule, Air Quality Program  
Department of Ecology  
P.O. Box 47600  
Olympia, WA 98504-7600

B. Electronic Correspondence and E-Mail:

car@ecy.wa.gov

## Right to Appeal this Order

20. You have the right to appeal this Order to the Pollution Control Hearings Board (PCHB) within 30 days of the date of receipt of this Order. The appeal process is governed by Chapter 43.21B RCW and Chapter 371-08 WAC. "Date of receipt" is defined in RCW 43.21B.001(2).

To appeal you must do all of the following within 30 days of the date of receipt of this Order:

- File your appeal and a copy of this Order with the PCHB (see addresses below). Filing means actual receipt by the PCHB during regular business hours.
- Serve a copy of your appeal and this Order on Ecology in paper form - by mail or in person. (See addresses below.) E-mail is not accepted.

You must also comply with other applicable requirements in Chapter 43.21B RCW and Chapter 371-08 WAC.

## ADDRESS AND LOCATION INFORMATION

### Street Addresses:

**Department of Ecology**  
Attn: Appeals Processing Desk  
300 Desmond Drive SE  
Lacey, WA 98503

**Pollution Control Hearing Board**  
111 Israel RD SW  
STE 301  
Tumwater, WA 98501

### Mailing Addresses:

**Department of Ecology**  
Attn: Appeals Processing Desk  
PO Box 47608  
Olympia, WA 98504-7608

**Pollution Control Hearing Board**  
PO Box 40903  
Olympia, WA 98504-090

## Baseline Establishment Order Support Document

The purpose of this document is to explain how the baseline emission and reduction requirements have been established for Shell Puget Sound Refinery.

### Facility Information

Shell Puget Sound Refinery is a petroleum product producer administered in Anacortes, WA. Primary North American Industry Classification System (NAICS) Code: 324110

### Determination of Greenhouse Gas (GHG) Baseline Emissions

The baseline emissions for this petroleum products producer were collected through GHG emissions data reported to Ecology as required by Washington Administrative Code (WAC) Chapter 173-441 for the reporting years 2012-2016. Emissions data is reported in metric tons of carbon dioxide equivalent (MT CO<sub>2e</sub>).

The following table lists the covered greenhouse gas emissions reported to Ecology from Shell Puget Sound Refinery for calendar years 2012-2016.

Table 1: Baseline Emissions

Year	Covered GHG Emissions, MT CO <sub>2e</sub>	Adjusted by Ecology (Y/N)	Used to calculate Baseline (Y/N)
2012	10,841,038	Yes	Yes
2013	9,037,464	Yes	Yes
2014	10,243,665	Yes	Yes
2015	10,154,739	Yes	Yes
2016	9,871,360	Yes	Yes
Baseline	10,029,653		

Ecology adjusted or did not use the indicated year(s) to determine the baseline emissions for this facility:

All years were recalculated using 2016 Environmental Protection Agency (EPA) emission factors for each product.

The baseline emissions are defined as the average reported GHG emissions from the baseline period that have not been excluded per WAC 173-442-040. Ecology has determined the baseline CO<sub>2e</sub> emissions for Shell Puget Sound Refinery to be 10,029,653 MT CO<sub>2e</sub>.

Because baseline emissions are greater than 70,000 MT CO<sub>2e</sub>, the facility is subject to the provisions of WAC Chapter 173-442 (Clean Air Rule).

### Emissions Limits and Emissions Reduction Pathway

The emissions reduction pathway is based on the requirements in WAC 173-442-060. Table 2 shows the annual emissions reductions pathway for Shell Puget Sound Refinery and Table 3 shows the three year total emissions allowed in each compliance period. The emissions limits



Baseline Establishment Order 15580

Issued: December 18, 2017

for Shell Puget Sound Refinery decrease at an annual rate of 1.7% per year beginning in the second year of the first compliance period as shown in Table 2.

Table 2: Emission Reduction Pathway

Calendar Year	Calculated Annual Emissions Limit (MT CO <sub>2</sub> e)
2017	10,029,653
2018	9,859,149
2019	9,688,645
2020	9,518,141
2021	9,347,637
2022	9,177,133
2023	9,006,629
2024	8,836,125
2025	8,665,620
2026	8,495,116
2027	8,324,612
2028	8,154,108
2029	7,983,604
2030	7,813,100
2031	7,642,596
2032	7,472,092
2033	7,301,588
2034	7,131,084
2035 (and all subsequent years)	6,960,579

Compliance periods are three year periods at the end of which the covered party must demonstrate that it met its GHG emissions reduction requirement. The emissions reduction requirement is the total emissions allowed over a three year compliance period. The emissions limit is the sum of the calculated annual emissions limits over a compliance period. Shell Puget Sound Refinery’s compliance period maximum allowable emissions are shown in Table 3. Compliance may be demonstrated by actual emissions reductions or by retiring emission reduction units (ERUs).

Table 3: Emission Reduction Requirement

Compliance Period (Calendar Years)	Three Year Total Emissions Limit (MT CO <sub>2</sub> e)
2017-2019	29,577,448
2020-2022	28,042,911
2023-2025	26,508,374
2026-2028	24,973,837
2029-2031	23,439,300
2032-2034	21,904,763

Baseline Establishment Order 15580

Issued: December 18, 2017

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