



**NORTHWEST**  
AIR POLLUTION AUTHORITY

1600 South Second Street  
Mount Vernon, WA 98273-5202  
Tel: (360) 428-1617 / Fax: (360) 428-1620

*Serving Island, Skagit and Whatcom Counties*

REGULATORY ORDER

ISSUE DATE: May 15, 2002 NUMBER: 28

APPLICANT: Ms. Karen L. Payne  
BP Cherry Point Refinery  
4519 Grandview Road  
Blaine, WA 98230

LOCATION: BP Cherry Point Refinery

TITLE: Sulfur Recovery Plant and Fuel Gas System for Heaters and Boilers

Pursuant to your request and Section 121 of the Northwest Air Pollution Authority (NWAPA) regulations and WAC 173-400-091, you are hereby authorized to operate:

- I. The fuel gas combustion system for all of the heaters and boilers at the BP Cherry Point Refinery which will meet the requirements of 40 CFR Part 60 Subpart J and shall comply with all requirements of 40 CFR Part 60, Subpart A and J, as those subparts apply to the fuel gas combustion in heaters and boilers by September 30, 2005.
- II. The Sulfur Recovery Plant (SRP) at the BP Cherry Point Refinery subject to the following monitoring provisions:
  1. All SRP sulfur pit emissions shall be treated, monitored and included as part of the SRP's emissions subject to New Source Performance Standard (NSPS) Subpart J limit for sulfur dioxide (SO<sub>2</sub>) by no later than the first turnaround of the Claus train that occurs six months after January 18, 2001 (ie the first turnaround of the Claus train after July 18, 2001). SO<sub>2</sub> from the SRP will be monitored according to requirements of 40 CFR Subpart J.
  2. By the end of the turnaround in 2006, the SRP shall comply with 40 CFR 60.104(a)(2). The SRP shall meet a SO<sub>2</sub> limit of 250 ppm by volume on a dry basis at zero percent excess air, except for periods of startup, shutdown, or malfunction of the Tail Gas Unit (TGU).

If the conditions of this regulatory order are in conflict with existing regulations, standards, orders of approval, or other previously issued regulatory orders, this regulatory order shall have precedence.

ATTEST: James Randles  
James Randles, Director

June 5, 2002  
Date

ATTEST: Karen L. Payne  
Karen L. Payne,  
Health, Safety & Environmental Manager

May 22, 2002  
Date

**RECEIVED**

JUN - 5 2002

Northwest Air Pollution  
Authority



**REGULATORY ORDER**

*Serving Island, Skagit and Whatcom Counties*

ISSUE DATE: June 30, 1998

NUMBER: 018

ISSUED TO: ARCO Products Company  
P. O. Box 8100  
Blaine, WA 98231

ORDER: This Regulatory Order is issued pursuant to 70.94.141(3) RCW, and NWAPA Regulation, Section 121. The order establishes an alternate means of compliance for the number 3 calciner hearth acid mist ( $H_2SO_4$ ) emission limit of 18.3 lb/hr on a 24 hour average.

ARCO Products Company is ordered to take the following actions:

1. Submit to NWAPA for approval, a test plan for acid mist emissions testing of the third calciner hearth at operating conditions not addressed in the "Third Hearth Monitoring Plan, Sulfuric Acid Removal" dated August 16, 1995.
2. Conduct emissions testing in accordance with approved test plan, and submit source test performance data to NWAPA within 20 days of testing.
3. Monitor and record operating parameters of the third calciner hearth and the wet electrostatic precipitator (WESP) in sufficient detail to determine compliance based on source test performance data and operating conditions.
4. Submit a revised monitoring plan to the Department of Ecology for the third calciner hearth to address alternative operating scenarios for approval no later than September 1, 1998.

Validated performance test data submitted in action item 1, shall be considered credible evidence in demonstrating compliance with Condition 1 of PSD Permit Number 95-01 for emissions of acid mist.

This order is effective immediately, but an appeal may be made for a hearing to the State of Washington Pollution Control Hearings Board, M/S PY-21, Olympia, WA 98504, not more than thirty (30) days from the receipt of this notice. A copy of the appeal must also be sent to the NWAPA within thirty (30) days. An appeal alone will not stay the effectiveness of this order.

Regulatory Order No. 018  
ARCO Products Company

Failure to comply with the terms of this Regulatory Order by ARCO Products Company may result in the issuance of a Notice of Violation and/or other enforcement actions provided by law.

ATTEST:

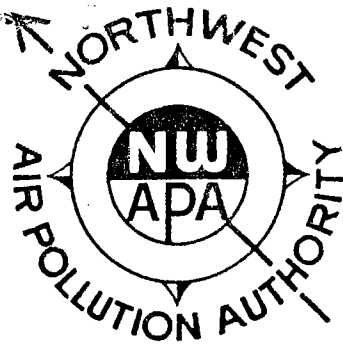
Irving L. Hyman  
Air Pollution Control Officer

6/30/98  
Date

John Cronen  
Company Representative

6/30/98  
Date

Nov 30, 1984



207 Pioneer Building

Mount Vernon, Washington 98273

Area Code 206: Mount Vernon 336-5705 Bellingham 676-2223 Scan 738-2223

Glen F. Hallman  
AIR POLLUTION  
CONTROL AND  
EXECUTIVE OFFICER

Fielding Formway, Manager  
Cherry Point Refinery  
ARCO Petroleum Products Company  
P.O. Box 1127  
Ferndale, Washington 98248

Dear Mr. Formway:

REGULATORY ORDER

Issuance of:

A "Time Schedule of Compliance"  
Petroleum Coke Calciner Stack Emission  
Cherry Point Refinery  
ARCO Petroleum Products Company  
4519 - Grandview Road,  
Ferndale, Washington 98248

Pursuant to Washington State Clean Air Act - RCW 70.94.211 -  
Violations and Northwest Air Pollution Authority Regulation Section  
121 - Orders, as Control Officer of the Northwest Air Pollution Authority  
(NWAPA), I hereby issue, under the conditions specified herein, a "Time  
Schedule of Compliance" to require said company to take necessary corrective  
action to bring their petroleum coke calciner stack emission into compliance  
with the visual emission standard of NWAPA, Regulation - Section 451,  
within a reasonable period of time.

FINDINGS OF FACT

1. The visual emissions from the ARCO Cherry Point refinery  
petroleum coke calciner stack has exceeded the 20% opacity standard  
(NWAPA Regulation - Section 451) 46 times out of a total of 76 observations  
made from January 1 through October 31, 1984 by ARCO employees who are  
certified by the Washington Department of Ecology as plume evaluators.

2. ARCO has, since the start-up of the calciner in 1980, spent  
over \$2 million on capital modifications to the calciner, incurred over  
three weeks of downtime on the units, and invested large amounts of time  
and money in research and testing using combustion additives all in an  
effort to bring the opacity into compliance with the NWAPA visual standard.

3. On June 13, 1984 this Authority issued a "Bubble" permitting a particulate emission from the coke calciner stack in excess of the particulate emission standard in exchange for reduced fuel oil burning from various heaters and boilers to assist in bringing the opacity of said stack into compliance with the visual standard.

4. Efforts made thus far have not been fully successful, as noted, in bringing said emission opacity into compliance. Therefore, ARCO Petroleum Products Company, in a letter to me dated November 26, 1984, proposes to take three actions to bring the calciner stack opacity into compliance by the end of the third quarter 1985. I have reviewed these proposed actions and find that they are necessary corrective actions and will be taken within a reasonable time considering the extent and amount of time needed to complete the proposed actions.

SPECIFIC "TIME SCHEDULE OF COMPLIANCE" PROVISIONS

1. ARCO Petroleum Products Company is to take the following actions within the time periods stated to bring the petroleum coke calciner stack emission to the atmosphere at their Cherry Point refinery into compliance with NWAPA Visual Standard - Regulation Section 451:

- a) Replace the tubes in the first and second stage recuperators, in order to eliminate air leaks. The project will be completed during the first quarter of 1985, depending on delivery of the special alloy tubes.
- b) Conduct pilot scale tests to determine if alternate technologies will be cost effective. This will be completed by the end of the second quarter 1985.
- c) By the end of the third quarter 1985 ARCO will have the calciner opacity in compliance or present additional technology to resolve the problem.

2. The opacity of the calciner stack emission shall not exceed 40% for three minutes in any one (1) hour period during the time this Order is in effect.

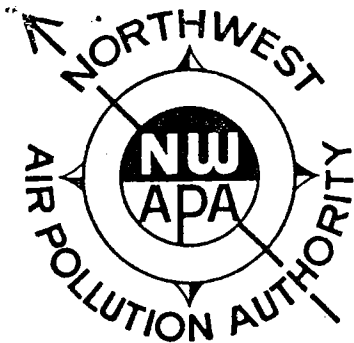
3. A written guideline shall be developed by ARCO Petroleum Products Company and approved by me, that is to be used by ARCO personnel who hold a valid Washington Department of Ecology plume evaluation certificate when observing said stack emission. After January 1, 1985 this guideline shall be used in making visual observation of said stack emissions.

4. This Order shall become final no later than thirty (30) days after issuance unless an appeal is made for a hearing to the Environmental Hearing Board, 4224 - 6th. Avenue S. E., Building 2, Rowe 6, Lacey, Washington 98501.

APPROVED by the Control Officer of the Northwest Air Pollution Authority this 30th day of November, 1984.

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Glen F. Hallman,  
Air Pollution Control &  
Executive Officer



Glen F. Hallman  
AIR POLLUTION  
CONTROL AND  
EXECUTIVE OFFICER

207 Pioneer Building Mount Vernon, Washington 98273  
Area Code 206: Mount Vernon 336-5705 Bellingham 676-2223 Scan 738-2223

November 30, 1984

Fielding Formway, Manager  
Cherry Point Refinery  
ARCO Petroleum Products Company  
P.O. Box 1127  
Ferndale, Washington 98248

Dear Mr. Formway:

I am in receipt of your letter of November 26, 1984 in response to my letter of October 30, 1984 concerning the excessive opacity of the coke calciner stack emissions.

You ask that the calciner opacity be based on a yearly average, in order to eliminate the effects of atmospheric conditions. You state that if this were done for the period September 1983 to November 1984 the average opacity would be slightly less than 20%. During this period you will note that about 46% of the observations were greater than 20% and that a significant number were 30% or greater. I also reviewed the results of the opacity readings made by your personnel as required and submitted as a part of your monthly report to this Authority. For the period January through October, 1984 there were 76 observations made with 46, or 60.5% over the 20% limit. Considering the observations, however, for the period January - April, on 2 (9%) out of the 25 total observations made were over 20% while during the period May - September, 41 (91%) out of 45 observations were over the 20% limit.

I do not believe that operating conditions and therefore the emissions from the calciner varied that much. In fact you have stated in your letter to Lynda Brothers, WDOE, dated November 27, 1984 that ".....coke calcination is, predominantly, a steady state process....." Therefore, this variance is probably due to meteorological conditions that effect visual observations made during the times of the year when the sky is overcast and the humidity is above 60% making it difficult to read the opacity of the plume.

There is no legal way that I can approve, or can the Board of this Authority grant a permanent variance to average over an extended period of time the opacity readings of the calciner stack plume. NWAPA and

November 30, 1984

State Department of Ecology regulations require, in most instances including this instance, that the opacity not exceed 20% for more than three (3) minutes in any one hour.

Certain conditions have been established for making opacity observations. These include humidity limits, relationship of the plume to the sun, position of the observer, etc. I suggest we develop jointly a more formal guideline than is now used for observing the opacity of the calciner plume. This guideline would include frequency of observation such as once every six (6) days using the high volume sampler schedule, with at least two (2) attempts being made to obtain a valid reading during the period noon to 3 P.M. on each of these days; establishment of a maximum humidity, selecting a number of physical locations from which observations will be made; making observations periodically with a certified NWAPA staff member, etc. I have instructed Terry Nyman, of my staff, to meet with your designated personnel to work out this formal written guideline.

I accept as a reasonable time schedule of compliance the other three actions you propose in your letter that will be carried out by the end of the third quarter 1985 in a further attempt to bring the calciner stack emission into compliance with the opacity standard. This compliance schedule needs to be in effect before the NWAPA Board considers your Notice of Construction and Application for Approval at their December 12, 1984 meeting and the Washington State Department of Ecology issues the Prevention of Significant Deterioration permit for your proposed third calciner unit.

Therefore, I am issuing the enclosed Order that necessary corrective action be taken within a reasonable time to correct the violation of the visual standard by the emission from the calciner stack.

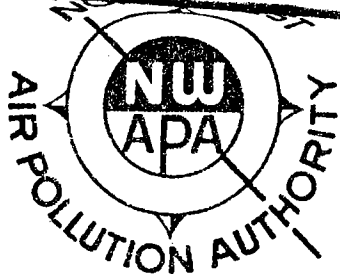
If you have any questions concerning these matters, please contact me.

Sincerely,

Glen F. Hallman,  
Air Pollution Control &  
Executive Officer

GFH:sh

Enclosure



207 Pioneer Building

Mount Vernon, Washington 98273

Area Code 206: Mount Vernon 336-5705 Bellingham 676-2223 Scan 738-2223

June 13, 1984

Glen F. Hallman  
AIR POLLUTION  
CONTROL AND  
EXECUTIVE OFFICER

Fielding Formway, Manager  
Cherry Point Refinery  
ARCO Petroleum Products Company  
P.O. Box 1127  
Ferndale, Washington 98248

Dear Mr. Formway:

REGULATORY ORDER

AUTHORIZING: Calciner "Bubble"  
Cherry Point Refinery  
ARCO Petroleum Products Company  
4519 - Grandview Road,  
Ferndale, Washington 98248

Pursuant to RCW 70.94.155 and WAC 173-403-060 "Bubble Rules", the Northwest Air Pollution Authority (NWAPA) Board of Directors hereby authorizes a bubble under the conditions specified herein, at the ARCO Petroleum Products Company, Cherry Point Refinery, Ferndale, Washington, to off-set particulate emissions associated with burning of fuel oil in four specified heaters and three steam boilers in order to raise the allowable particulate emissions from their coke calciner but not to exceed the aggregate limit for the specified emission sources.

FINDINGS OF FACT:

1. Reason and Need for Bubble

At the time the coke calciner installation was approved by the NWAPA Board of Directors on October 12, 1977, the emission control system was judged to be best available control technology (BACT). After startup, difficulties were experienced in consistently meeting the 20% opacity standard. An improvement program was undertaken by ARCO, the cost of which exceeded one million dollars, to bring the opacity into compliance with the standard. Although these improvements were effective in bringing the opacity into compliance, the particulate emissions were found to be exceeding the standard. To date, the refinery has not found an operating mode that consistently meets the particulate and opacity emission standards simultaneously at desirable coke production rates.

2. Particulate contaminants will be exchanged for particulate contaminants at the same Cherry Point Refinery facility.

3. The bubble will not interfere with the attainment and maintenance of air quality standards.
4. The authorization of this bubble will not result in the delay in compliance of any sources, nor a delay in any existing enforcement action.
5. The issuance of the bubble will not supersede any other applicable air pollution control laws and regulations.
6. The bubble will not increase the presently allowed particulate emissions of 60 tons per month from the plant as a whole from the specific units as delineated in Table 2 of the application.
7. The 20% opacity standard will remain in effect.
8. The emission limits of the bubble will be enforced through the issuance of an enforcement Order pursuant to Northwest Air Pollution Authority Regulation - Section 121 and RCW 70.94.211. The existing total allowable plant particulate emission limit of 60 tons per month is enforced as a condition of the approved coke calciner Notice of Construction (RCW 70.94.152):

SPECIFIC BUBBLE CONDITIONS:

1. Total allowable particulate emissions from the Cherry Point Refinery shall not exceed the previously established limit of sixty (60) tons per thirty-one (31) day month.
2. The allowable particulate emission from the calciner stack shall not exceed 46.3 tons per thirty-one (31) day month and a maximum calciner production rate of 60 tons per hour, while at the same time the particulate emissions from the fuel gas burning in the crude, vacuum, coker #1 and coker #2 heaters and one utility boiler shall not exceed 3.7 tons per thirty-one (31) day month provided a lower particulate emission rate from the calciner stack will permit a commensurate increase in the particulate emissions from the said heaters and boiler in accordance with an established relationship between the calciner stack particulate emission rate represented by the calciner production rate and the particulate emission rate represented by the stack emission particulate grain loading for the various levels of oil/gas firing of said heaters and boilers as graphically represented in the attached "Figure 1, Existing Calciner allowable emissions versus calciner coke rate at various levels of oil/gas firing, 50.5 T/M Bubble TSP Emissions."

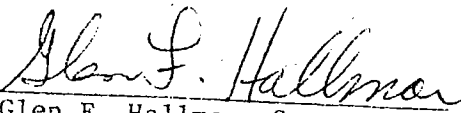
This operating curve may be changed when a new set of compliance conditions are demonstrated and approved by the NWAPA Control Officer; provided the total particulate emissions from these specified sources do not exceed the 50.5 tons per month limit. The need to change the amount of oil firing in said heaters within these prescribed limits will be based upon the dictates of economics and natural gas curtailment.

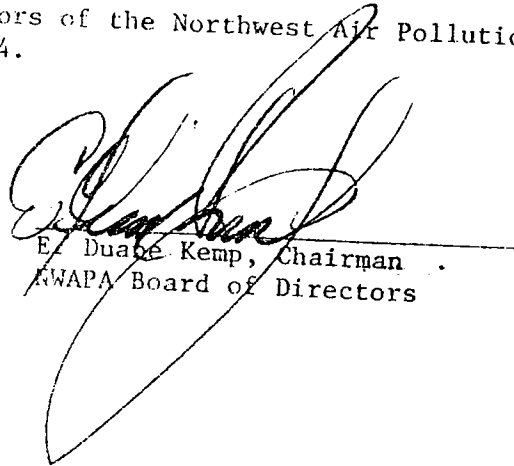
3. There will be no added air pollution control restrictions as a result of this bubble authorization.

4. This Order shall become final unless no later than thirty (30) days after the issuance, an appeal is made for a hearing to the Environmental Hearings Office, 4224 - 6th. Avenue. S. E., Building No. 2, Rowe 6, Lacey, Washington 98501.

APPROVED by the Board of Directors of the Northwest Air Pollution Authority this 13th. day of June, 1984.

ATTEST:

  
Glen F. Hallman, Secretary  
NWAPA Board of Directors

  
E. Duane Kemp, Chairman  
NWAPA Board of Directors

GFH:sh

CERTIFIED MAIL