northwest Clean Air agency

1600 South Second Street
Mount Vernon, WA 98273-5202
ph 360.428.1617
tel 800.622.4627
fax 360.428.1620
www.nwcleanair.org

Original Issuance: February 20, 1986

Revision a: October 14, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) 308a

Project Summary: Installation of new equipment and modification of existing equipment in the crude and vacuum units to improve energy utilization at the facility.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Environmental Superintendent
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

Crude and vacuum units

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #308 dated February 20, 1986.

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- 40 CFR Part 60 Subpart A – General Provisions
- 40 CFR Part 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or before November 7, 2006.

National Emission Standards for Hazardous Air Pollutants/ Maximum Achievable Control Technology Standards

- 40 CFR Part 63 Subpart A—General Provisions
- 40 CFR Part 63 Subpart CC— National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. The facility shall submit and maintain current, a NWCAA-approved sulfur curtailment plan. The plan shall delineate mitigating actions to be followed minimizing emissions of sulfur dioxide (SO_2) and maintaining compliance with NWCAA emission standards during curtailment periods.

2. When General Chemical curtails sulfur acceptance, the facility shall immediately implement the approved sulfur curtailment plan.

Theresa Allen, P.E.
Permitting Engineer

Mark Buford, P.E.
Engineering Manager

Revision a: Removed term 1, dropping the requirement to operate in accordance with the information submitted in the Notice of Construction. Revised terms 2 and 3 to update facility ownership and clarify the requirement. Removed term 4 because the requirement has expired.

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Original Issuance: January 8, 1992

Revision a: October 14, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) 358a

Project Summary: Install two new 175,000 barrel gasoline storage tanks.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Environmental Superintendent
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

Tanks 202 and 203

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #358 dated January 8, 1992.

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- 40 CFR Part 60 Subpart A – General Provisions
- 40 CFR Part 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984.

National Emission Standards for Hazardous Air Pollutants/ Maximum Achievable Control Technology Standards

- 40 CFR Part 63 Subpart A—General Provisions
- 40 CFR Part 63 Subpart CC— National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules. A Group 1 or Group 2 storage vessel that is part of an existing source and is also subject to the provisions of 40 CFR part 60, subpart Kb, is required to comply only with the requirements of 40 CFR part 60, subpart Kb [40 CFR 63.640(n)(8)].

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. The maximum true vapor pressure of liquids stored in either tank 202 or 203 shall not exceed 11.1 psia as determined using the local maximum monthly average temperature.
2. Notify the NWCAA in writing when the project is complete.

Theresa Allen, P.E.
Permitting Engineer

Mark Buford, P.E.
Engineering Manager

Revision a: Removed terms 1 and 2 because the federal regulation is directly applicable to the facility; retained the requirement for initial notification as required in the original permit.

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Original Issuance: April 26, 1993

Revision a: May 18, 1993
Revision b: July 12.1993
Revision c: October 4, 1993
Revision d: January 12, 1995
Revision e: December 19, 2007

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct #390e

Project Summary: This permit revision reflects current status of Boiler F-753 fuel use and monitoring requirements to demonstrate continuous compliance. The fuel oil burning allowance and corresponding compliance limits have been removed under the provisions of NWCAA Regulation §300.11; fuel oil burners and supply lines were never installed on F-753. Boiler F-753 is located in the utilities area of the facility and is rated at 220 MMBtu/hr. The boiler was originally permitted in 1993 as part of the initial clean fuels projects to burn propane, pipeline grade natural gas, and fuel oil.

The facility applied for, and was granted the ability, to use an alternative monitoring plan by US EPA Region 10 under §60.13(i) for sulfur in the gas in a May 14, 1996 letter. An alternative monitoring plan for NO_X monitoring by predictive monitoring (PEMS) was submitted and approved by US EPA Region 10 October 30, 1996. The facility used the alternative plan for NO_X monitoring by PEMS from 1996 until December 2006. From December 28, 2006 forward, continuous compliance with the NO_X limits has been demonstrated by a continuous emissions monitoring system (CEMS).

This permit supersedes the previous revisions of OAC 390 as listed above.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Sr. Environmental Engineer

NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road - Anacortes, Washington

Best Available Control Technology (BACT)

- BACT for SO_2 emissions from F-753 was determined upon initial permitting as the combustion of natural gas or propane.
- BACT for NO_X was determined upon initial permitting as burner and flue gas recirculation technology meeting 0.06 lb NO_X/MMBtu.

- BACT for CO, VOC, and PM-10 emissions was determined upon initial permitting as good combustion practices.

New Source Performance Standards (NSPS)

Boiler F-753 is an affected facility under:

- 40 CFR Part 60 Subpart J (40 CFR §60.104)
- 40 CFR Part 60 Subpart Db (40 CFR §60.40b)

National Emission Standards for Hazardous Air Pollutants (NESHAP)

- 40 CFR Part 63 Subpart DDDDD (40 CFR §63.7490) – vacated June 8, 2007

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

Visible Emissions

1. Visible emissions from the F-753 boiler stack shall not exceed five percent (5%) opacity for more than six minutes in any one-hour period as measured by 40 CFR Part 60, Appendix A, Method 9.

Nitrogen Oxides (NO_X)

2. NO_X emissions from the F-753 boiler stack shall not exceed 0.06 lb NO_X /MMBtu (30-day average).
3. Compliance demonstration with Condition 2 of this order may be required by stack testing according to 40 CFR Part 60, Appendix A Method 7A or 7E or an equivalent method as approved by the NWCAA.
4. A continuous emission monitor system (CEMS) or an equivalent method approved by the NWCAA shall be used to measure NO_X emissions from the F-753 stack in accordance with 40 CFR Part 60 Appendix B Performance Specification 2. The CEMS quality assurance procedures shall be in accordance with 40 CFR Part 60 Appendix F and NWCAA Regulation 367 and Appendix A

Sulfur Oxides (SO_2)

5. Fuel combusted in boiler F-753 shall be limited to purchased natural gas or propane.

Recordkeeping and Reporting

6. Continuous emission monitoring reports shall be submitted monthly to NWCAA within 30 days after the previous calendar month and shall include the following information:
    a. The reason and duration of any monitor down time and corrective action planned or taken
    b. Results of any stack emission tests
    c. Results of any quality assurance tests
    d. Periods of excessive drift

7. For each occurrence of monitored emissions in excess of the standard the report shall include the following:
    a. time of the occurrence
    b. magnitude of the emission excess (concentration and mass)
    c. duration of the excess
    d. probable cause
    e. corrective actions taken or planned
    f. agencies notified

Theresa (Toby) Allen	Lynn Billington, PE	Mark Asmundson
Permitting Engineer	Reviewing Engineer	Director

Revision History:

390a – May 18, 1993: Clarified testing requirements for operating using fuel oil
390b – July 12, 1993: Corrected references to multiple boilers
390c – October 4, 1993: Revised wording in condition 12
390d – January 12, 1995: Removed SO_2 limit and source test requirement for natural gas combustion
390e – December 19, 2007: Removed allowance to burn fuel oil, specified NO_X monitoring as CEMS, and updated federal regulatory applicability and document form.

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Original Issuance: March 6, 2006

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct #633a

Project Summary: This permit modification aligns the provisions of the equilibrium catalyst hopper V-353 with other more recent permit conditions applicable to similar sources. The original approval for construction of the equilibrium catalyst addition system was granted in 1998. BACT was determined at that time to be the installation of a baghouse. The conditions of this permit do not reflect any physical or operational change to the unit or the stringency of the requirements.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Sr. Environmental Engineer
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road - Anacortes, Washington

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. Particulate emissions from the equilibrium catalyst hopper (V-353) exhaust shall be controlled by a baghouse with maximum visible emissions not to exceed five-percent (5%) opacity for more than three minutes in any consecutive sixty-minute period as determined by Washington State Department of Ecology Method 9A.
2. A differential pressure gauge shall be installed on each baghouse. Acceptable differential pressure ranges shall be established by the manufacturer or through good engineering judgment and posted on or near the gauges.
3. Continuous compliance shall be demonstrated by qualitative visible emissions monitoring results during material addition.

a. Baghouse exhaust shall be observed for visible emissions during any catalyst transfer to V-353.

b. Excess emissions from the V-353 exhaust shall be reported to the NWCAA if any opacity is observed. Actions shall be taken to identify and correct the cause of excess emissions immediately.

c. A log of catalyst transfer time and date and visible emission observations shall be kept by the facility, and available to the NWCAA upon request.

4. A written operation and maintenance (O/M) manual shall be developed for the baghouse and kept up-to-date. The O/M manual shall be consistent with the manufacturer's recommendations and shall include internal inspection schedules, maintenance requirements and operating procedures. The O/M manual shall be kept on-site and readily available for inspection by the NWCAA.
5. The facility shall keep a (written or electronic) log of all maintenance and repair work performed on the baghouse. The log shall include, at minimum, any differential pressure gauge measurements, all external and internal inspections, any fabric filtration failures, repairs or replacements, the time and date that each activity was performed, and the name of the person performing the work.

Theresa (Toby) Allen	Lynn Billington, PE	James Randles
Permit Engineer	Reviewing Engineer	Director

northwest Clean Air agency

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Original Issuance: March 17, 1998

Revision a: May 7, 2001

Revision b: October 14, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) 649b

Project Summary: The project added new equipment and modified existing equipment for the manufacture of Asphalt Binder, the hydrocarbon component of commercial asphalt pavement. Asphalt binder is stored, blended with cutter stock, and loaded into trucks and railcars at a new truck rack and a new rail car rack. Equipment to be added includes two 20,000 barrel heated fixed roof tanks (Tank #248 for asphalt cutter and Tank #247 for asphalt/cutter blending), a new wharf transfer line, truck and rail car racks, five new oil/water sewer system connections, valves, flanges, and pumps.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Environmental Superintendent
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

Asphalt loading unit

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #649a dated May 7, 2001.

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- 40 CFR Part 60 Subpart A – General Provisions
- 40 CFR Part 60 Subpart UU – Standards of Performance for Asphalt Processing and Asphalt Roofing Manufacture
- 40 CFR Part 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or before November 7, 2006.
- 40 CFR Part 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

National Emission Standards for Hazardous Air Pollutants/ Maximum Achievable Control Technology Standards

- 40 CFR Part 63 Subpart A—General Provisions
- 40 CFR Part 63 Subpart CC— National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart. Wastewater streams subject to 40 CFR Part 60 Subpart QQQ only comply with Subpart CC in accordance with 40 CFR 63.640(o)(1).

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. The initial performance test required for Tanks #247 and #248 in 40 CFR Subpart A shall be performed using EPA Reference Method 9.
2. Opacity from the truck and rail car racks and from the barge loading of asphalt shall not exceed 20 percent, three-minute average, at any time.
3. Notify the NWCAA in writing when the project is complete.

Theresa Allen, P.E.
Permitting Engineer

Mark Buford, P.E.
Engineering Manager

Revision a: May 7, 2001: Added conditions 2, 3, and 11 and slightly changed condition 4 to incorporate April 23, 2001 project modification. Added the second paragraph to describe the modification and the invoice charge to the last paragraph.

Revision b: Removed the condition 1 requirement to operate in accordance with the information submitted in the Notice of Construction; conditions 2 through 4, relocated the Part 63 Subpart CC citations to the applicable federal regulation section; condition 5, removed to reflect the results of initial testing; condition 6, relocated the Part 60 Subpart UU citation to the applicable regulation section; retained conditions 7 and 8; relocated condition 9 to the applicable regulation section; retained conditions 10 and 11 as a single initial notification requirement.

northwest Clean Air agency

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Original Issuance: June 12, 2000

Revision A: September 24, 2002
Revision B: July 10, 2007

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct #725b

Project Summary: This order removes references to backup compressor 1-815, which has not been in operation and will be isolated from the process (mothballed) by removal of the suction and discharge vessels for the unit.

The original order was issued for the installation and operation of a new flare gas recovery compressor J-887. Revision 725a was issued during construction of a Residuum Oil Supercritical Extraction (ROSE) deasphalting unit. The application included a request that the refinery be allowed to operate compressors J-815 and J-887 simultaneously during ROSE unit compressor maintenance.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Sr. Environmental Engineer
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road - Anacortes, Washington

Best Available Control Technology (BACT)

Best Available Control Technology (BACT), including BACT for toxic air pollutants (TBACT), was determined to be inclusion of the compressor in the facility's enhanced leak detection and repair (LDAR) program.

New Source Performance Standards (NSPS)

- 40 CFR Part 60 Subpart GGG – Equipment Leaks of volatile organic compounds (VOC) in Petroleum Refineries applies to compressor J-887

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. Flare gas compressor J-887 shall comply with the new source equipment leak standards of 40 CFR Part 63 Subpart CC as provided in 563.648.

2. The J-887 flare gas compressor subject to Subpart CC shall comply with 40 CFR Part 63 Subpart A.

3. Emissions from the flare gas compressor components shall not cause an exceedance of acceptable source impact levels specified in WAC 73-460-50 and –60 as determined by methods specified in WAC 73-460-080. Tesoro shall demonstrate compliance with this term upon request by the NWAPA.

4. LDAR inspection results shall be in the facility's semi-annual reports submitted to the NWCAA.

Theresa Allen, EIT
Permitting Engineer

Lynn Billington, PE
Reviewing Engineer

Mark Asmundson
Director

Revision a: September 24, 2002 - Allowance made for both the J-887 and the backup flare gas compressors to operate during maintenance to the ROSE Unit compressor. Periods when the ROSE Unit compressor is taken offline is anticipated to be one day per year.

Revision b: July 10, 2007 – Removal of references to J-815 that is effectively demolished and removal of fulfilled initial requirement language.

northwest Clean Air agency

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Original Issuance: March 7, 2001

Revision a: March 3, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct #744a

Project Summary: This order delineates the requirements for the Residuum Oil Supercritical Extraction (ROSE) unit. This revision aligns the regulatory references for enhanced Leak Detection and Repair (LDAR) for clarity without relaxing requirements on the unit.

APPLICANT	Tesoro Refining and Marketing Company P.O. Box 700 Anacortes, Washington 98221 Contact: Craig Neuman Environmental Engineer NWCAA facility ID: 006-V-S
OWNER	Tesoro Refining and Marketing Company P.O. Box 700 Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road - Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #744 dated March 7, 2001

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- 40 CFR Part 60 Subpart A – General Provisions
- 40 CFR Part 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which construction, reconstruction, or modification commenced after January 4, 1983, and on or before November 7, 2006 which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006.
- 40 CFR Part 60 Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

As authorized by the Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. All on-plot equipment associated with the ROSE unit and subject to 40 CFR Part 60 Subpart GGG shall be in compliance with applicable 40 CFR Part 60 Subpart VV standards as written, *except* for the following replacements
   a. 40 CFR 60.482-2(b) - the leak definition for pumps in light liquid service shall be 2,000 ppm

b. 40 CFR 60.482-7(b) - the leak definition for valves in gas/vapor or light liquid service shall be 1,000 ppm

c. 40 CFR 60.485(b)(ii) – Use a calibration gas methane or n-hexane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

2. Emissions from the ROSE Unit shall not cause an exceedance of acceptable source impact levels specified in WAC 173-460-150 and –160 as determined by methods specified in WAC 173-460-080. Compliance with this condition shall be demonstrated upon request by the NWCAA.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director,
Engineering

Lynn Billington, P.E.
Director, Engineering

Revision a: Revised condition 1 regulatory reference in Leak Detection and Repair (LDAR) to enhance clarity without relaxing requirements and removal of completed and obsolete terms in conditions 2, 5, 6, 7, 8, 9, and 10 of the original permit.

NORTHWEST
AIR POLLUTION AUTHORITY

1600 South Second Street
Mount Vernon, WA 98273-5202
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Serving Island, Skagit and Whatcom Counties

May 15, 2001

John T. Giboney
Tesoro Northwest Company
P.O. Box 700
Anacortes, WA 98221

ORDER OF APPROVAL TO CONSTRUCT No. 768

Dear Mr. Giboney:

On April 6, 2001 you submitted a "Notice of Construction and Application for Approval" to the Northwest Air Pollution Authority (NWAPA) for approval to install one diesel fuel-fired emergency generator (rated 465 hp) at the Tesoro Northwest Company's Anacortes refinery. The generator, with engine model Cummins NTA855-G2, will be identified as GEN763.

The information submitted was reviewed to determine that all known, available, and reasonable air pollution control measures are employed. Best Available Control Technology for the generator is internal engine controls and the use of low sulfur diesel fuel. The project was reviewed and evaluated subject to NWAPA Regulation Section 300 and 302, WAC 173-400-110, and WAC 173-460. A Determination of Nonsignificance was issued by the NWAPA on April 26, 2001.

You are hereby granted approval to install the emergency generator in the NWAPA jurisdiction subject to the following conditions:

1. The emergency generator shall operate without producing visible emissions of greater than five percent opacity for more than six minutes as measured by Environmental Protection Agency 40 CFR Part 60 Method 9.

2. The standby emergency generator shall not operate greater than two hundred (200) hours per year, including testing time. Annual records of the number of operating hours shall be recorded and made available to the NWAPA upon request. These records shall be retained for five years.

3. The diesel fuel used by the generator shall contain 0.05 % by weight sulfur, or less. A fuel specification sheet from the fuel supplier shall be made available to NWAPA personnel upon request.

Final approval to operate will be conditioned upon the facility meeting the requirements described above and conditions set forth in the application and the applicable air pollution control regulations when in actual operation.

The emergency generator will be included in the next annual site inspection. A "Certificate of Approval to Operate" will be issued after we determine that the process was installed in accordance with the plans and specifications submitted with the application and can operate in compliance with the regulations of this Authority and the conditions of approval.

Please call Anne Naismith if you have any questions about the approval of this project. New Source Review and Application fees of $650 were paid on April 6, 2001.

Sincerely,

James Randles

James Randles
Director

Reviewed by: Anne Naismith, P.E. A-N

f:\users\common\misc\noc768

northwest Clean Air agency

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Original Issuance: May 22, 2003

Revision a: February 16, 2005

Revision b: June 2, 2009

Northwest Clean Air Agency (NWCAA) **hereby issues**
Order of Approval to Construct (OAC) #827b

Project Summary: This order addresses modifications to the cat gas splitter (CGS), Heater F-104, catalytic reformer (CR), naphtha hydrotreater (NHT), and amine treatment system. Revision b allows a change to the regulatory reference governing the enhanced leak detection and repair (LDAR) program to improve clarity without relaxing requirements on the low sulfur gasoline (LSG) project.

APPLICANT	Tesoro Refining and Marketing Company P.O. Box 700 Anacortes, Washington 98221 Contact: Rebecca Spurling Superintendent, Environmental NWCAA facility ID: 006-V-S
OWNER	Tesoro Refining and Marketing Company P.O. Box 700 Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #827a dated February 16, 2005

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- Subpart A – General Provisions
- Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which construction, reconstruction, or modification commenced after January 4, 1983, and on or before November 7, 2006 which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006.

National Emission Standards for Hazardous Air Pollutants / Maximum Achievable Control Technology Standards

- Subpart A – General Provisions
- Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which

construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. The F-104 reboiler, the F6600 and F6601 heaters, and the F6650, F6651, F6652, F6653, and F6654 heaters shall combust only pipeline grade natural gas and/or refinery fuel gas.
2. All on-plot equipment associated with the cat gasoline splitter (CGS), naphtha hydrotreater (NHT) and catalytic reformer (CR) units and subject to 40 CFR Part 60 Subpart GGG and/or 40 CFR Part 63 Subpart CC [40 CFR §63.648(c)] shall be in compliance with applicable 40 CFR Part 60 Subpart VV standards as written, except for the following replacements
   a. 40 CFR 60.482-2(b) - the leak definition for pumps in light liquid service shall be 2,000 ppm
   b. 40 CFR 60.482-7(b) - the leak definition for valves in gas/vapor or light liquid service shall be 1,000 ppm
   c. 40 CFR 60.485(b)(ii) – Use a calibration gas methane or n-hexane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.
3. Emissions of nitrogen oxides (NO_X) from the F-104 reboiler shall not exceed 0.035 lb NO_x per million BTU (higher heating value).
   a. The facility shall demonstrate compliance with the F-104 NO_X limit at least once every 5 years.
   b. F-104 performance testing shall be conducted in accordance with NWCAA Section 367 and NWCAA Appendix A, using 40 CFR Part 60 Appendix A Method 7E, or methods otherwise pre-approved by the NWCAA.
4. On a rolling 12-month average basis, total sulfur oxides from heater F-104 shall not exceed 186 tons per year. Sulfur oxides shall be determined based on calculations derived from the measured hydrogen sulfide (H_2S) concentration in unit fuel.
5. A continuous emission monitor system (CEMS) for H_2S concentration shall be installed, calibrated, maintained, and operated in the refinery fuel gas stream vented from the C-501 amine contactor. The monitor shall be maintained and certified in accordance with Performance Specification 7 (40 CFR 60 Appendix B) and operated in accordance with 40 CFR 60 Appendix F and NWCAA Regulation 367 and Appendix A. A flow monitor shall be installed to measure the flow rate of the vent gas stream entering the low sulfur gasoline amine contactor. After a period of time, if the results of the continuous emissions monitoring system establish that the low sulfur

gasoline amine contactor consistently operates well below the standards in condition 6 with minimal variability, the permittee may propose an alternative means for continuous assessment of H_2S emissions. The alternative method shall be submitted to the NWCAA for review and approval before implementation.

6. The concentration of H_2S in the refinery fuel gas stream exiting C-501 amine contactor shall not exceed 162 ppmdv on a rolling 24-hour average basis (as measured by CEMS or by Draeger tube sampling and analysis every 4 hours). Alternate demonstration of compliance with this limit shall be that refinery fuel gas H_2S from the main fuel gas drum V-213 shall not exceed 400 ppmdv on a rolling 24-hour average basis. When NHT high-pressure separator (HPS) vent gas is fully or partially diverted away from C-501, (to C-1110 or C-524), then the refinery fuel gas H_2S from V-213 shall not exceed 400 ppmdv on a rolling 24-hour average basis (demonstrated by CEMS) or the refinery fuel gas stream exiting the contactor(s) in use shall not exceed 162 ppmdv on a rolling 24-hour average basis (as measured by CEMS or by Draeger tube sampling and analysis every 4 hours).
7. The NHT HPS vent (that bypasses C-501) will be maintained in the closed position at all times except during periods of startup or shutdown of any of the amine contactors (C-501, C-1110, C-524), startup or shutdown of the CR/NHT, startup or shutdown of the cat feed hydrotreater/distillate hydrotreater (CFH/DHT) unit, or during unit upsets. Emissions as a result of the vent gas stream shall be minimized during these periods. The periods during which the NHT HPS vent gas stream is diverted shall be recorded at the facility and made available to the NWCAA upon request.
8. Report to the NWCAA by the end of the month immediately following the end of the period indicated.
    a. Report quarterly: The C-501 amine contactor maximum 24-hour concentration of H_2S and the corresponding refinery fuel gas (V-213) maximum 24-hour concentration of H_2S. If NHT HPS vent gas is being partially or fully diverted to C-1110 of C-524, then for those corresponding time periods, also report the refinery fuel gas (V-213) maximum 24-hour concentration of H_2S or the amine contactor outlet maximum 24-hour concentration of H_2S.
    b. Report monthly: Any period during which any standard in this permit is exceeded including the duration of the event, quantified excess emissions, cause of the event, and any corrective actions taken.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director,
Engineering

Lynn Billington, P.E.
Director, Engineering

Revision a: Updated format and agency name, clarified LDAR delineation and measurement locations for the C-501 amine contactor, added due date for CEM certification, reporting requirements separated into monthly and quarterly reports.

Revision b: Revision of condition 2 to update the regulatory references for the leak detection and repair requirements, condition 7 to reflect that the initial source has been completed, condition 9 to reflect more stringent requirements, conditions 10 and 11 to provide an alternative monitoring scenario for compliance demonstration, and condition 12 to update CEMS requirements. Removal of completed actions in conditions 3, 4, 5, 8, 14, 15, & 16.

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Original Issuance: December 22, 2004

Revision a: March 3, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) #896a

Project Summary: This order addresses phase 2 of Tesoro's Low Sulfur Gasoline Project. The project included modification of the facility's cat gasoline splitter (CGS) and clean fuels hydrotreater (CFH, formerly called the cat feed hydrotreater). The CFH is part of the CFH/DHT (distillate hydrotreater) unit. Revision a aligns the regulatory references for enhanced Leak Detection and Repair (LDAR) for clarity without relaxing requirements on the unit. This order supersedes OAC 896.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

Contact: Craig Neuman
Environmental Engineer

NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

Low Sulfur Gasoline (LSG) Project Phase 2 (LSG2) at the CGS and CFH

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #896 dated December 22, 2004

Note that in addition to other applicable rules and regulations, the CGS/CFH project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- Subpart A – General Provisions
- Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which construction, reconstruction, or modification commenced after January 4, 1983, and on or before November 7, 2006 which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006.

National Emission Standards for Hazardous Air Pollutants (NESHAPs)

- Subpart A – General Provisions
- Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. All on-plot equipment associated with the cat gasoline splitter (CGS) and clean fuels hydrotreater/distillate hydrotreater (CFH/DHT) units and subject to 40 CFR Part 60 Subpart GGG and/or 40 CFR Part 63 Subpart CC [40 CFR §63.648(c)] shall be in compliance with applicable 40 CFR Part 60 Subpart VV standards as written, *except* for the following replacements
    a. 40 CFR 60.482-2(b) - the leak definition for pumps in light liquid service shall be 2,000 ppm
    b. 40 CFR 60.482-7(b) - the leak definition for valves in gas/vapor or light liquid service shall be 1,000 ppm
    c. 40 CFR 60.485(b)(ii) – Use a calibration gas methane or n-hexane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.
2. The calculation of percentages of pumps and valves leaking for the CGS, and CFH/DHT units shall be on a unit-by-unit basis, with the CFH/DHT defined as one process unit.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director,
Engineering

Lynn Billington, P.E.
Director, Engineering

Revision a: change to conditions 1, 4, 5, and 6 of the original permit, regulatory references in Leak Detection and Repair (LDAR) to enhance clarity without relaxing requirements and removal of completed and obsolete terms in conditions 2, 3, 7, 8, 9, and 10 of the original permit.

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Original Issuance: February 1, 2005

Revision a: March 3, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) #901a

Project Summary: This permit addresses alterations to the distillate hydrotreater (DHT) to meet the most recent diesel sulfur specifications mandated by the U.S. EPA. The DHT is part of the CFH/DHT (clean fuels hydrotreater/distillate hydrotreater) unit. Revision a aligns the regulatory references for enhanced Leak Detection and Repair (LDAR) for clarity without relaxing requirements on the unit. This order supersedes OAC 901.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Sr. Environmental Engineer
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #901 dated February 1, 2005

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- 40 CFR Part 60 Subpart A – General Provisions
- 40 CFR Part 60 Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which construction, reconstruction, or modification commenced after January 4, 1983, and on or before November 7, 2006.

National Emission Standards for Hazardous Air Pollutants / Maximum Achievable Control Technology Standards

- 40 CFR Part 63 Subpart A – General Provisions
- 40 CFR Part 63 Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for

cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. All on-plot equipment associated with the distillate hydrotreater (DHT) unit and subject to 40 CFR Part 60 Subpart GGG and/or 40 CFR Part 63 Subpart CC [40 CFR §63.648(c)] shall be in compliance with applicable 40 CFR Part 60 Subpart VV standards as written, *except* for the following replacements
    a. 40 CFR 60.482-2(b) - the leak definition for pumps in light liquid service shall be 2,000 ppm
    b. 40 CFR 60.482-7(b) - the leak definition for valves in gas/vapor or light liquid service shall be 1,000 ppm
    c. 40 CFR 60.485(b)(ii) – Use a calibration gas methane or n-hexane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.
2. Compressor J-600M shall meet the requirements of 40 CFR § 60.482-3a.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director,
Engineering

Lynn Billington, P.E.
Director, Engineering

Revision a: change to a regulatory reference in Leak Detection and Repair (LDAR) to enhance clarity without relaxing requirements in condition 1 and removal of completed terms in conditions 3, 4, and 5 of the original permit.

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Original Issuance: November 15, 2005

946a: April 6, 2006

Northwest Clean Air Agency (NWCAA) hereby issues Order of Approval to Construct (OAC) #946a

Project Summary: The fluidized catalytic cracking unit (CCU) operating configuration with a flue gas scrubber (FGS) is herein modified by OAC 946a. OAC 946a aligns the conditions of the catalyst additive hopper V-356 with permit conditions applicable to the other catalyst hoppers at the facility. The original approval for construction of the catalyst additive system was granted in OAC 753, issued in 2001. BACT was determined at that time to be the installation of a baghouse. This monitoring change does not change the stringency of any condition.

OAC 946 supersedes OAC 753d and OAC 873. Applicable conditions from both permits are consolidated herein and updated to reflect the current CCU operating configuration with a FGS. The OAC 753 series authorized projects at the CCU and applied best available control technology (BACT) for minor new sources, while providing limits to avoid review under federal requirements for criteria pollutants: 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart J and 40 CFR Part 52 – prevention of significant deterioration (PSD). OAC 873 permitted the installation of the FGS as the facility-elected control option for achieving compliance with 40 CFR Part 63 Subpart UUU and established appropriate limits and monitoring for SO_2 emissions.

The FGS treats the combined exhaust of carbon monoxide boilers (COBs) 1 and 2, reducing particulate matter (PM) and sulfur dioxide (SO_2) emissions. The CCU system will retain a diversion stack (formerly COB 1 stack). Provisions of this permit directly governing FGS operation in conjunction with 40 CFR Part 63 Subpart UUU and presume an initial 180-day shakedown period for the equipment.

OAC 753d conditions specifically for avoidance of NSPS applicability and PSD review are retained, replaced, or removed herein as follows:

Condition 2 OAC 753d 828 tons/yr, 273.6 lb/hr, and 0.2 gr/dscf (corrected to 7% O2) PM (as PM10) as measured by 40 CFR Part 60 Appendix A Method 5 and Part 51 Appendix M 202	Replaced by OAC 946 Condition 3 0.11 gr/dscf (corrected to 7% O_2) as measured by 40 CFR Part 60 Appendix A Method 5 and Part 51 Appendix M 202; representing 820 tons/yr PTE
Condition 3 OAC 753d Bed air blower limited to 3520 rpm – NSPS avoidance	Removed
Condition 8 OAC 753d 1770 tons NO_X (as NO_2)/12-month rolling period	Retained as OAC 946 Condition 11
Condition 9 OAC 753d 1274 lb/hr SO_2 at the regenerator vent and 4371 tons/12-month rolling period SO_2	Replaced by OAC 946 Condition 5 25 ppm (365-day average) and 50 ppm (7-day average) SO_2 dry, 0% O_2 representing 210 tons/year PTE

Initial testing requirements originally assigned in OAC 753 were reviewed and found completed. Ongoing testing requirements are aligned to the CCU configuration with a flue gas scrubber.

Conditions from OACs 753d and 873 that are equivalent to or less stringent than 40 CFR Part 63 Subpart UUU or are no longer applicable have been removed. Reporting requirements have also been aligned to 40 CFR Part 63 Subpart UUU. 40 CFR Part 63 Subpart UUU requirements and specified options are summarized in the attachment to this OAC.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Senior Environmental Engineer

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

West March Point Road, Anacortes, Washington
NWCAA facility ID: 006-V-S

Best Available Control Technology (BACT) determined in the course of the OAC 753 project:

- Catalyst hopper vent: PM - fabric filter with an efficiency of 99.0%
- FCC regenerator: CO – good combustion practices, NO_X – good combustion practices, PM and visible emissions – good combustion practices, adherence to approved operation and maintenance plans, toxic air pollutants – inclusion of components into LDAR program and maintaining good combustion practices in the CO boilers.

In addition to other applicable rules and regulations, the FCC unit is subject to applicable portions of the following federal regulations:

National Emission Standards for Hazardous Air Pollutants / Maximum Achievable Control Technology Standards

- 40 CFR Part 63 Subpart A – General Provisions
- 40 CFR Part 63 Subpart UUU – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries: Catalytic Cracking Units, Catalytic Reforming Units, and Sulfur Recovery Units.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

Catalyst Additive Hopper V-356

1. Emissions from the catalyst additive hopper (V-356) exhaust shall not exceed 0.02 grains particulate matter/dscf and 5% visible emission (for more than 3 minutes in any consecutive sixty-minute period as measured by Washington State Department of

Ecology Method 9A). Hopper exhaust shall be controlled by a baghouse. Compliance with the grain loading requirement shall be demonstrated by visible emissions monitoring results during material addition.

a. A differential pressure gauge shall be installed on the baghouse. The acceptable differential pressure range shall be established by the manufacturer or through good engineering judgment and posted on or near the gauge.

b. Continuous compliance with this emission limit shall be demonstrated by qualitative visible emissions monitoring results during material addition.

    i. Baghouse exhaust shall be observed for visible emissions during any catalyst transfer to V-356.

    ii. Excess emissions from the V-356 exhaust shall be reported to the NWCAA if any opacity is observed. Actions shall be taken to identify and correct the cause of excess emissions immediately.

    iii. A log of catalyst transfer time and date and visible emission observations shall be kept by the facility, and available to the NWCAA upon request.

c. A written operation and maintenance (O/M) manual shall be developed for the baghouse and kept up-to-date. The O/M manual shall be consistent with the manufacturer's recommendations and shall include internal inspection schedules, maintenance requirements and operating procedures. The O/M manual shall be kept on-site and readily available for inspection by the NWCAA.

d. The facility shall keep a (written or electronic) log of all maintenance and repair work performed on the baghouse. The log shall include, at minimum, any differential pressure gauge measurements, all external and internal inspections, any fabric filtration failures, repairs or replacements, the time and date that each activity was performed, and the name of the person performing the work.

Flue Gas Scrubber (FGS)

2. The facility shall perform visible emissions monitoring of the FGS exhaust by Washington Department of Ecology Method 9A once per calendar month with not less than 15 days between observations. Records documenting the monitoring shall be kept at the facility for at least 5 years and made available to the NWCAA upon inspection. In the event that visible emissions are observed (VE greater than 0%) during the monthly readings, the NWCAA shall be notified within 7 days.

   Upon demonstration of no visible emissions for 12 consecutive months from the FGS stack Tesoro may file a written request to discontinue the visual monitoring required by this permit condition.

3. Particulate matter (PM) emissions (as PM10) from the FGS stack shall not exceed 0.11 grains/dscf, corrected to 7% oxygen.

   a. The facility shall demonstrate initial compliance with the PM limit by a source test conducted within 180 days of FGS startup according to 40 CFR Part 60 Appendix A Methods 5, 40 CFR Part 51 Appendix M Method 202 (considering all PM as PM10), and NWCAA Regulation §367.

   b. Demonstration of continued compliance with this PM limit shall be ongoing compliance with the CCU 1.0 lb/1000 lb coke burn standard according to appropriate continuous parameter monitoring system limits and work practice standards in 40 CFR Part 63 Subpart UUU.

4. Sulfuric acid mist emissions from the FGS stack shall be measured within 180 days of startup, and annually thereafter, by source testing according to 40 CFR Part 60 Appendix

A Method 8 and NWCAA Regulation §367. Tesoro may file a written request to discontinue the annual portion of sulfuric acid mist source testing.

5. Sulfur dioxide (SO_2) emissions from the FGS shall not exceed 25 ppmv (dry basis, 0% O_2, 365-day rolling average) or 50 ppmv (5.0×10^1, dry basis, 0% O_2, 7-day rolling average) as demonstrated by a continuous emissions monitor.

6. A continuous emission monitoring system (CEMS) shall be installed, calibrated, maintained, and operated to measure oxygen and SO_2 concentrations from the FGS stack. The monitor shall meet the appropriate specifications of 40 CFR Part 60 Appendices B and F and the NWCAA Regulation §367 and Appendix A.

   a. Sulfur dioxide emissions data from the CEM shall be maintained as hourly averages for at least 60 days, and 7-day rolling, and 365-day rolling averages for at least 5 years, and made available to the NWCAA upon request.

   b. Reporting of SO_2 emissions shall be semiannual and due within 30 days of the end of the January through June and July through December periods. The reporting shall include daily average SO2 concentration (midnight-to-midnight basis), 7-day rolling average, and 365-day rolling average. This report may be submitted electronically.

   c. Quality control testing results (CGA and RATA) shall be provided to the NWCAA within 45 days of test completion.

7. The SO_2 mass emission rate in pounds per hour (lb/hr) under normal operating conditions shall be demonstrated within 180 days of startup by methods approved by the NWCAA. The demonstration plan shall be submitted to the NWCAA for approval at least 30 days prior to the demonstration date.

   a. Mass emissions of SO_2 shall be determined monthly and reported semiannually.

8. Sulfur dioxide emissions during bypass of the FGS shall not exceed 1000 ppmv (dry basis, 7% O2) averaged for a sixty (60) consecutive minute period as demonstrated by a mass balance calculation or continuous emissions monitor. Mass balance calculations must assume all incoming sulfur is oxidized to sulfur dioxide and released to the stack unless demonstrated otherwise by process data and/or analytical methods at representative operating conditions. Records used to determine compliance with this provision shall be kept for 5 years and made available to the NWCAA upon inspection.

9. Sulfur dioxide emissions during bypass of the FGS shall be minimized to the extent reasonably practicable by CCU feed rate reduction, CCU feed sulfur content consideration, catalyst utilization, and/or other actions. Procedures regarding minimization of SO_2 emissions during bypass shall be incorporated into CCU operations and maintenance procedures. Compliance with this provision shall be demonstrated by records of bypass event beginning and end times and specific actions taken during each bypass event, and may take the form of a checklist. The records shall be kept for 5 years and made available to the NWCAA upon inspection.

10. A CEMS shall be installed, calibrated, maintained, and operated to measure carbon monoxide (CO) from the FGS stack within 180 days of FGS startup. The monitor shall meet the performance specifications of 40 CFR Part 60 Appendix B and Appendix F and NWCAA REGULATION §367 Appendix A.

    a. The CO CEMS need not be installed if the facility demonstrates that the hourly average CO emissions are less than 50 ppm (dry basis) and files a written request for exemption to the NWCAA. The demonstration shall consist of continuously monitoring CO emissions for 30 days using an instrument that meets the requirements of 40 CFR Part 60 Appendix B Performance Specification 4 and equivalent methods to 40 CFR Part 60 Appendix A Method 10. The span value shall

be 100 ppm CO instead of 1,000 ppm, and the relative accuracy limit shall be 10 percent of the average CO emissions or 5 ppm CO, whichever is greater.

b. If the CO CEMS is not installed on the FGS stack, annually, the facility shall conduct a source test at the FGS stack to measure CO concentration and mass emissions according to 40 CFR Part 60 Appendix A Methods 1-4 and 10. Process data collected and listed in the test report shall include; regenerator coke burn rate, quantity of auxiliary fuel burned in the CO boilers, fresh and recycle feed rates, oxygen addition rate and purity, and bed air blower rotor rotation rate.

11. Nitrogen oxide (as NO_2) emissions from the combined CO boiler stacks shall not exceed 1770 tons per any twelve rolling month period.

a. Annually, the facility shall conduct a source test at the FGS stack to measure NO_X (as NO_2) according to 40 CFR Part 60 Appendix A Method 7E. The source test shall include measurements with the sour water stripper (SWS) vent gas valve opened to both boilers and to each boiler individually. Process data collected and listed in the test report shall include: regenerator coke burn rate, the position of the sour water stripper tops butterfly valve (indicating stream flow to each boiler), quantity of auxiliary fuel burned in the CO boilers, fresh and recycle feed rates, oxygen addition rate and purity, and bed air blower rotor rotation rate. In the event that NO_X (as NO_2) emissions are shown to be above 90% of the emission limit either, the permittee shall submit a plan to the NWCAA within 45 days to either (1) install a NOx CEMS for the CO boilers, or (2) propose a method to permanently reduce NOx emissions from the CCU/CO Boiler system. If the second option is chosen, the plan must include testing to determine compliance with the limit.

b. The facility shall determine and report monthly NO_X (as NO_2) emissions with an update of the rolling 12-month NO_X total. The monthly report shall include information on SWS vent position.

Theresa (Toby) Allen, EIT	Lynn Billington, PE	James Randles
Permitting Engineer	Reviewing Engineer	Director

Modification a: Aligns the provisions of the catalyst additive hopper V-356 with permit conditions applicable to the other catalyst hoppers at the CCU streamlining the monitoring of the system.

Issued: December 19, 2005

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Northwest Clean Air Agency (NWCAA) hereby issues Order of Approval to Construct (OAC) #947

Project Summary: The facility is proposing to equip two existing catalyst hoppers (V-307 and V-308) in the catalytic cracking unit (CCU) with new control equipment. These hoppers were originally installed at the facility in 1955 and upgraded in 1983 and 1984 by addition of cyclone separators and an equalizing line to meet NWCAA particulate emissions regulations.

Hopper V-307 is used for receipt and storage of fresh CCU catalyst offloaded from rail cars by pneumatic transfer. Hopper V-308 receives spent catalyst from the CCU regenerator, also by pneumatic transfer.

The hopper cyclones will be replaced by passive baghouses, controlling emissions of particulate matter during transfer operations. The baghouses are each equipped with differential pressure gauges. The gauges are to be available for diagnostic purposes in the event of observed excess emissions.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: John Giboney
Environmental Engineer

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

West March Point Road, Anacortes, Washington
NWCAA facility ID: 006-V-S

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

Catalyst Additive Hoppers V-307 and V-308

1. Particulate emissions from the catalyst hoppers (V-307 and V-308) exhaust shall be controlled by baghouses with maximum visible emissions not to exceed five-percent (5%) opacity for more than three minutes in any consecutive sixty-minute period as determined by Washington State Department of Ecology Method 9A.

2. A differential pressure gauge shall be installed on each baghouse. Acceptable differential pressure ranges shall be established by the manufacturer or through good engineering judgment and posted on or near the gauges.
3. Continuous compliance shall be demonstrated by qualitative visible emissions monitoring results during material addition.
    a. Baghouse exhaust shall be observed for visible emissions during any catalyst transfer to V-307 or V-308.
    b. Excess emissions from the V-307 and V-308 exhaust shall be reported to the NWCAA if any opacity is observed. Actions shall be taken to identify and correct the cause of excess emissions immediately.
    c. A log of catalyst transfer time and date and visible emission observations shall be kept by the facility, and available to the NWCAA upon request.
4. A written operation and maintenance (O/M) manual shall be developed for the baghouses and kept up-to-date. The O/M manual shall be consistent with the manufacturer's recommendations and shall include internal inspection schedules, maintenance requirements and operating procedures. The O/M manual shall be kept on-site and readily available for inspection by the NWCAA.
5. The facility shall keep a (written or electronic) log of all maintenance and repair work performed on the baghouses. The log shall include, at minimum, any differential pressure gauge measurements, all external and internal inspections, any fabric filtration failures, repairs or replacements, the time and date that each activity was performed, and the name of the person performing the work.

Theresa (Toby) Allen, EIT	Lynn Billington, PE	James Randles
Permitting Engineer	Reviewing Engineer	Director

northwest Clean Air agency

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Original Issuance: December 22, 2004

Revision a: May 15, 2007

Revision b: March 3, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct #952b

Project Summary: This order addresses the installation of a new 10-inch process line from the modified amine treatment unit (ATU) to expand the sulfur handling capacity of the facility in place of the originally proposed new sulfur recovery unit (SRU). Revision b aligns the regulatory references for enhanced Leak Detection and Repair (LDAR) for clarity without relaxing requirements on the unit. This order supersedes OAC 952a.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

Contact: Craig Neuman
Environmental Engineer

NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

Modified Amine Treatment Unit

10200 West March Point Road - Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #952a dated May 15, 2007

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- Subpart A – General Provisions
- Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which construction, reconstruction, or modification commenced after January 4, 1983, and on or before November 7, 2006 which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006.
- Subpart QQQ – Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems

National Emission Standards for Hazardous Air Pollutants / Maximum Achievable Control Technology Standards

- Subpart A – General Provisions
- Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks

of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

Amine Treatment Unit

1. Fuel gas from blend drum V-213 shall not contain greater than 0.10% by volume H2S, 365-day rolling average, measured according to condition 2 of this order.
2. A continuous emissions monitoring system (CEMS) for hydrogen sulfide concentration shall be installed, calibrated, maintained, and operated measuring the outlet stream of the fuel gas blend drum subsequent to all unmonitored incoming sources of sulfur compounds to the system and prior to any fuel gas combustion device. The monitor shall be certified in accordance with 40 CFR Part 60 Appendix B and operated in accordance with 40 CFR Part 60 Appendix F and the NWCAA Regulation §367 and Appendix A.
3. Bypass of acid gas from the amine regenerator C-1120 system away from the normal processing flow to General Chemical shall be recorded and reported the NWCAA (i.e., any period that PC5265A is opened). A root-cause analysis shall be conducted and recorded for any bypass event.

Fugitive Emissions – Leak Detection and Repair

4. All on-plot equipment associated with the amine 2 unit and subject to 40 CFR Part 60 Subpart GGG shall be in compliance with applicable 40 CFR Part 60 Subpart VV standards as written, *except* for the following replacements
    a. 40 CFR 60.482-2(b) - the leak definition for pumps in light liquid service shall be 2,000 ppm
    b. 40 CFR 60.482-7(b) - the leak definition for valves in gas/vapor or light liquid service shall be 500 ppm
    c. 40 CFR 60.485(b)(ii) – Use a calibration gas methane or n-hexane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.

Recordkeeping and Reporting

5. Quarterly, the owner or operator of the facility shall report to the NWCAA by the end of the month following the reporting period:

a. Monthly total and 12-month rolling total heat input and steam production for F-751, F-752, and F-753 (Utility boilers)

b. Monthly total and 12-month rolling total NOX emissions from F-751, F-752, and F-753 (Utility boilers)

c. Fuel oil use (daily total and 30-day rolling average) for each unit combusting fuel oil

6. Monthly, within 30 days of the end of each calendar month, the owner or operator of the facility shall submit a CEMS summary report. In addition to the information required by NWCAA Regulation 367 Appendix A, the report shall include monthly H_2S average concentrations and the 365-day rolling average H_2S average concentrations. The report may be submitted electronically.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director, Engineering

Lynn Billington, P.E.
Director, Engineering

Revision a: Removal of the sulfur recovery unit terms; Inclusion of emission factor testing to establish actual emissions from boilers F-751 and F-752; Decrease in the averaging time for the fuel gas H2S concentration limit from 12-month rolling average to a 30-day rolling average; Addition of recordkeeping and reporting provisions to track project emissions.

Revision b: Removed completed actions in conditions 1, 6, 7, and 8 of revision a. Revised condition 5 to update the regulatory references for the leak detection and repair requirements.

northwest Clean Air agency

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Original Issuance: June 7, 2007

Revision a: March 3, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) #989a

Project Summary: This order approved installation of the selective hydrogenation unit (SHU). The SHU is located in the Zone A Operating Area, processing up to 32,000 bpd of catalytic cracking unit (CCU) debutanizer bottoms (gasoline) removing gum-forming compounds and mercaptans, in route to the existing Cat Gasoline Splitter (CGS). Revision a aligns the regulatory references for enhanced Leak Detection and Repair (LDAR) for clarity without relaxing requirements on the unit. This order supersedes OAC 989.

APPLICANT	Tesoro Refining and Marketing Company P.O. Box 700 Anacortes, Washington 98221 Contact: Craig Neuman Environmental Engineer NWCAA facility ID: 006-V-S
OWNER	Tesoro Refining and Marketing Company P.O. Box 700 Anacortes, Washington 98221

FACILITY LOCATION:

Selective Hydrogenation Unit (SHU)

10200 West March Point Road, Anacortes, Washington

Permit History

- As of the date of issuance, this Order supersedes NWCAA Order of Approval to Construct #989 dated June 7, 2007

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- Subpart A – General Provisions
- Subpart GGG – Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for which Construction, Reconstruction, or Modification Commenced after January 4, 1983, and on or before November 7, 2006.
- Subpart QQQ – Standards of Performance for VOC Emissions from Petroleum Refinery Wastewater Systems

National Emission Standards for Hazardous Air Pollutants / Maximum Achievable Control Technology Standards

- Subpart CC – National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries which references Subpart VV – Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry for which construction, reconstruction, or modification commenced after January 5, 1981, and on or before November 7, 2006. This Subpart provides regulatory instructions for cases where requirements of this Subpart overlap those of other applicable rules, such as 40 CFR Part 60 Subpart GGG. All project components are assumed to be in organic HAP service according to the application materials and thus subject to the provisions of this subpart.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. All on-plot equipment associated with the selective hydrogenation unit (SHU) and subject to 40 CFR Part 60 Subpart GGG and/or 40 CFR Part 63 Subpart CC [40 CFR §63.648(c)] shall be in compliance with applicable 40 CFR Part 60 Subpart VV standards as written, *except* for the following replacements:
    a. 40 CFR 60.482-2(b) - the leak definition for pumps in light liquid service shall be 2,000 ppm
    b. 40 CFR 60.482-7(b) - the leak definition for valves in gas/vapor or light liquid service shall be 500 ppm
    c. 40 CFR 60.485(b)(ii) – Use a calibration gas methane or n-hexane in air at a concentration no more than 2,000 ppm greater than the leak definition concentration of the equipment monitored. If the monitoring instrument's design allows for multiple calibration scales, then the lower scale shall be calibrated with a calibration gas that is no higher than 2,000 ppm above the concentration specified as a leak, and the highest scale shall be calibrated with a calibration gas that is approximately equal to 10,000 ppm. If only one scale on an instrument will be used during monitoring, the owner or operator need not calibrate the scales that will not be used during that day's monitoring.
2. Quarterly, the owner or operator of the facility shall report to the NWCAA:
    a. Monthly total and 12-month rolling total heat input and steam production for F-751, F-752, and F-753 (Utility boilers).
    b. Monthly total and 12-month rolling total NOX emissions from F-751, F-752, and F-753 (Utility boilers).
    c. Fuel oil use (daily total and 30-day rolling average) for each unit combusting fuel oil.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director,
Engineering

Lynn Billington, P.E.
Director, Engineering

Revision a: change conditions 1 and 4 regulatory reference in Leak Detection and Repair (LDAR) to enhance clarity without relaxing requirements and removal of obsolete terms in conditions 2 and 3 of original permit.

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: August 22, 2000 NUMBER: 26

APPLICANT: Tesoro Northwest Company

LOCATION: Anacortes Refinery

TITLE: F-101 PROCESS HEATER CREDIT RETIREMENT

Pursuant to your request and 70.94.141(3) RCW, you are hereby authorized to operate the F-101 process heater while combusting fuel oil subject to the following provisions:

1. Fuel oil and gaseous fuels will be combusted through permanently installed low-NO_x burners.
2. Eight tons per year of NO_x will be relinquished and thirty-five tons per year of NO_x will be retired from Emission Reduction Credit No. 18, dated October 2, 1995. All of the NO_x credits from Credit No. 18 will have thereby been relinquished or retired.
3. Nitrogen oxide emissions from combusting gaseous fuels shall not exceed 21.6 tons per year, on a twelve month rolling average basis. Nitrogen oxide emissions from combusting fuel oil shall not exceed 35 tons per year, on a twelve month rolling average basis. Compliance with these limits may be demonstrated by fuel use records.
4. Submit a monthly report summarizing the nitrogen oxide emissions from combusting gaseous and liquid fuels. The report shall be submitted prior to the end of the month following the monthly reporting period.

This regulatory order supersedes Emission Reduction Credit No. 18 issued on October 2, 1995. 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.

Failure to comply with the terms of this Regulatory Order by the Tesoro Northwest Company may result in the issuance of a Notice of Violation and/or other enforcement action.

ATTEST AND CONCURRENCE:

James Randles — August 22, 2000

James Randles, Director — Date

John J. Giboney — Staff Engr. — Aug. 23, 2000

Company Representative — Title — Date

northwest Clean Air agency

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Original Issuance: 01/20/09

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct #1031

Project Summary: This order approves an optimization project in the Butane Isomerization unit that will result in an increase in unit throughput to 8,500 bpd. Emissions from the project result from an incremental increase in steam production of 5,000 lb/hr. This Order supersedes Order of Approval to Construct 517.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Craig Neuman
Environmental Engineer
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road - Anacortes, Washington

The operating units and equipment affected by this order are subject to applicable portions of the following federal regulations:

New Source Performance Standards - 40 CFR Part 60

- Subpart A—General Provisions
- Subpart GGG—Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, Or Modification Commenced After January 4, 1983, And On Or Before November 7, 2006

National Emission Standards for Hazardous Air Pollutants (NESHAPs) - 40 CFR Part 63

- Subpart A—General Provisions
- Subpart CC—National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. The facility shall notify NWCAA in writing within 30 days of project startup.

2. Total fuel oil (no. 6) combustion facility-wide shall not exceed 432 barrels per day (rolling 365-day average).
    a. The facility shall document any fuel oil use, by combustion unit, daily.
    b. The facility shall report monthly the daily fuel oil usage and monthly average sulfur content.

Theresa (Toby) Allen Engineer	Mark Buford, P.E. Assistant Director, Engineering	Lynn Billington, P.E. Director, Engineering

northwest Clean Air agency

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Original Issuance: June 19, 2009

Northwest Clean Air Agency (NWCAA) hereby issues
Order of Approval to Construct (OAC) 1037

Project Summary: This order approves the construction of a gasoline benzene reduction project at the March Point refinery. The unit is being installed to comply with the Environmental Protection Agency (EPA) Mobile Source Air Toxics Phase 2 (MSAT2) gasoline regulations. The project involves construction of a new Benzene Saturation (BenSat) Unit (UOP design), and re-tasking and/or modification of column C-6601 and associated 73.5 MMBtu/hr heater F-6602, compressors J-6651 and J-6654, and tank 231.

APPLICANT

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221
Contact: Rebecca Spurling
Environmental Superintendent
NWCAA facility ID: 006-V-S

OWNER

Tesoro Refining and Marketing Company
P.O. Box 700
Anacortes, Washington 98221

FACILITY LOCATION:

10200 West March Point Road, Anacortes, Washington

Note that in addition to other applicable rules and regulations, this project is subject to applicable portions of the following federal regulations:

New Source Performance Standards

- 40 CFR Part 60 Subpart A—General Provisions
- 40 CFR Part 60 Subpart Kb—Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984
- 40 CFR Part 60 Subpart GGGa—Standards of Performance for Equipment Leaks of VOC in Petroleum Refineries for Which Construction, Reconstruction, or Modification Commenced After November 7, 2006 which references portions of Subpart VVa.
- 40 CFR Part 60 Subpart QQQ—Standards of Performance for VOC Emissions From Petroleum Refinery Wastewater Systems

National Emission Standards for Hazardous Air Pollutants/ Maximum Achievable Control Technology Standards

- 40 CFR Part 61 Subpart J - National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene applies only to the surge control vessel in the unit. Compliance with the monitoring recordkeeping and reporting requirements of the more

stringent 40 CFR Part 60 Subpart GGGa constitutes compliance with this regulation for this equipment.

- 40 CFR Part 63 Subpart A—General Provisions
- 40 CFR Part 63 Subpart CC—National Emission Standards for Hazardous Air Pollutants from Petroleum Refineries, which states that wastewater streams subject to 40 CFR Part 60 Subpart QQQ only comply with Subpart CC. The regulation also references 40 CFR Part 60 Subpart VV regarding equipment leaks.

As authorized by Northwest Clean Air Agency Regulation Section 300, this order is issued subject to the following restrictions and conditions:

1. Notwithstanding the 40 CFR 63 Subpart CC overlap provision of §63.640(p), a leak detection and repair (LDAR) program that conforms with the requirements of 40 CFR 60 Subpart GGGa and Subpart VVa (as referenced by Subpart GGGa), shall be conducted for subject equipment associated with the BenSat unit.

2. The F-6602 heater shall combust only natural gas or refinery fuel gas.

3. Gaseous fuel combusted in the F-6602 heater shall contain no greater than 50 ppmv H_2S, 24-hour average. For refinery fuel gas, Continuous compliance with this provision shall be demonstrated by a continuous H_2S monitor meeting CEMS requirements of 40 CFR Part 60 Appendix B and NWCAA Regulation §367 and Appendix A located on the feed stream to the F-6602 heater. This provision may be fulfilled by a CEMS located on the outlet of the fuel gas blend drum provided no additional sulfur sources enter the line downstream of the blend drum. No continuous sulfur monitoring is required for natural gas fuel.

4. NO_X emissions from the F-6602 heater stack shall be measured by CEMS meeting the requirements of 40 CFR Part 60 Appendix B and NWCAA Regulation §367 and Appendix A and shall not exceed the following limits:

    a. 4.4 lb NO_X per hour, 1-hour average, at all times, including periods of startup and shutdown (stack flow may be based on firing rate)

    b. 53 ppmdv NO_X @0% 0_2, 3-hour average, except during periods of startup or shutdown

5. CO emissions from the F-6602 heater shall not exceed 0.040 lb CO/MMBtu (net) of heat input 1-hr average.

    a. Compliance with the CO emissions limit shall be demonstrated by testing annually in accordance with 40 CFR Part 60 Appendix A Method 10.

6. Notify the NWCAA in writing within 30 days of startup of the benzene saturation unit.

Theresa (Toby) Allen
Engineer

Mark Buford, P.E.
Assistant Director,
Engineering

Lynn Billington, P.E.
Director, Engineering