

Fact Sheet



*For Final Renewal Permitting Action Under 45CSR30 and
Title V of the Clean Air Act*

Permit Number: **R30-02900008-2010**
Application Received: **August 11, 2008**
Plant Identification Number: **029-00008**
Permittee: **Ergon - West Virginia, Inc.**
Mailing Address: **P.O. Box 356 Newell, WV 26050**

Physical Location: Newell, Hancock County, West Virginia
UTM Coordinates: 531.25 km Easting • 4495.35 km Northing • Zone 17
Directions: Two miles south of Newell on State Route 2.

Facility Description

Ergon - West Virginia, Inc. (EWVI) owns and operates a petroleum refinery in Newell, West Virginia. The refinery processes crude oil and produces several petroleum products such as diesel, gasoline, kerosene, and crude oils.

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2007 Actual Emissions
Carbon Monoxide (CO)	238.64	135.55
Nitrogen Oxides (NO _x)	273.9	132.85
Particulate Matter (PM ₁₀) <i>PM₁₀ is a component of TSP.</i>	23.68	13.38
Total Particulate Matter (TSP)	23.68	13.38
Sulfur Dioxide (SO ₂)	132.83	16.00
Volatile Organic Compounds (VOC)	204.42	90.59
Hazardous Air Pollutants	Potential Emissions	2007 Actual Emissions

Benzene (<i>may be counted as VOC</i>)	5.54	0.97
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Title V Program Applicability Basis

This facility has the potential to emit 238.64 tons per year of carbon monoxide, 273.9 tons per year of nitrogen oxides, 132.83 tons per year of sulfur dioxide, and 204.42 tons per year of volatile organic compounds. Due to this facility's potential to emit over 100 tons per year of a criteria pollutant, Ergon -West Virginia, Inc. is required to have an operating permit pursuant to Title V of the Federal Clean Air Act as amended and 45CSR30.

Legal and Factual Basis for Permit Conditions

The State and Federally-enforceable conditions of the Title V Operating Permits are based upon the requirements of the State of West Virginia Operating Permit Rule 45CSR30 for the purposes of Title V of the Federal Clean Air Act and the underlying applicable requirements in other state and federal rules.

This facility has been found to be subject to the following applicable rules:

Federal and State:	45CSR2	Opacity and particulate matter limits for boilers, heaters.
	45CSR6	Open burning prohibited.
	45CSR10	Limit on sulfur emissions.
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Facility-wide emissions limits to net out of PSD.
	45CSR16	Performance Standards Pursuant to 40 CFR Part 60
	45CSR30	Operating permit requirement.
	40 CFR Part 60, Subpart J	Performance Standards for boilers
	40 CFR Part 60, Subparts K, Ka, Kb	Performance Standards for storage tanks
	40 CFR Part 61, Subpart M	Asbestos inspection and removal
	40 CFR Part 61, Subpart FF	Standards for Benzene Waste
State Only:	45CSR4	No objectionable odors.

Each State and Federally-enforceable condition of the draft Title V Operating Permit references the specific relevant requirements of 45CSR30 or the applicable requirement upon which it is based. Any condition of the draft Title V permit that is enforceable by the State but is not Federally-enforceable is identified in the draft Title V permit as such.

The Secretary's authority to request any pertinent information such as annual emission inventory reporting is provided in WV Code § 22-5-4(a)(14). The Secretary's authority to require standards under 40 CFR Part 60 (NSPS), 40 CFR Part 61 (NESHAPs), and 40 CFR Part 63 (NESHAPs MACT) is provided in West Virginia Code §§ 22-5-1 *et seq.*, 45CSR16, 45CSR34 and 45CSR30.

Active Permits/Consent Orders

Permit or Consent Order Number	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (<i>if any</i>)
R13-2334N	September 8, 2008	N/A
CO-SIP-95-1	January 9, 1995	N/A
Consent Decree-Civil No. 3: 03CV114010S	September 2003	N/A

Conditions from this facility's Rule 13 permit(s) governing construction-related specifications and timing requirements will not be included in the Title V Operating Permit but will remain independently enforceable under the applicable Rule 13 permit(s). All other conditions from this facility's Rule 13 permit(s) governing the source's operation and compliance have been incorporated into this Title V permit in accordance with the "General Requirement Comparison Table B," which may be downloaded from DAQ's website.

Determinations and Justifications

This is a renewal of the Title V Permit. The following changes have occurred since the original Title V permit was issued:

Permit R13-2334

R13-2334D was in effect during the initial Title V Permit issuance. Since then, R13-2334 has been amended and the Title V Permit has been modified. R13-2334N is the current version of the NSR Permit. This Title V Permit renewal includes the following changes from the administrative amendment to R13-2334:

Boiler B was de-rated to match the rating of Boiler A (159.5 MMBtu/hr), and the emissions tables in Conditions 4.1.7. and 4.1.14. of the renewal permit were revised.

The design capacities for TLoad and MLD have been corrected to 344.6 MMgal/yr for TLoad and 101.2 MMgal/yr for MLD.

Tank 4060 was changed from an incorrect capacity of 4,540,000 gallons to the correct 5,040,000 gallons.

Tanks 4063, 4064, 4065, and the Kerosene Treater, emission point KERO-FUG, were permitted but were never constructed. They have been removed.

Conditions Removed:

Tanks 303 and 304 were treated as tanks in prior permits. During an audit, it was determined that these tanks are process vessels, therefore they are no longer listed as emission units.

The facility is not subject to 40 CFR Part 63. See Non-Applicability Determinations on page 5 of this Fact Sheet. Therefore, any emissions limitations and MRR requirements from 40 CFR Part 63, Subparts G, R, CC, DDDDD, and GGGGG, were removed. The remaining permit conditions were renumbered.

Old Permit Condition 4.1.26. - This was an option, not a requirement, therefore it was deleted by request of EWVI.

Old Permit Condition 4.3.7. - The permittee has completed the initial performance test, therefore this condition was removed from the permit.

Other changes:

Two diesel firewater pumps (FWPUMP1 and FWPUMP2) were added to the equipment table.

Consent Decree, Civil No. 3: 03CV114010S, Paragraphs V.12.B. and V.14.A. proclaim that all boilers and heaters, as well as the flare, are affected facilities and shall be subject 40 CFR Part 60, Subparts A and J. Many of the requirements from the Consent Order, CO-SIP-95-1, are the same or less stringent than the requirements from Subparts A and J. For instance, the heaters and boilers were subject to an SO₂ emissions limit of 800 ppm specified in CO-SIP-95-1, but are now subject to a limit of 160 ppm based on the requirements of 40 CFR Part 60, Subpart J. Therefore, many of the Consent Order conditions have been streamlined with the requirements from 40 CFR Part 60, Subpart J.

Old Permit Conditions 4.1.14. and 4.1.15. were moved to Permit Conditions 4.2.8. and 4.2.3., respectively.

Old Permit Condition 4.1.18., now Condition 4.1.16. - The first sentence was deleted since the stacks have been completed. The second sentence remained since it addresses possible modifications to the stacks.

Old Permit Condition 4.1.20. was combined with renewal permit conditions 4.1.17. and 4.1.18. In addition, the 0.050 lb/mmBTU NO_x limit from R13-2334, Condition 4.1.18., for Boiler C, which is rated at 95 mmBTU/hr, is equivalent to a limit of 4.75 lbs/hr of NO_x. 4.75 lbs/hr equates to 1.71 TPM, which is more stringent than the 2.08 TPM limit from the R13-2334, Condition 4.1.17. Therefore, the 2.08 TPM limit in the Table at 4.1.17. was replaced with the 0.050 lb/mmBTU limit.

Old Permit Condition 4.1.34. was a duplicate of Condition 4.1.12, so it was combined with Condition 4.1.12.

Old Permit Condition. 4.2.6., now Condition 4.2.10. - required continuous monitoring for Heater H-701 during fuel oil combustion only. However, fuel oil combustion is not permitted in accordance with Conditions 4.1.21 in the Title V permit and Permit R13-2334. The requirement, taken from Consent Order (CO-SIP-95-1), was originally for heaters H-101, H-102, H-500S, H-600S, H-701, and H-201. However, all the aforementioned heaters except H-701 are now subject to the continuous monitoring requirement from NSPS Subpart J and the two conditions were streamlined in the previous version of the Title V permit. In accordance with Condition 4.1.6., combustion of fuel oil is allowed under specific circumstances in all the aforementioned heaters except H-701, therefore the heading for 4.2.10. was changed from Heater H-701 to Heaters H-101, H-102, H-500S, H-600S, and H-201, and it was noted that this requirement applies only during fuel oil combustion.

Old Permit Condition 4.2.7. was the requirement from the Consent Order to use continuous monitoring to show compliance with the hydrogen sulfide concentration limit for Boilers A and B, Heaters H-101, H-102, H-201, H-701, H-500S, and H-600S. 40 CFR Part 60, Subpart J also requires the use of an H₂S monitoring system, therefore the Consent Order requirement was streamlined with the requirement from 40 C.F.R. §§ 60.105(a), which is listed in Condition 4.2.9.

Old Permit Condition 4.3.4., now Condition 4.3.5. - from Consent Order CO-SIP-95-1 requires the use of gas chromatography during any period of failure or malfunction of the H₂S monitoring system required by CO-SIP-95-1. Because of streamlining, this requirement now refers to Condition 4.2.9. The heading was changed to remove the reference to Boilers A and B since the Boilers have a separate requirement under Condition 4.2.4.C., and it was noted that this condition applies during fuel oil combustion only.

Old Permit Condition 4.4.7. was streamlined with Condition 3.4.2.

Old Permit Condition 4.4.13., now Condition 4.4.6. - this requirement from NSPS subpart J applies to any boilers or heaters that combust refinery fuel gas, therefore this condition was moved to the heading for Boilers A and B, Heaters H-101, H-102, H-500S, H-600S, H-901.

Condition 5.1.8. - The requirement to not fire fuel gas or other process gas that contains hydrogen sulfide in a excess of 50 grains/100 dry standard cubic feet of gas was streamlined with Condition 5.1.5. of the current permit, which is more stringent (0.10gr/dscf).

Section 7.0 - A table listing the Tanks and the respective requirements was added for clarity. Group 1 or Group 2 MACT designations were deleted, and Old Permit Conditions 7.1.4. and 7.1.6. were combined since they were identical without the Group 1 or 2 designations.

Old Permit Condition 3.1.13. was moved to Section 9.0 (Benzene Waste Operations). The reference to 45CSR15 was changed to 45CSR34 since 45CSR15 was repealed and 45CSR34 now incorporates 40 CFR Parts 61 and 63.

Sections 9.0. (Wastewater Treatment Plant - now Section 8.0) and 10.0. (Benzene Waste Operations - now Section 9.0.) of the original permit were reduced to only include requirements applicable to EWVI.

A new Section 10.0 was added to incorporate requirements for Leak Detection And Repair. The requirements were proposed by the permittee and were derived from the Consent Decree, Civil No. 3: 03CV114010S and from 40 CFR Part 60, Subpart VV. The Consent Decree standards do not survive the termination of the Consent Decree, therefore the citation of the Consent Decree standards will be removed upon termination of the Consent Decree.

Appendix B (Consent Decree) - Consent Decree, Civil No. 3: 03CV114010S. Only certain specified emission limits and standards that survive the termination of the Consent Decree have been incorporated into the Title V Permit. Therefore, it was no longer necessary to attach the Consent Decree, however it was noted in the Title V permit that the Consent Decree is still active.

Non-Applicability Determinations

The following requirements have been determined not to be applicable to the subject facility due to the following:

EWVI has certified that it has completed its obligations from the Consent Judgement (97-C-338), therefore the requirements from the Consent Judgement are no longer included in the Title V Permit.

EWVI has demonstrated that the facility is not a major source of HAPs and never has been. MEK is a major constituent of the EWVI HAP emissions and has now been delisted [70 Fed. Reg. 75047 (December 19, 2005)]. Further, EPA has made the determination that the delisting of MEK may be applied retroactively. In February 2004, EWVI requested to change the methodology used to calculate VOC and HAPs from the MEK/Toluene Dewaxing Unit (MEK – TOL Unit) from a mass balance calculation to a more reliable method. To estimate emissions that would be more representative of the operations, EWVI decided to use the enhanced Leak Detection and Repair (LDAR) program as the basis for estimating the potential to emit (PTE) from the MEK-TOL Unit.

The enhanced LDAR Program includes leak definitions of 500 ppm for valves and 2,000 ppm for pumps. The program also requires that pumps be monitored on a monthly basis and valves are monitored on a quarterly basis, with no ability to skip periods.

To determine the MEK-TOL Unit PTE, EWVI used the USEPA Correlation Approach. The following assumptions were made to arrive at the unit PTE:

1. The screening value used for each non leaking component was 1 ppm less than the leak definition of 500 ppm for valves and 2,000 ppm for pumps
2. An overall unit leak rate of 3% was used. The screening value used for these components (leaking) was 20,000 ppm.

The West Virginia Department of Environmental Protection (WVDEP) approved this methodology and first incorporated this change in permit R13-2334E that was issued in May 2004.

Retroactively applying the more accurate calculation methods for determining the fugitive emissions from the MEK-TOL unit, added to the rest of the facility's HAP emissions, determined that the facility-wide HAP PTEs have always been less than 10 tons per year of a single HAP and 25 tons per year of aggregate HAPs. Therefore, the requirements from 40 CFR Part 63, Subparts R, CC, UUU, GGGGG, and DDDDD have been removed. Subpart DDDDD was vacated and removed from the permit for that reason as well.

40 CFR 64 - The main/sour gas flare, F1, and the Carbon Bed Adsorber are not subject to the CAM requirements of 40 CFR 64 due to the fact that the potential pre-control device emissions are below the threshold in 40 CFR 64.2(a)(3). The thermal oxidizer meets the applicability requirements of 40 CFR 64. However, the existing Title V permit specifies a continuous compliance determination method which was taken from 40 CFR Part 63, Subpart R. Although Subpart R is no longer applicable to the facility, the facility has agreed to maintain the compliance determination method and therefore exempt the thermal oxidizer from the CAM rule in accordance with 40 CFR § 64.2(b)(vi).

Request for Variances or Alternatives

None.

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application.

Comment Period

Beginning Date: December 16, 2009

Ending Date: January 15, 2010

All written comments should be addressed to the following individual and office:

Bobbie Scroggie
Title V Permit Writer
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304

Procedure for Requesting Public Hearing

During the public comment period, any interested person may submit written comments on the draft permit and may request a public hearing, if no public hearing has already been scheduled. A request for public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. The Secretary shall grant such a request for a hearing if he/she concludes that a public hearing is appropriate. Any public hearing shall be held in the general area in which the facility is located.

Point of Contact

Bobbie Scroggie
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
Phone: 304/926-0499 ext. 1225 • Fax: 304/926-0478

Response to Comments

EPA was assured that its understanding that this Title V permit has been amended through this renewal process was correct.

EPA expressed concern over the practical enforceability of pounds per hour, tons per month, and tons per year limits in Sections 4.1, 5.1 and 6.1., and the use of "12-month rolling total", stating "permittee should be required to keep records of the emissions for each month as well as the calculation of the 12-month rolling total of emissions for each month." EPA requested a reference to Section 2.1.4. of the permit which defines "rolling yearly total".