

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

RESOURCE CONSERVATION AND RECOVERY ACT (RCRA) PERMIT

Facility Name and Location: SABIC Innovative Plastics Mt. Vernon, LLC
One Lexan Lane
Mt. Vernon, Indiana 47620

Owner(s): 1. Mt. Vernon Phenol Plant Partnership
One Lexan Lane
Mt. Vernon, Indiana 47620

2. SABIC Innovative Plastics Mt. Vernon, LLC
One Lexan Lane
Mt. Vernon, Indiana 47620

Operator(s): SABIC Innovative Plastics Mt. Vernon, LLC
One Lexan Lane
Mt. Vernon, Indiana 47620

U.S. EPA Identification Number: IND 006 376 362

Effective Date: _____

Expiration Date: _____

Authorized Activities:

The United States Environmental Protection Agency (“U.S. EPA”) hereby issues a Resource Conservation and Recovery Act (RCRA) permit (hereinafter referred to as the “permit”) to **SABIC Innovative Plastics Mt. Vernon, LLC (Operator and Co-Owner)** and **Mt. Vernon Phenol Plant Partnership (Co-Owner)** (hereinafter referred to as the “Permittees” or addressed in the second person as “you”) in connection with the boilers burning hazardous waste and associated activities at the Mt. Vernon facility in Indiana.

This permit is issued under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976, and the Hazardous and Solid Waste Amendments (HSWA) of 1984 (42 USC § 6901 *et seq.*) (collectively referred to as RCRA) and U.S. EPA’s regulations promulgated thereunder (codified, and to be codified, in Title 40 of the Code of Federal Regulations (40 CFR)).

Specifically, this permit addresses: (1) boilers burning hazardous waste fuel (40 CFR Part 266, Subpart H) and (2) other federal RCRA regulations for which the state has not yet been authorized.

This permit contains the federal RCRA permit conditions. The Permittees also has a state RCRA permit which contains conditions issued by the State of Indiana's RCRA program authorized under 40 CFR Part 271. Any hazardous waste activity which requires a RCRA permit and is not included in the federal or state RCRA permit, is prohibited.

Permit Approval:

On January 31, 1986, the State of Indiana received final authorization pursuant to Section 3006 of RCRA, 42 USC § 6926, and 40 CFR Part 271, to administer the pre-HSWA RCRA hazardous waste program. The State of Indiana has also received final authorization to administer certain additional RCRA requirements on several occasions since then. However, because the U.S. EPA has not yet authorized the State of Indiana to administer certain regulations, including the Boilers and Industrial Furnaces regulations (see 40 CFR Part 266.100 et seq., also known as the BIF regulations), the U.S. EPA Region 5 is issuing the RCRA permit requirements for operations at the Permittees's facility which fall under these regulations.

You must comply with all terms and conditions contained in this permit. This permit consists of all the conditions contained herein, all documents attached, hereto, and all documents listed or cross-referenced in these documents, approved submittals (including plans, schedules and other documents), and the applicable regulations contained in 40 CFR Parts 124, 260, 261, 262, 264, 266, 268, 270, and applicable provisions of RCRA.

This permit is based on the assumption that the information contained in: (1) the RCRA permit application dated July 2008, (2) the approved trial burn report, dated June 2009, and (3) any subsequent modifications to the Part B application (hereinafter referred to as the "Application") is accurate, and the facility is configured, operated and maintained as specified in the permit, and as described in the permit application.

Any inaccuracies in the submitted information may be grounds for the U.S. EPA to terminate, revoke and reissue, or modify this permit in accordance with 40 CFR §§ 270.41, 270.42 and 270.43; and for enforcement action. You must inform the U.S. EPA of any deviation from, or changes in, the information in the Application that might affect your ability to comply with the applicable regulations or conditions of this permit.

Opportunity to Appeal:

Petitions for review must be submitted within thirty (30)days after the U.S. EPA serves notice of the final permit decision. Any person who filed comments on the draft permit or participated in the public hearing may petition the Environmental Appeals Board to review any condition of the permit decision. Any person who failed to file comments or failed to participate in the public hearing on the draft permit may file a petition for review only to the extent of the changes from the draft to the final permit decision. The procedures for permit appeals are found in 40 CFR § 124.19.

Effective Date:

This permit is effective as of _____ and will remain in effect until _____, unless revoked and reissued under 40 CFR § 270.41, terminated under 40 CFR § 270.43, or continued in accordance with 40 CFR § 270.51(a).

By: _____ Date: _____
Bruce Syniewski, Acting Director
Land and Chemicals Division

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SECTION I—STANDARD PERMIT CONDITIONS

I.A EFFECT OF PERMIT

This permit contains federal permit conditions. The Permittees also has a state RCRA permit. You are hereby allowed to manage hazardous waste in accordance with this permit. Under this permit, the storage, treatment and disposal of RCRA hazardous waste must comply with all terms and conditions in this permit. Other aspects of the storage and treatment of RCRA hazardous wastes are subject to the conditions in the state-issued portion of the RCRA permit. Any hazardous waste activity, which requires a RCRA permit and is not included in the RCRA permit, is prohibited.

Subject to 40 CFR § 270.4, compliance with the RCRA permit during its term constitutes compliance for purposes of enforcement with Subtitle C of RCRA except for those requirements not included in the permit which: (1) become effective by statute; (2) are promulgated under 40 CFR Part 268 restricting the placement of hazardous waste in or on the land; (3) are promulgated under 40 CFR Part 264 regarding leak detection systems; or (4) promulgated under subparts AA, BB, or CC of 40 CFR Part 264 limiting air emissions. (40 CFR § 270.4)

This permit does not: (1) convey any property rights or any exclusive privilege (40 CFR § 270.30(g)); (2) authorize any injury to persons or property, or invasion of other private rights; or (3) authorize any infringement of state or local law or regulations. Compliance with the terms of this permit does not constitute a defense to any order issued, or any action brought, under: (1) Sections 3013 or 7003 of RCRA; (2) Sections 104, 106(a), or 107 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 USC §§ 9601 *et seq.* (commonly known as CERCLA); or (3) any other law protecting human health, welfare, or the environment.

I.B PERMIT ACTIONS

I.B.1 Permit Review, Modification, Revocation and Reissuance, and Termination

The U.S. EPA may review and modify, revoke and reissue, or terminate this permit for cause, as specified in 40 CFR § 270.41, § 270.42, and § 270.43. The U.S. EPA may also review and modify this permit, consistent with 40 CFR § 270.41, to include any terms and conditions it determines are necessary to protect human health and the environment under Section 3005(c)(3) of RCRA. The filing of a request for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance on

your part will not stay the applicability or enforceability of any permit condition. (40 CFR § 270.30(f))

You must not perform any construction associated with a Class 3 permit modification request until such modification request is granted and the modification becomes effective. You may perform construction associated with a Class 2 permit modification request beginning sixty (60)days after submission of the request unless the Director, Land and Chemicals Division, U.S. EPA Region 5 (Director), establish a later date. (40 CFR § 270.42(b)(8))

I.B.2 Permit Renewal

This permit may be renewed as specified in 40 CFR § 270.30(b) and Condition I.E.2 of this permit. In reviewing any application for a permit renewal, the U.S. EPA will consider improvements in the state of control and measurement technology, and changes in applicable regulations. (40 CFR § 270.30(b) and RCRA Section 3005(c)(3))

I.C SEVERABILITY

This permit's provisions are severable; if any permit provision, or the application of any permit provision to any circumstance, is held invalid, such provision's application to other circumstances and the remainder of this permit will not be affected. Invalidation of any statutory or regulatory provision on which any condition of this permit is based does not affect the validity of any other statutory or regulatory basis for that condition. (40 CFR § 124.16(a))

I.D DEFINITIONS

The terms used in this permit will have the same meaning as in 40 CFR Parts 124, 260 through 266, 268 and 270, unless this permit specifically provides otherwise. Where neither the regulations nor the permit define a term, the term's definition will be the standard dictionary definition or its generally accepted scientific or industrial meaning.

I.E DUTIES AND REQUIREMENTS

1.E.1 Duty to Comply

You must comply with all conditions of this permit, except to the extent and for the duration for which an emergency permit authorizes such noncompliance (see 40 CFR § 270.61). Any permit noncompliance, except under the terms of an emergency permit, constitutes a violation of RCRA and will be grounds for: enforcement action; permit termination; revocation and reissuance; modification;

or denial of a permit renewal application. (40 CFR § 270.30(a))

I.E.2 Duty to Reapply

If you wish to continue the permit-regulated activities after the expiration date, you must apply for and obtain a new permit. You must submit a complete application for a new permit at least 180 days before the permit expiration date, unless the Director grants permission for a later submittal date. The Director will not grant permission to submit the complete application for a new permit later than the permit's expiration date. (40 CFR § 270.10(h) and § 270.30(b))

I.E.3 Permit Expiration

Unless revoked or terminated, this permit and all conditions herein will be effective for a fixed term not to exceed 10 years from this permit's effective date. This permit and all conditions herein will remain in effect beyond the permit's expiration date if you have submitted a timely complete application (40 CFR § 270.10 and §§ 270.13 through 270.29), and through no fault of your own, the Director has not made a final determination regarding permit reissuance. (40 CFR §§ 270.50 and 270.51)

I.E.4 Need to Halt or Reduce Activity Not a Defense

In an enforcement action, you are not entitled to a defense that it would have been necessary to halt or reduce the permitted activity to maintain compliance with this permit. (40 CFR § 270.30(c))

I.E.5 Duty to Mitigate

In the event of noncompliance with this permit, you must take all reasonable steps to minimize releases to the environment resulting from the noncompliance and must implement all reasonable measures to prevent significant adverse impacts on human health or the environment. (40 CFR § 270.30(d))

I.E.6 Proper Operation and Maintenance

You must always properly operate and maintain all facilities and treatment and control systems (and related appurtenances) that you install or use to comply with this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance/quality control procedures. This provision requires you to operate back-up or auxiliary facilities or similar systems only when necessary to comply with this permit. (40 CFR § 270.30(e))

I.E.7 Duty to Provide Information

You must provide the Director, within a reasonable time, any relevant information that the Director requests to determine whether there is cause to modify, revoke and reissue, or terminate this permit, or to determine permit compliance. You must also provide the Director, upon request, with copies of any records this permit requires. The information you must maintain under this permit is not subject to the Paperwork Reduction Act of 1980, 44 USC §§ 3501 *et seq.*, (40 CFR §§ 264.74(a) and 270.30(h))

I.E.8 Inspection and Entry

Upon the presentation of credentials and other legally required documents, you must allow the Director or an authorized representative to (40 CFR § 270.30(i)):

I.E.8.a Enter at reasonable times upon your premises where a regulated activity is located or conducted, or where records must be kept under the conditions of this permit;

I.E.8.b Have access to and copy, at reasonable times, any records that you must keep under the conditions of this permit;

I.E.8.c Inspect, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

I.E.8.d Sample or monitor, at reasonable times, any substances at any location to ensure permit compliance or as RCRA otherwise authorizes.

Notwithstanding any provision of this permit, U.S. EPA retains the inspection and access authority which it has under RCRA and other applicable laws.

I.E.9 Monitoring and Records

I.E.9.a Samples and measurements taken for monitoring purposes must be representative of the monitored activity. The methods used to obtain a representative sample of the wastes, contaminated media, treatment residue, or other waste to be analyzed must be the appropriate methods from Appendix I of 40 CFR Part 261, or the methods specified in the U.S. EPA-approved waste analysis plan, or an equivalent method approved by the Director. Laboratory methods must be those specified in *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods* (SW-846, latest edition), *Methods for Chemical Analysis of Water and Wastes*

(EPA 600/4-79-020), or an equivalent method, as specified in the referenced waste analysis plan. (40 CFR § 270.30(j)(1))

I.E.9.b You must retain, at the facility, all records as specified in 40 CFR § 264.74.

I.E.9.c You must submit all monitoring results at the intervals specified in this permit.

I.E.9.d You must retain all reports, records, or other documents, required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the reports, records, or other documents, unless a different period is specified in this permit. The 3-year period may be extended by request of the Director at any time and is automatically extended during the course of any unresolved enforcement action regarding this facility. (40 CFR §§ 270.30(j), 270.31 and 264.74(b).)

I.E.10 Reporting Planned Changes

You must notify the Director as soon as possible of any planned physical alterations or additions to the permitted facility. (40 CFR § 270.30(l)(1))

I.E.11 Reporting Anticipated Noncompliance

You must notify the Director in advance, of any planned changes in the permitted facility or activity that may result in permit noncompliance. Advance notice will not constitute a defense for any noncompliance. (40 CFR § 270.30(l)(2))

I.E.12 Certification of Construction

Subject to the requirements of 40 CFR § 270.32(b)(2) and § 270.42 Appendix I, you must not operate any RCRA air emission control devices completed after the effective date of this permit until you have submitted to the Director, by certified mail or hand-delivery, a letter signed both by your authorized representative and by a registered professional engineer. That letter must state that the portions of the facility covered by this permit (including all air emission control devices required by this permit) have been constructed or modified in compliance with the applicable conditions of this permit. In addition, you must not operate the permitted control devices until either:

I.E.12.a The Director or his/her representative has inspected those portions of the facility and finds them in compliance with the conditions of the permit; or

I.E.12.b The Director waives inspection and the Permittee may commence treatment, storage, or disposal of hazardous waste in accordance with 40 CFR § 270.30(l)(2)(ii)(B).

I.E.13 Transfer of Permits

This permit is not transferable to any person, except after notice to the Director. You must inform the Director and obtain prior approval of the Director before transferring ownership or operational control of the facility (40 CFR § 270.42, Appendix I). Under 40 CFR § 270.40, the Director may require permit modification, or revocation and reissuance to change the Permittee's name and incorporate other RCRA requirements. Before transferring ownership or operation of the facility during its operating life, you must notify the Director and obtain prior approval and notify the new owner or operator in writing of the requirements of this permit and the requirements of 40 CFR Parts 264 and 270. (40 CFR §§ 264.12(c), 270.30(l)(3), and 270.40(a))

I.E.14 Twenty-Four Hour Reporting

I.E.14.a You must report to the Director any noncompliance with this permit that may endanger human health or the environment. Any such information must be promptly reported orally, but no later than 24 hours after you become aware of the noncompliance.

I.E.14.b The report must include the following information (40 CFR § 270.30(l)(6)): (1) the release of any hazardous waste that may endanger public drinking water supplies; (2) the release or discharge of hazardous waste from the hazardous waste management facility; or (3) a fire or explosion from the hazardous waste management facility. The oral report describing the occurrence and its cause must include the following details:

- (1) Name, title and telephone number of the person making the report;
- (2) Name, address and telephone number of the facility;
- (3) Name, address and telephone number of owner or operator;
- (4) Date, time and type of incident;
- (5) Location and cause of incident;
- (6) Identification and quantity of material(s) involved;

- (7) Extent of injuries, if any;
- (8) Assessment of actual or potential hazards to the environment and human health outside the facility, where applicable;
- (9) Description of any emergency action taken to minimize the threat to human health and the environment; and
- (10) Estimated quantity and disposition of recovered material that resulted from the incident.

I.E.14.c In addition to the oral notification required under Conditions I.E.14.a and I.E.14.b of this permit, a written report must also be provided within five (5) calendar days after you become aware of the circumstances. The written report must include, but is not limited to, the following:

- (1) Name, address and telephone number of the person reporting;
- (2) Incident description (noncompliance, including any release or discharge of hazardous waste), including cause, location, extent of injuries, if any, and an assessment of actual or potential hazards to the environment and human health outside the facility, where applicable;
- (3) Period(s) in which the incident (noncompliance, including release or discharge of hazardous waste) occurred, including exact dates and times;
- (4) Whether the incident's results continue to threaten human health and the environment, which will depend on whether the noncompliance has been corrected and/or the release or discharge of hazardous waste has been adequately cleaned up; and
- (5) If the noncompliance has not been corrected, the anticipated period for which it is expected to continue, and the steps taken or planned to reduce, eliminate, and prevent the recurrence of the noncompliance.

The Director may waive the requirement that the written report be provided within five (5) calendar days; however, you will then be required to submit a written report within 15 calendar days of the day on which you must provide oral notice, in accordance with Conditions I.E.14.a and I.E.14.b of this permit. (40 CFR § 270.30(1)(6))

I.E.15 Other Noncompliance

You must report all instances of noncompliance not reported under Condition I.E.14 of this permit, when any other reports this permit requires are submitted. The reports must contain the information listed in Condition I.E.14. (40 CFR § 270.30(l)(10))

I.E.16 Other Information

I.E.16.a Whenever you become aware that you failed to submit or otherwise omitted any relevant facts in the permit application or other submittal, or submitted incorrect information in the permit application or other submittal, you must promptly notify the Director of any incorrect information or previously omitted information, submit the correct facts or information, and explain in writing the circumstances of the incomplete or inaccurate submittal. (40 CFR § 270.30(l)(11))

I.E.16.b All other requirements contained in 40 CFR § 270.30 not specifically described in this permit are incorporated into this permit and you must comply with all those requirements.

I.F SIGNATORY REQUIREMENT

You must sign and certify all applications, reports, or information this permit requires, or which are otherwise submitted to the Director, in accordance with 40 CFR § 270.11. (40 CFR § 270.30(k))

I.G REPORTS, NOTIFICATIONS AND SUBMITTALS TO THE DIRECTOR

Except as otherwise specified in this permit, all reports, notifications, or other submittals that this permit requires to be submitted to the Director should be sent by certified mail, express mail, or hand-delivered to the U.S. Environmental Protection Agency, Region 5, at the following address:

RCRA Branch, LR-8J
Land and Chemicals Division
U.S. EPA Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

I.H CONFIDENTIAL INFORMATION

In accordance with 40 CFR Part 2 Subpart B, you may claim any information this

permit requires, or is otherwise submitted to the Director as confidential. You must assert any such claim at the time of submittal in the manner prescribed on the application form or instructions, or, in the case of other submittals, by stamping the words "Confidential Business Information" on each page containing such information. If you made no claim at the time of submittal, the Director may make the information available to the public without further notice. If you assert a claim, the information will be treated in accordance with the procedures in 40 CFR Part 2. (40 CFR § 270.12)

You have the burden of substantiating the claimed information is confidential, and U.S. EPA may request further information from you regarding such claim, and may reasonably determine which such information to treat as confidential.

I.I DOCUMENTS TO BE MAINTAINED AT THE FACILITY

You must maintain at the facility, until closure is completed and certified by an independent registered professional engineer, the following documents and all amendments, revisions, and modifications to them.

I.I.1 Operating Record

You must maintain in the facility's operating record the documents required by this permit, and by the applicable portions of 40 CFR §§ 264.1035, 264.1064, 264.1084, 264.1088, 264.1089 and 40 CFR § 264.73 (as they apply to the equipment used to comply with this permit).

I.I.2 Notifications

You must maintain notifications from generators accompanying initial incoming shipment of wastes subject to 40 CFR Part 268 Subpart C, that specify treatment standards, as required by 40 CFR §§ 264.73, 268.7, and this permit.

I.I.3 Copy of Permit

You must keep a copy of this permit on site, including all the documents listed in any attachments, and you must update it as necessary to incorporate any official permit modifications.

I.J ATTACHMENTS AND DOCUMENTS INCORPORATED BY REFERENCE

I.J.1 All attachments and documents that this permit requires to be submitted, if any, including all plans and schedules are, upon the Director's approval, incorporated into this permit by reference and become an enforceable part of this

permit. Since required items are essential elements of this permit, failure to submit any of the required items or submission of inadequate or insufficient information may subject you to enforcement action under Section 3008 of RCRA. This action may include fines, or permit suspension or revocation.

I.J.2 This permit also includes the documents attached hereto, all documents cross-referenced in these documents, and the applicable regulations contained in 40 CFR Parts 124, 260, 261, 262, 264, 268, 270, and the applicable provisions of RCRA, all of which are incorporated herein by reference.

I.J.3 Any inconsistency or deviation from the approved designs, plans and schedules is a permit noncompliance. The Director may grant written requests for extensions of due dates for submittals required in this permit.

I.J.4 If the Director determines that actions beyond those provided for, or changes to what is stated herein, are warranted, the Director may modify this permit according to procedures in Condition I.B of this permit.

I.J.5 If any documents attached to this permit are found to conflict with any Condition in this permit, the Condition will take precedence.

I.K COORDINATION WITH THE CLEAN AIR ACT

You must fully comply with the RCRA requirements contained in this permit. This permit does not include the requirements imposed by the Clean Air Act.

SECTION II - BOILERS (40 CFR Part 266, Subpart H)

II.A GENERAL

You must meet the applicable requirements of 40 CFR Part 266, Subpart H (§ 266.100 through § 266.112) - Hazardous Waste Burned in Boilers and Industrial Furnaces. You must also meet the requirements of 40 CFR Part 264 standards regarding:

II.A.1 Imminent Hazard Action. (40 CFR §264.4)

II.A.2 General Facility Standards. (40 CFR §§ 264.11-264.18)

II.A.3 Preparedness and Prevention. (40 CFR §§ 264.31-264.37)

II.A.4 Contingency Plan and Emergency Procedures. (40 CFR §§ 264.51-264.56)

II.A.5 Manifest System, Recordkeeping, and Reporting. (40 CFR §§ 264.71-264.77)

II.A.6 Closure. (40 CFR § 264.111-264.115)

II.A.7 Financial Requirements. (40 CFR Part 264 Subpart H, §§ 264.142, 264.143, and 264.147- 264.151)

II.B HAZARDOUS WASTE FUEL

II.B.1 Hazardous Waste Fuel

You may burn hazardous waste fuel generated from the following process sources:

- Phenol manufacturing distillation cracker bottoms (K022)
- Heavy end cracking byproduct light overheads (D018)
- Alpha-methyl styrene (AMS) distillation column bottoms (D001)
- Acetophenone distillation column bottoms (D001)
- Oil purge from dephenolation (D001)

The hazardous wastes described above may be mixed with Bis-phenol-A (BPA) manufacturing distillation tars, which is a non-hazardous waste.

II.B.2 Co-Firing with Natural Gas

In each boiler (H-530A and H-530B), natural gas must be fired whenever hazardous waste fuel is fired. The minimum heat input from the natural gas in each boiler when hazardous waste fuel is burned shall be 2.0 million BTU per hour (hourly rolling average).

II.B.3 Hazardous Waste Fuel Analysis and Feed Rate Limits

II.B.3.a The as-generated hazardous waste fuel shall be stored in one of the 2 holding tanks (V-525A & B). Samples shall be taken and analyzed to determine: (1) average Btu, (2) metals concentrations, (3) ash content, and (4) other factors limiting the boiler operation to comply with regulatory requirements. The sample analysis results should be used for computing the maximum hazardous waste fuel flow to the boilers for the purpose of meeting the boiler operating conditions, hereinafter stipulated, and the metals emission limits. You must follow the approved waste analysis plan included in the RCRA Part B Permit Application.

II.B.3.b The hazardous waste fuel feed rate limits on metals and on total chloride and chlorine set forth in Condition II.B.3.c below are based on the approved Trial Burn Report and the Adjusted Tier I feed rate screening limits in 40 CFR §§ 266.106 and 266.107. For any significant changes in the hazardous waste fuel characteristics due to manufacturing processes which may affect the compliance of 40 CFR §§ 266.106 and 266.107, you must process a Class 3 permit modification in accordance with 40 CFR § 270.42.

II.B.3.c The ash feed to each boiler shall not exceed 4.4 pounds/hour (1,996 g/hr). The feed rate of each of the following constituents shall not exceed the respective maximum feed rate shown. The feed rate of each constituent must be calculated by multiplying the hazardous waste fuel hourly rolling average feed rate by the constituent's concentration.

No.	Constituents	Maximum Feed Rate Per Boiler g/hr/boiler
1	Arsenic (As)	5.2
2	Beryllium (Be)	4.8
3	Cadmium (Cd)	6.4
4	Total Chromium (Cr)	14.7
5	Antimony (Sb)	3,411
6	Barium (Ba)	568,541
7	Lead (Pb)	1,023
8	Mercury (Hg)	3,411
9	Silver (Ag)	34,112
10	Thallium (Tl)	5,685
11	Chlorine/Chloride	4,548

II.B.4 Hazardous Waste Fuel Temperature and Pressure

The hazardous waste fuel must be maintained at a minimum temperature of **140 °F** (hourly rolling average) and the temperature must be monitored on a continuous basis. When the temperature falls below 140 °F, it should trigger a boiler trip or automatic waste feed cutoff.

The hazardous waste fuel supply pressure must be monitored at least one time during each of the period of time 0000-0800 hours, 0800-1600 hours, and 1600-2400 hours and be recorded electronically or in the boiler operating record. When the hazardous waste fuel supply pressure (between the pump discharge and the burner firing valve (which for H-530A is valve number FV5319, and which for H-530B is valve number FV5367)) falls below 125 psig or the hazardous waste fuel supply pressure (downstream of such burner firing valve) exceeds 150 psig, either a boiler trip or automatic waste feed cut-off shall be triggered.

II.C BOILERS (H-530A and H-530B)

II.C.1 General

II.C.1.a The hazardous waste fuel boilers are designated as H-530A and H-530B. These boilers were designed and manufactured by Babcock & Wilcox (B&W) in accordance with ASME Fired Pressure Vessel Code. Each boiler is rated for 70,000 pounds/hr steam production at 250 psig. The steam generated from the boilers is piped to a common medium pressure steam header, which is maintained at an average pressure of 175 psig.

II.C.1.b The boiler burners were also manufactured by B&W. Boiler cold start up must be fired with natural gas to establish a minimum boiler chamber temperature listed in the table below prior to firing hazardous waste fuel.

II.C.1.c The boilers must be operated with effective permissives and electric interlockings to ensure safe and proper operation. Failure to satisfy permissive controls should trigger an appropriate response, which may include preventing boiler startup or boiler trip.

II.C.1.d You must submit a trial burn plan every 5 years from the effective date of this permit unless another option is available under 40 CFR § 270.22(a).

II.C.1.e Each boiler must meet the definition of a "boiler" as set forth in 40 CFR § 260.10

II.C.2 Boiler Operating Conditions

When hazardous waste fuel is burned in the boiler, the following parameters must be monitored and the following limits must be met. The abbreviations used in the following table shall mean:

HRA: Hourly rolling average
SCFM: Standard Cubic Foot/Minute

No.	Parameters	H-530A	H-530B
1	Maximum Steam Header Nominal Pressure, psig	205	205
2	Minimum Feedwater Supply Temperature, ° F (HRA)	251	251
3	Maximum Hazardous Fuel Heat Input, MM Btu/Hr (HRA)	71.9	72.0
4	Maximum Hazardous Fuel Input, pounds/hour (HRA)	4,432	4,444
5	Maximum Steam Output with Hazardous Fuel, pounds/hour (HRA)	61,061	63,093
6	Maximum Total Heat Input, MM Btu/Hr (HRA)	74.0	74.0
7	Minimum Heat Input, MM Btu/Hr (HRA)	56.6	57.7
8	Minimum Oxygen Concentration in Flue Gas, % (HRA)	3.6	2.9
9*	Minimum Boiler Chamber Temperature, ° F (HRA)	1,704	1,733
10	Minimum Atomizing Steam Pressure over waste feed pressure, psig (HRA)	35	35
11	Maximum CO Concentration (60-minute average), ppmv dry @ 7 % O ₂	100	100
12	Maximum Combustion Air Flow, SCFM (HRA)	14,491	14,882
13**	Maximum Particulate Emission, grains/dscf @ 7 % O ₂	0.08	0.08
14	Soot Blowing Frequencies, times/day	1	1

* Two independent measurements of the boiler chamber temperature shall be made, and an hourly rolling average shall be calculated for each set of measurements. The lower hourly rolling average of the two shall be used to determine compliance with the minimum temperature standard.

** No continuous monitoring of this item is required. It shall apply at all times and shall be met during any particulate matter test.

II.C.3 Automatic Waste Feed Cut-Offs

II.C.3.a The automatic waste feed cut-offs systems for a boiler shall be activated when one of the following conditions occurs on that boiler (40 CFR § 266.102(e)(7)(ii)):

- (1) High hazardous waste fuel pressure
- (2) Low hazardous waste fuel pressure
- (3) Low hazardous waste fuel temperature
- (4) Low atomizing steam pressure
- (5) High CO concentration
- (6) Low combustion chamber temperature
- (7) High combustion air flow rate

II.C.3.b The automatic hazardous waste feed cutoff system and associated alarms must be tested at least once every 7 days when hazardous waste is burned to verify operability in accordance with 40 CFR § 266.102(e)(8)(iv).

II.C.3.c The automatic waste cutoff must be recorded for the event which actuated the cutoff. The frequency of such cutoff shall not exceed 14 times per week per boiler.

II.C.4 Boiler Ancillary Equipment

Deaerating feedwater heater, chemical feed system, continuous blow-down, blow-off system, boiler trims, high and low level alarms, feedwater regulator, instrumentation and control must be properly maintained to safeguard the operations of the boilers.

II.C.5 Boiler System Maintenance Requirements

II.C.5.a If a boiler burns hazardous waste at any time during a fifteen-month period, then that boiler must be cleaned at least once during that fifteen-month period. Cleaning consists of removing, to the extent practicable, accumulated ash in the boiler. An extension of time between cleanings may be requested of, and approved by the Director. The boiler ash must be handled, transported and disposed of as hazardous waste. The Permittee may define the beginning and end of each fifteen-month period.

II.C.5.b Each boiler must meet the requirements of the American Society of Mechanical Engineers' (ASME) Pressure Vessel Code or equivalent requirements.

II.C.5.c The Distributed Control System (DCS) must be maintained as required by the instrumentation supplier or in an equivalent manner, and calibrated as necessary to maintain its required accuracies.

II.C.5.d Boiler tubes must be cleaned and replaced, as required, to maintain reasonable heat transfer efficiency and safety of boiler operations.

II.C.5.e All instrumentation and control systems must be properly calibrated as recommended by the suppliers of the devices and/or systems in accordance with written maintenance practices and maintained in good operating condition, including but not limited to: the DCS; transducers; indicator controllers; stack CO monitor; stack O₂ monitor; natural gas flow meters; hazardous waste fuel flow meters; boiler combustion chamber thermocouples; and combustion air flow meters.

II.C.6 Permit Modification

The U.S. EPA may initiate a permit modification to include additional conditions if it determines that the permit conditions specified herein are not protective of human health and the environment as required under RCRA Section 3005(c)(3).

II.D RECORDKEEPING

You must keep in the operating record of the facility all information and data which indicate that the operations of the boilers are in compliance with the limits established in this permit in accordance with 40 CFR § 266.102(e)(10).