



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**  
REGION 6  
1201 ELM STREET, SUITE 500  
DALLAS, TEXAS 75270

November 22, 2022

Mr. Stephen LeDoux  
Responsible Official  
Blue Cube Operations, LLC  
21935 LA-1  
Plaquemine, Louisiana 70764

**RE: The United States Environmental Protection Agency (EPA) Region 6 Approval of the Polychlorinated Biphenyl (PCB) F-700 Incinerator Owned and Operated by Blue Cube Operations LLC, (BCO), Plaquemine, Louisiana (EPA ID No. LAR000086074) With the Dow Chemical Company (Dow) (EPA ID No. LAD008187080) Retaining Ownership of the Property on Which the Incinerator Stands.**

Dear Mr. LeDoux:

This letter and the enclosed Conditions of Approval grants approval to BCO for high temperature incineration of onsite generated liquid PCBs in its F-700 incinerator with Dow retaining ownership of the property on which the incinerator stands. A Public Notice was published in both the Houma Today and the Plaquemine Post South newspapers announcing the proposed approval which opened a 45-day comment period, during which requests could be made for a Public Hearing. No comments were received during the comment period which closed on November 17, 2022.

Violation of 40 CFR Part 761, or any of the enclosed Conditions of Approval may subject BCO to enforcement action under the Toxic Substances Control Act (TSCA) and/or other applicable laws and regulations. Such action could result in a termination, revocation, or modification of the approval. This approval becomes effective on the date of this letter and expires at midnight, the same day and month, five years later.

If you have questions, please contact Tracie Donaldson at (214) 665-6633 or Dale Thrush at (214) 665-9799

Sincerely,

11/22/2022

**X Ronald D. Crossland**

Ronald D. Crossland

Signed by: RONALD CROSSLAND

Director  
Land, Chemicals and Redevelopment Division

Enclosure

cc: Robert Thomas, LDEQ

**CONDITIONS OF APPROVAL  
FOR  
INCINERATION OF BLUE CUBE OPERATIONS, LLC (BCO) GENERATED PCBs  
IN THE F-700 INCINERATOR  
AT ITS PLAQUEMINE, LOUISIANA FACILITY**

This approval is issued pursuant to Section 6(e) of the Toxic Substances Control Act (TSCA) and the federal Polychlorinated Biphenyls (PCB) Regulations, 40 CFR Part 761.

Failure to comply with the approval conditions specified herein shall constitute a violation of 40 CFR 761.50(a) and 761.60(e) and may also be a violation of other provisions of the PCB Regulations in 40 CFR Part 761. A violation of the regulations is a prohibited act under Section 15 of TSCA.

The terms and abbreviations in these conditions are in accordance with those defined in 40 CFR 761.3, unless otherwise noted. The word "Facility" hereinafter refers to Blue Cube Operations (BCO), Plaquemine, Louisiana, which owns and operates the F-700 Incinerator. The Facility is located on Dow property in Plaquemine, Louisiana, near Highway 1 South.

Pursuant to 40 CFR 761.65 and 761.70, the Facility is approved to operate the following Facility units for storage and disposal of onsite generated PCBs in the manner prescribed by this approval. All PCB waste management is to be confined to the approved units listed in this approval.

**FACILITY SPECIFIC CONDITIONS**

1. Pursuant to 40 CFR 761.70(a) and (d), the Facility is authorized to incinerate PCBs containing waste from the following sources in the F-700 Incinerator:
  - a. "Hex" waste generated in the Perchlorethylene/Carbon Tetrachloride process and sent to tanks D-13 and D-15 prior to incineration;
  - b. Ethylene dichloride (EDC) "Heavies" generated in the EDC process and sent to tanks T-106 and T-107 prior to incineration;
  - c. PCB laboratory samples and spill material collected for disposal; and
  - d. PCB containing material from decontamination and maintenance activities.
2. Pursuant to 40 CFR 761.65(a), the Facility is authorized to operate the following units for storage of on-site generated liquid PCBs.
  - a. Tanks D13 and D15 to store on-site "Hex" waste prior to being incinerated in F-700;
  - b. Tanks T-106 and T-107 to store EDC "Heavies" prior to being shipped off-site for

disposal or incinerated in F-700.

3. Pursuant to 40 CFR 761.70(a)(1)(i), the F-700 Incinerator shall maintain a minimum temperature of 1200 °C ( $\pm 100$  °C) and 3 percent excess oxygen in the stack gas when incinerating on-site generated liquid PCBs.
4. Pursuant to 40 CFR 761.70(d)(5), EPA waives the incinerator dwell time requirement of 40 CFR 761.70(a)(1)(i). Instead, the Facility shall comply with Specific Condition 5 which limits the maximum stack gas flow rate based on the 2005 Trial Burn. Residence time is calculated using the stack gas flow rate. The 2005 Trial Burn demonstrated a sufficient destruction efficiency at an average stack gas flow rate of 4027 dscfm.
5. Pursuant to 40 CFR 761.70(d)(4), the maximum stack gas flow rate shall be limited to 4027 dscfm.
6. Pursuant to 40 CFR 761.70(d)(5), EPA waives the 99.99% combustion efficiency requirement of 40 CFR 761.70(a)(2). The Facility was granted this waiver based on results of a 2005 PCB Trial Burn in which the incinerator demonstrated destruction efficiencies from 99.99975% to greater than 99.9999%.
7. Based upon guidelines issued by EPA, the records required in Specific Conditions 18 and 19 meet the monitoring requirements of 40 CFR 761.70(a)(3).
8. Pursuant to 40 CFR 761.70(a)(4), the temperatures of the incineration process shall be continuously measured and recorded. The combustion temperature of the incineration process shall be based on either direct (pyrometer) or indirect (wall thermocouple-pyrometer correlation) temperature readings.
9. Pursuant to 40 CFR 761.70(a)(5), the flow of PCBs to the incinerator shall stop automatically whenever the combustion temperature drops below 1100 °C required by Specific Condition 3.
10. Pursuant to 40 CFR 761.70(a)(7)(i), the O<sub>2</sub> shall be continuously monitored and recorded when the incinerator is incinerating PCBs.
11. Pursuant to 40 CFR 761.70(a)(7)(ii), the CO in the exhaust gas shall be continuously monitored and recorded when the incinerator is incinerating PCBs.
12. Pursuant to 40 CFR 761.70(d)(5), EPA waives the CO<sub>2</sub> monitoring requirements of 40 CFR 70(a)(7)(iii). CO and CO<sub>2</sub> are both indicators of proper combustion. The continuous monitoring of temperature (Specific Condition 8), O<sub>2</sub> (Specific Condition 10), and CO (Specific Condition 11) are deemed sufficient parameters to monitor combustion in the incinerator.

13. Pursuant to 40 CFR 761.70(a)(8)(i), the flow of PCBs to the incinerator shall stop automatically if there is failure of the O<sub>2</sub> or CO monitoring operations required by Specific Conditions 10 and 11.
14. Pursuant to 40 CFR 761.70(a)(8)(ii), the flow of the PCBs to the incinerator shall stop automatically if there is a failure of the continuous PCB feed flow measuring and recording equipment of Specific Condition 19.
15. Pursuant to 40 CFR 761.70(a)(8)(iii), the flow of PCBs to the incinerator shall stop automatically when the excess oxygen falls below 3.0 percent required by Specific Condition 3.
16. Pursuant to 40 CFR 761.70(a)(9), the water scrubbing tower shall be used for HCl control during PCB incineration and shall meet any performance requirements specified by EPA. Scrubber effluent shall be monitored and shall comply with applicable effluent or pretreatment standards, and any State and Federal laws and regulations.
17. Pursuant to 40 CFR 761.70(d)(4), EPA requires that the PCB waste feed streams shall automatically shut off when maximum stack gas flow rate exceeds the limit in Specific Condition 5.
18. Pursuant to 40 CFR 761.70(d)(4), the Facility shall analyze the following PCB contaminated incinerator waste feed streams for PCBs at least once every six months and the results maintained on-site:
  - a. "Hex" waste from the Perchloroethylene/Carbon Tetrachloride production process.
  - b. EDC "Heavies" from the Ethylene Dichloride production process.
  - c. For the "Hex" waste only, the feed rate shall be a calculated flow rate based on the tank level drop or a continuous measuring and recording device.
  - d. For the EDC "Heavies" waste, the feed rate shall be monitored with a continuous measuring and recording device.
19. Pursuant to 40 CFR 761.70(d)(4), the PCB feed rate shall not exceed 2.3 pounds per hour. The PCB concentration for the EDC Heavies, and Hex waste shall be based on the average of the two most recent sample analysis results for each stream. The flow rate for feed streams to the F-700 Incinerator shall be measured and recorded by a continuous flow measuring and recording device, and the results kept on file.

20. Pursuant to 40 CFR 761.70(d), the Facility shall continuously monitor and record the stack gas flow rate.
21. The continuous monitors for O<sub>2</sub> and CO required by Specific Conditions 10 and 11 shall meet the performance standards in 40 CFR Part 60, Appendix B.
22. All PCB tank storage facilities shall comply with 40 CFR 761.65(c)(7).
23. Decontamination of PCB containers or movable equipment shall comply with 40 CFR 761.79.
24. All PCB articles, equipment and containers shall be properly marked as required by 40 CFR 761.40 and 45.
25. All other PCB storage shall comply with 40 CFR 761.65(b).

### **GENERAL CONDITIONS**

1. For approval of additional units, the Facility shall not commence storage or disposal in the new unit until it has requested approval from the EPA Region 6 Land, Chemical and Redevelopment Division, and received written approval from EPA.
2. For expansion in capacity or modification of an existing unit, the Facility shall not store or dispose of PCBs in the modified unit until it has requested approval from the EPA Region 6 Land, Chemical and Redevelopment Division, and received written approval from EPA.
3. The Facility shall properly operate and maintain all facilities and systems of treatment and control (and related appurtenances), which are installed and used to achieve compliance with the conditions of this approval. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures.
4. The Facility shall comply with all applicable requirements of 40 CFR Part 761, as well as the specific and general conditions of this approval. The Facility is not required to comply with only those requirements of 40 CFR 761.70 that are specifically waived in this approval.
5. This approval applies only to the requirements under the Toxic Substances Control Act (TSCA). This approval does not cite to or make any determination regarding the requirements that may be applicable under other federal, state, or local law. Further, this approval does not release the

Facility from any applicable requirements of federal, state, or local law.

6. The conditions of this approval are severable, and if any provision of this approval, or any application of any provision is held invalid, the remainder of this approval shall not be affected thereby.
7. Violations of any applicable regulations or conditions of this approval may be subject to enforcement action and may result in termination of this approval. Violation of any requirement of this approval is a violation of 40 CFR 761.60(e) and 761.50(a) and may also be a violation of other provisions of 40 CFR Part 761. A violation of the regulations is a prohibited act under Section 15 of TSCA.
8. The Facility shall furnish to EPA, within a reasonable time, any relevant information to determine whether cause exists for modifying, revoking, reissuing, or terminating this approval, or to determine compliance with this approval.
9. The Facility shall also furnish to EPA, upon request, copies of records required to be kept under this approval or the PCB regulations.
10. The Facility shall allow an authorized representative, upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter the Facility where PCBs are being handled, stored, treated, or disposed.
  - b. Have access to and copy, at reasonable times, any records that must be kept under the TSCA PCB regulations.
  - c. Inspect any facilities, equipment (including monitoring and control equipment).
  - d. Sample or monitor for the purpose of assuring that the Facility is operating in compliance with the conditions of this approval and the TSCA PCB regulations.
11. The Facility shall comply with all applicable monitoring and record keeping requirements of 40 CFR 761.70 and 761.180, except those that have been specifically waived in this approval. All PCB records, documents, and reports shall be maintained at one centralized location at the Facility and shall be made available for inspection by authorized EPA representatives.
12. All records required by 40 CFR 761.180 and this approval shall be written in ink, typed, or contained electronically. Any modification or correction of the records must be initialed and dated by the supervisor in charge.
13. The Facility shall notify EPA at least ninety (90) days before transferring ownership of the Facility. The Facility shall also submit to the EPA, at least ninety (90) days before such transfer, a notarized affidavit signed by the transferee stating that the transferee shall abide by the terms of this approval.
14. This approval shall administratively continue beyond the expiration date in General Condition

19 until EPA reaches a final decision on an application if: the Facility has submitted an application for approval to EPA and EPA, through no fault of the Facility, does not issue a new approval with an effective date on or before the expiration date of this approval. The Facility shall continue to comply with the conditions of the administratively continued approval and may not operate under any proposed revised conditions. The Facility shall, at least 180 days prior to expiration of this approval, submit to the EPA an application that includes all documents necessary to satisfy the requirements for a TSCA PCB approval under 40 CFR Part 761.

15. The EPA may require the Facility to conduct another demonstration test to assure the EPA that the Facility will continue to operate its F-700 Incinerator in accordance with the applicable performance standards and in a manner that does not present an unreasonable risk of injury to health or the environment. As a result, the Facility is encouraged to contact the EPA Region 6 Land, Chemical and Redevelopment Division, RCRA Permits and Solid Waste Section, 180 days prior to the expiration date of this approval, to ascertain whether the EPA would require the Facility to conduct a new demonstration test. This is especially important if the Facility wants to make changes to its operating parameters. Under those circumstances, the Facility will not be allowed to operate under revised operating conditions until the EPA issues the Facility a fully renewed, and revised operating approval.
16. PCB spills occurring at the Facility, or from any Facility-owned PCB transport vehicle, shall be cleaned up according to the PCB Spill Cleanup Policy, 40 CFR Part 761, Subpart G.
17. PCB spills directly contaminating surface water, sewers, or drinking water supplies, PCB spills directly contaminating grazing lands or vegetable gardens, and/or PCB spills exceeding 10 pounds of PCBs by weight, shall be reported within twenty-four (24) hours of the event to the EPA Region 6 Land, Chemical and Redevelopment Division, RCRA Permits and Solid Waste Section.
18. If spills cannot be cleaned up within twenty-four (24) hours, a Facility official shall notify the EPA Region 6 Land, Chemical and Redevelopment Division of the circumstance of the spill, the estimated time of cleanup, and a justification for the delay of the cleanup. The EPA may order cessation of PCB disposal at the Facility if spills are not cleaned up to acceptable levels as defined by EPA.
19. This approval shall become effective on the date of the approval letter and shall expire the same month and day at midnight after five years.

**END OF APPROVAL CONDITIONS**