

Fact Sheet



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

Permit Number: **R30-05100002-2024**
Application Received: **April 10, 2023**
Plant Identification Number: **051-00002**
Permittee: **Westlake Natrium LLC**
Facility Name: **Natrium Plant**
Mailing Address: **P.O. Box 191, New Martinsville, WV 26155**

Physical Location: New Martinsville, Marshall County, West Virginia
UTM Coordinates: 512.70 km Easting • 4,399.60 km Northing • Zone 17
Directions: WV State Route 2, 5 miles north of New Martinsville, WV.

Facility Description

Westlake Natrium LLC owns and operates a Chlor-Alkali and Derivatives Plant in Marshall County, West Virginia commonly known as the Natrium Plant. The facility is located five miles north of New Martinsville, thirty miles south of Wheeling, and is built above salt deposits. The facility manufactures chlorine (Cl₂) and caustic soda (NaOH). In addition to producing Cl₂ and NaOH, the facility produces hydrogen gas (H₂), hydrochloric acid (HCl), and calcium hypochlorite [Ca(OCl)₂]. The facility is a Chemicals and Allied Products facility and operates under the following SIC Codes:

Primary 2812 – Alkalis and Chlorine
Secondary 2819 – Industrial Inorganic Chemicals, Not Elsewhere Classified

Emissions Summary

Plantwide Emissions Summary [Tons per Year]		
Regulated Pollutants	Potential Emissions	2022 Actual Emissions¹
Carbon Monoxide (CO)	545	163.64
Nitrogen Oxides (NO _x)	1130	449.93
Particulate Matter (PM _{2.5})	125	9.91
Particulate Matter (PM ₁₀)	125	26.91
Total Particulate Matter (TSP)	125	54.65
Sulfur Dioxide (SO ₂)	115	18.17
Volatile Organic Compounds (VOC)	100	23.79

PM₁₀ is a component of TSP.

Hazardous Air Pollutants	Potential Emissions	2022 Actual Emissions¹
Chlorine	1.1	0.38
Mercury	2.4	0.06
Hydrochloric Acid	1.2	0.42
Methylene Chloride	2.5	0.9

Some of the above HAPs may be counted as PM or VOCs.

Regulated Pollutants other than Criteria and HAP	Potential Emissions	2022 Actual Emissions¹
Ammonia	46	36.27
Reduced sulfur compounds (TRS)	90	39

¹ Actual emissions values are from the State and Local Emissions Inventory System (SLEIS) 2022 Summary Report Total Emissions by Source, and represent emissions from January 1, 2022, through December 31, 2022.

Title V Program Applicability Basis

This facility has the potential to emit 545 tons per year of carbon monoxide, 1130 tons per year of nitrogen oxides, 125 tons per year of particulate matter (PM₁₀, PM_{2.5}), 115 tons per year of sulfur dioxide, and 100 tons per year of volatile organic compounds. Due to this facility's potential to emit over 100 tons per year of criteria pollutants and the facility being subject to 40 C.F.R. 60 Subparts Db and Dc and 40 C.F.R. 63 Subparts DDDDD, IIIII and ZZZZ, Westlake Natrium LLC 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	PM from Indirect Heat Exchangers
	45CSR6	Open burning prohibited.
	45CSR7	PM from Manufacturing Sources
	45CSR10	Sulfur oxide limits
	45CSR11	Standby plans for emergency episodes.
	45CSR13	Permits to Construct/Modify
	45CSR14	Prevention of Significant Deterioration
	45CSR16	New Source Performance Standards
	45CSR20	Good Engineering Practices as Applicable to Stack Heights
	45CSR30	Operating permit requirement.
	45CSR34	Emission Standards for HAPs
	WV Code § 22-5-4 (a) (14)	The Secretary can request any pertinent information such as annual emission inventory reporting.
	40 C.F.R. Part 60, Subpart Db	NSPS for Industrial-Commercial-Institutional Steam Generating Units
	40 C.F.R. Part 60, Subpart Dc	NSPS for Small Industrial-Commercial-Institutional Steam Generating Units
	40 C.F.R. Part 61, Subpart E	Mercury NESHAP. Must comply only with 40 C.F.R. Part 63, Subpart IIIII.
	40 C.F.R. Part 61	Asbestos inspection and removal
	40 C.F.R. Part 63, Subpart ZZZZ	Reciprocating Internal Combustion Engine (RICE) NESHAP-MACT
	40 C.F.R. Part 63, Subpart DDDDD	Industrial/Commercial/Institutional Boilers and Process Heaters Major Source MACT
	40 C.F.R. Part 63, Subpart IIIII	Mercury NESHAP-MACT
	40 C.F.R. Part 64	Compliance Assurance Monitoring (CAM)
40 C.F.R. Part 82, Subpart F	Ozone depleting substances	
State Only:	45CSR4	No objectionable odors.
	45CSR27	Prevent and Control the Emissions of Toxic Air Pollutants
	45CSR40	Control of Ozone Season NO _x Emissions

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

The Secretary's authority to require standards under 40 C.F.R. Part 60 (NSPS), 40 C.F.R. Part 61 (NESHAPs), and 40 C.F.R. 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	Title V Permit Section	Dept.	Date of Issuance	Permit Determinations or Amendments That Affect the Permit (if any)
R13-1664	12.0	Plant Paint Spray Booth	12/20/1993	
R13-2046G	7.0	HCl	8/1/2013	
R13-2886	10.0	Caustic	10/28/2011	
R13-3328A	6.0, 9.0	Brine, Cal-Hypo	3/17/2020	
R14-0027F	4.0	Power - Boilers	3/19/2018	
CO-R27-91-18	8.0	Chlorine Recovery	6/25/1991	Amended by CO-R27-98-39A(91)
CO-R27-98-39A(91)	8.0	Chlorine Recovery	6/02/1992	
CO-SIP-C-2003-27	3.0, 6.0, 8.0, 11.0	Facility-wide, Brine, Chlorine Recovery, PELS™	7/29/2003	

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," which may be downloaded from DAQ's website.

Determinations and Justifications

Scrubber SC001 was removed from the Emission Units table Section 1.1 and section 9.0 Cal-Hypo.

Control device KO006 was added to Emissions Unit T078 in the Emission Units table Section 1.1.

The Ammonia Storage Tank (Emission Unit ID V706) was replaced in 2022. DAQ received notification through off-permit change R30-05100002-2018 (OP01).

Changes to 40 C.F.R. 63 Subpart ZZZZ to remove provisions for emergency demand response resulted in changes to Title V conditions 13.1.7 and 13.4.2.

Additional changes made to the Title V permit include changes to Title V boilerplate conditions 2.1.3, 2.11.4, 2.17, 2.22, 3.1.3, 3.1.8, 3.5.3, 3.5.4, 3.5.7 and 3.5.8.

40 C.F.R. 63 Subpart IIIII – National Emission Standards for Hazardous Air Pollutants for Mercury Cell Chlor-Alkali Plants. The applicable requirements of this subpart are included in the current operating permit. 40 C.F.R. 63 Subpart IIIII was updated on May 6, 2022 and these changes have been included in this Title V renewal. New requirements of this subpart have been included in sections 8.1.11 and 8.5.7. The new requirement in section 8.1.11 includes a compliance date of May 6, 2025. On and after this date, emissions of mercury from the mercury cell chlor-alkali production facility are prohibited. Section 8.5.7 requires notification of compliance with this prohibition. The notification is required before the close of business on the 30th calendar day following the date when compliance with section 8.1.11 is attained.

Other changes made as a result of the Subpart IIIII revision include the following:

The exception for startup, shutdown, and malfunction was removed from condition 8.1.3. The reference to this section was changed from §63.8226(a) to §63.8226(c) due to the compliance date being passed for §63.8226 (a).

The reference for condition 8.1.4 was changed from 40 C.F.R. § 63.8256(c) to 40 C.F.R. §63.8256(e) based on the new recordkeeping requirements which became effective on November 7, 2022.

Condition 8.1.5 was changed to incorporate the changes in the May 6, 2022 revision of 40 C.F.R. §63.8222.

Section 8.1.6 was changed to Reserved. The provisions of the start-up, shutdown, and malfunction plan no longer apply after November 7, 2022.

The reference for condition 8.2.2.3 was changed from 40 C.F.R. § 63.8256(c) to 40 C.F.R. §63.8256(e) based on the new recordkeeping requirements which became effective on November 7, 2022.

For condition 8.2.2.5., the exception for periods of startup, shutdown, and malfunction was removed since it no longer applies according to 40 C.F.R. §63.8226(c). Since it no longer applies, the reference to 40 C.F.R. §63.8226 (a) was changed to 40 C.F.R. § 63.8226(c).

Section 8.2.3 was added to the permit to incorporate the new fugitive chlorine monitoring/leak detection and repair rules of 40 C.F.R. §§63.8192(h)(1) through (4).

Condition 8.2.4.2 (previously condition 8.2.3.2) was changed to include the capability to detect a mercury concentration of 0.1 µg/m³.

Section 8.2.4.3.5 (previously condition 8.2.3.3.5) was changed to include the revisions to 40 C.F.R. §63.8242(a)(3)(v).

Section 8.2.6 was added in accordance with 40 C.F.R. §63.8246(d) which requires continuous compliance with work practice standards for chlorine emissions.

Condition 8.4.1.2 was changed to the updated version of 40 C.F.R. §63.8256(a)(2). The revision of this rule no longer addresses startup, shutdown, and malfunction deviations.

The reference to 40 C.F.R. § 63.8256(c)(3) was changed to 40 C.F.R. § 63.8256(e)(3) for condition 8.4.3.

Condition 8.4.4 was deleted and marked as Reserved. After November 7, 2022, the permittee must follow the new recordkeeping requirements of 40 C.F.R §63.8256(e) in condition 8.4.8.

Sections 8.4.8 and 8.4.9 were added to the permit to require the new recordkeeping requirements of 40 C.F.R. §§63.8256 (e) and (f).

Condition 8.5.4.4 was changed to Reserved in accordance with 40 C.F.R. §63.8254(b)(4).

Startup, shutdown, and malfunction provisions were removed from condition 8.5.4.7.

A new condition 8.5.4.7.1 was inserted into the permit. Conditions following these conditions were renumbered accordingly.

In condition 8.5.4.7.2 (previously 8.5.4.7.1), the word ‘malfunction’ was changed to ‘deviation’.

The condition 8.5.4.7.4 of the previous permit has been deleted.

New conditions 8.5.4.7.3, 8.5.4.7.4, and 8.5.4.7.5 were inserted into the permit. Conditions following these conditions were renumbered accordingly.

The words startup and shutdown were removed from condition 8.5.4.7.9 (previously 8.5.4.7.6).

Section 8.5.4.8 was included to address the deviations from section 8.2.3. Conditions following this section were renumbered accordingly.

Conditions 8.5.4.12 and 8.5.4.13 were added to address the reporting of chlorine detection by the chlorine sensors and leaks identified.

Condition 8.5.5 was changed to Reserved in accordance with 40 C.F.R. §63.8254(c).

Non-Applicability Determinations

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

- a. **45CSR3** – *To Prevent and Control Air Pollution from the Operation of Hot Mix Asphalt Plants*: This regulation is not applicable to this facility because the facility is not a hot mix asphalt plant.
- b. **45CSR17** – *To Prevent and Control Particulate Air Matter Pollution from Materials Handling, Preparation, Storage and Other Sources of Fugitive Particulate Matter*: The facility is subject to 45CSR2 and 45CSR7 in lieu of 45CSR17.
- c. **45CSR21** – *Regulation to Prevent and Control Air Pollution from the Emission of Volatile Organic Compounds*: This regulation is not applicable to this facility because the facility is not located in Putnam, Kanawha, Cabell, Wayne, or Wood counties.
- d. **40 C.F.R. 60, Subpart D** – *Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced After August 17, 1971*: The maximum design heat inputs of Boilers No. 4 and 5 are 540 and 999 mmBtu/hr, respectively, which exceed this subpart’s applicability threshold of 250 mmBtu/hr. However, they are not subject to this subpart because they were constructed prior to August 17, 1971 and have not been modified or undergone “reconstruction” (as defined in 40 C.F.R. §60.15(b)) since. The maximum design heat input of Boiler No. 6 is 182 mmBtu/hr which is less than the applicable threshold of 250 mmBtu/hr; therefore, No. 6 Boiler is not subject to this subpart.
- e. **40 C.F.R. 60, Subpart Da** – *Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced After September 18, 1978*: This subpart applies to Electric Utility Steam Generating Units only. The maximum design heat input of Boiler No. 6 is 182 mmBtu/hr which is less than the applicable threshold of 250 mmBtu/hr. Boiler Nos. 4, 5, and 6 do not sell more than one-third of their potential electric output capacity and more than 25 MW electrical output to any utility power distribution system for sale and are not classified as electrical utility steam-generating units subject to this part.
- f. **40CFR60, Subpart Y** – *Standards of Performance for Coal Preparation Plants*: the coal-handling facilities were removed from service in 2018.
- g. **40 C.F.R. 60, Subpart VV** – *Standards of Performance for Equipment Leaks of VOC in the Synthetic Organic Chemicals Manufacturing Industry*: Hydrochloric Acid (HCl) is the only remaining Hazardous Air Pollutant emitted from the former MCB Process Area (re-named the HCl Production Area). HCl is not on the list of chemicals to which this Subpart applies (40 CFR §60.489).
- h. **40 C.F.R. 60, Subpart NNN** – *Standards of Performance for Volatile Organic Compound (VOC) Emissions From Synthetic Organic Chemical Manufacturing Industry (SOCMI) Distillation Operations*. This regulation is not applicable to the facility because organic chemicals are no longer manufactured at this facility.
- i. **40 C.F.R. 60, Subpart IIII** – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. This regulation is not applicable to the facility because the five emergency engines were manufactured prior to April 1, 2006
- j. **40 C.F.R. 61, Subpart J** – *National Emission Standard for Equipment Leaks (Fugitive Emission Sources) of Benzene*. This regulation is not applicable to the facility because benzene is no longer utilized at this facility.

- k. **40 C.F.R. 61, Subpart V** – *National Emission Standard for Equipment Leaks (Fugitive Emission Sources)*. No equipment covered by this Subpart is in use at this facility.
- l. **40 C.F.R. Part 61, Subpart Y** – *National Emission Standard for Benzene Emissions From Benzene Storage Vessels*. This regulation is not applicable to the facility because benzene is no longer utilized at this facility.
- m. **40 C.F.R. Part 61, Subpart FF** – *National Emission Standard for Benzene Waste Operations*. This regulation is not applicable to the facility because benzene is no longer utilized at this facility.
- n. **40 C.F.R. 63, Subpart Q** – *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*: This regulation is not applicable to the facility because no chromium-based water treatment chemicals are used to condition the recirculation water in the cooling tower.
- o. The facility is not subject to Title IV of the Clean Air Act, therefore requirements of Section 2.25., “Acid Deposition Control” are not applicable.
- p. **40 C.F.R. Part 63, Subpart NNNNN** - *National Emission Standards for Hazardous Air Pollutants for Hydrochloric Acid Production*. This process is exempted in 40 CFR 63.8985(d) as it produces HCl through the Direct synthesis of hydrogen and chlorine and is part of a chlor-alkali facility.
- q. **40 C.F.R. Part 97, Subparts AAAAA, CCCCC, and EEEEE** – *CSAPR NO_x Annual Trading Program, CSAPR NO_x Ozone Season Group 2 Trading Program, and CSAPR SO₂ Group 1 Trading Program*. A portion of the electricity produced is pushed back to the electrical grid for a credit; however, the amount of electricity pushed back to the electrical grid is less than one-third of the unit’s potential electrical output capacity and 219,000 MWh. Therefore, these regulations are not applicable since the criteria in 40 C.F.R. §§ 97.404(b)(1)(i)(B), 97.804(b)(1)(i)(B), and 97.604(b)(1)(i)(B) are not met.

Request for Variances or Alternatives

None

Insignificant Activities

Insignificant emission unit(s) and activities are identified in the Title V application. In particular, the Package Sewage Treatment Plant (Em. Unit ID# WW001) was included in Attachment D of the renewal application. However, since there are no applicable requirements for WW001, and its Attachment E of the application states that it is an insignificant source, it will not be included in the renewal operating permit.

Comment Period

Beginning Date: February 7, 2024
Ending Date: March 8, 2024

Point of Contact

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

Jonathan W. Carney
West Virginia Department of Environmental Protection
Division of Air Quality
601 57th Street SE
Charleston, WV 25304
304/926-0499 ext. 41247
Jonathan.W.Carney@wv.gov

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.

Response to Comments (Statement of Basis)

Comments from Westlake Natrium, LLC(received via email on March 8, 2023)

Comment 1 – Westlake commented that mailing address located on page 2 should be changed to 15696 Energy Road, Proctor, WV 26055.

Response – The address change was granted.

Comment 2 – Westlake commented that the facility location on page 2 should be changed to Proctor, Marshall County, West Virginia.

Response – The location change was granted.

Comment 3 – Westlake commented that Item ‘n’ in section 3.7.2 Permit Shield relating to 40 C.F.R. Part 63, Subpart NNNNN (Hydrochloric Acid Production). The second sentence should state ‘ However, #1, #2, and #3 HCL Synthesis Units (SU004, SU005, SU006) and the associated equipment...’.

Response – Item ‘n’ in Section 3.7.2 Permit Shield was changed in accordance with the comment.