



Notice of Construction (NOC) Approval

Issued in accordance with:
Chapter 70A.15 RCW, SRCAA Regulation I,
Article V, Chapter 173-400 WAC, and Chapter
173-460 WAC

1610 S Technology Blvd, STE 101, Spokane, WA 99224 (509) 477- 4727

NOTICE OF
CONSTRUCTION (NOC):

#1932

DATE APPROVED:

5/20/2024

DATE OF 1st REVISION:

DRAFT- Adding new CVD furnaces, boilers, and cooling towers

DATES OF FORMERLY APPROVED
NOCs:

SEE ATTACHMENT A

COMPANY NAME:

Collins Aerospace
11135 W Westbow Blvd
Spokane, WA 99224

FACILITY LOCATION:

Same as above

FACILITY CONTACT:

Chris Matuszak
(509)744-6038

DESCRIPTION OF EQUIPMENT:

(18) CARBON VAPOR DEPOSITION (CVD) FURNACES (CVD FURNACES #1-18), (12) NEW CVD FURNACES (CVD FURNACES #19-30), (6) 33.45 MMBTU/HR (800 BOILER HP) CLEAVER BROOKS CB (LE) 700-800-200 BOILERS FIRED WITH EXHAUST FROM THE CVD FURNACES AND NATURAL GAS (Boilers #1-6), (1) 30.26 MMBtu/hr (800 boiler hp) CLEAVER BROOKS CBLE-4D BOILER FIRED WITH EXHAUST FROM THE CVD FURNACES AND NATURAL GAS (Boiler #7), (3) 49.98 MMBtu/hr CLEAVER BOOKS CBEX-2W BOILERS FIRED WITH EXHAUST FORM THE CVD FURNACES AND NATURAL GAS (Boilers #8-10)
(3) MARLEY NCC263GM TWO-CELL COOLING TOWERS (Cooling Tower #1-3), (2) MARLEY NC8414U

TWO-CELL COOLING TOWERS (Cooling Tower #4-5), (3)
MARLEY NC8414U NON-CONTACT TWO-CELL
COOLING TOWERS (Cooling Towers #6-8)

PREPARED BY: _____
John Conklin, Environmental Engineer

REVIEWED BY: _____
April Westby, PE

APPROVED BY: _____
April Westby, Executive Director

ATTACHMENT A

The NOC below has been incorporated into NOC #1932

NOC #	Date Issued	Description
927	8/3/2022 Originally Issued: 1/19/1999	18 carbon vapor deposition (CVD) furnaces controlled with (6) 33.45 MMBTU/hr. (800 boiler hp) Cleaver Brooks CB (LE) 700-800-200 natural gas fired boilers; 3 Marley NCC263GM Two-cell cooling towers; 2 Marley NC8414U two-cell cooling towers
	Revision # 1 3/19/1999	To require benzene testing for the boiler
	Revision # 2 11/2/1999	To add conditions related to the 18 hotwell vents associated with the CVD furnaces
	Revision # 3 11/12/1999	To correct errors in the original approval
	Revision # 4 4/5/2001	To revoke section B as it relates to carbonization process
	Revision # 5 3/28/2005	To allow 0.005% drift from the cooling towers
	Revision # 6 8/22/2013	Installation of an additional cooling tower
	Revision # 7 7/26/2017	Installation of an additional cooling tower
	Revision #8 8/3/2022	Baghouse removed from NOC incorporated into NOC #1887

PRELIMINARY DETERMINATION

A preliminary determination has been made, based on review of the Notice of Construction and Application for Approval (NOC) #1932 and the carbon vapor deposition (CVD) process expansion request (originally designated as NOC #1944). The proposed project, if constructed and operated as described in the NOC, will be in compliance with the applicable rules and regulations, as adopted pursuant to Chapter 70A.15 RCW, including Chapters 173-400 WAC and 173-460 WAC and SRCAA Regulation I, provided that the following conditions are met:

One-time requirements for the Boiler #7-10, CVD Furnaces #19-30, and Cooling Towers #6-8

1. SRCAA shall be notified at least seven days prior to the anticipated finalization of commissioning (i.e. operational control is handed over to Collins) of each boiler, CVD Furnace, or Cooling Tower. Combined notifications are acceptable.
2. This order of approval shall become invalid (as it applies to each individual source) if any of the following occur:
 - a. Construction has not commenced on Boiler #7 by November 30, 2025;
 - b. Construction has not commenced on Boiler #8 and 9, CVD Furnace #19-#20, or Cooling Tower #6-#7 by December 31, 2027;
 - c. Construction has not commenced on CVD Furnace #21-#22 by December 31, 2028;
 - d. Construction has not commenced on CVD Furnace #23-#24 by December 31, 2029;
 - e. Construction has not commenced on Boiler #10, CVD Furnace #25-#30, or Cooling Tower #8 by December 31, 2032;
 - f. Construction is discontinued for a period of eighteen months or more; or
 - g. Construction is not completed within eighteen months of commencement.

SRCAA may extend any of the eighteen-month periods referenced above, provided the proponent demonstrates that an extension is justified and the criteria given in SRCAA Regulation I, Section 5.13.B are met.

Boiler and CVD Furnace Requirements

3. The boilers and CVD furnaces shall be maintained in good operating condition. An operation and maintenance (O&M) plan or plans covering all boilers and CVD furnaces must be approved by SRCAA. Equipment must be added to O&M plan no later than 30 days after the finalization of commissioning. Manufacturer O&M manuals and/or existing O&M plans, that include the information described in Conditions 3.a – 3.e below, are acceptable. New Equipment may be incorporated into an existing O&M plan or have its own stand-alone plan. O&M plans may apply to multiple boilers or CVD furnaces. Once approved, the O&M plan(s) shall be followed.

The O&M plan(s) shall be kept on-site and made available to SRCAA personnel upon request.

The O&M plan shall, at a minimum, include the following:

- a. Normal operating parameters for the boilers;
- b. A description of the periodic maintenance activities that will be performed;
- c. The frequency each maintenance activity will be performed;
- d. Corrective actions to be taken if any operating parameter is outside of the normal range;
- e. Recordkeeping form(s) to be used to document the date and nature of maintenance activities performed and any corrective actions taken.

Records, including the recordkeeping forms used to document maintenance activities and corrective actions taken, shall be kept in accordance with Condition #21 below.

4. The exhaust gases from the CVD furnaces must be vented to the boilers for control at all times, except during excused off-gas conditions, as detailed in a. – d. below:
 - a. The exhaust gases from the CVD furnaces may be vented through the hotwells and released uncontrolled through roof vents only during excused off-gas conditions, which occur during CVD furnace start-ups, electrical power outages, inadvertent/unplanned operator actions, unplanned boiler faults, unplanned instrument air faults, steam system faults, or furnace gas recovery blower faults.
 - b. No more than 224 minutes of emissions, under excused off-gas conditions, are permitted to bypass the boilers from all furnaces combined, during any consecutive twelve-month period.
 - c. The gas supply to the CVD furnaces must automatically shut off after 90-seconds of continuous off-gassing.
 - d. To monitor the cumulative minutes of emissions under excused off-gas conditions, a tracking module must be established in the control system to monitor the total minutes of off-gassing from all furnaces combined. The total accumulated venting minutes must be totaled monthly and recorded, along with a notation as to the type of excused off-gas condition. The monthly records must be totaled annually and reported to SRCAA.
 - e. Records of the information collected for Condition 4.d shall be kept in accordance with Condition 23.
5. Only natural gas and process gas (residual gas) coming from the CVD furnaces shall be used to fire any of the boilers. The owner or operator shall submit a written certification to SRCAA before the boilers commence operation that only natural gas and process gas will be used to fire the boilers. The 1/14/99 letter from Greg Ryan of Goodrich is sufficient to meet the certification submittal requirement.
6. Boilers #1-#7 shall be controlled by a flue gas recirculation system whenever in operation.

7. The boilers shall not exceed the following emissions limits when firing at high fire (80% load or higher):

BOILER #	NITROGEN OXIDES (NOX) PPMV @ 3%O ₂	CARBON MONOXIDE (CO) PPMV @ 3%O ₂	HYDROCARBONS (HC) PPMV @ 3%O ₂	PARTICULATE MATTER (PM10) LB/MMBTU
1-6	30	50	40	0.01
7	30	50	8*	0.0075
8-10	30	25	4*	0.0075

*- VOC excluding methane

8. Within 90 days after Boiler #7, 8, 9, and 10's commissioning has been finalized, an initial performance test shall be conducted on each boiler, to demonstrate compliance with the emission limits given in Condition 7 above. SRCAA may extend this deadline if a request is made in writing and approved within the initial 90 days. The testing, specified below, shall be performed in accordance with SRCAA Regulation I, Section 2.09, unless alternate test methods or equivalent tests are requested in writing and approved by SRCAA:
- a. SRCAA shall be notified at least 30 calendar days prior to the start of the performance test. A written test plan, including a description of the method(s) proposed, shall be submitted to SRCAA for approval at least 30 calendar days prior the start of the initial performance test. Once approved, the test plan shall be followed.
 - b. The boiler shall be operated at a minimum of 80% of rated capacity or SRCAA approved alternative firing rate.
 - c. Testing of the boiler shall be performed as described below:
 - i. Testing of the boiler shall consist of three separate one-hour runs.
 - ii. The following constituents shall be measured during each test run:
 - Volumetric flow rate and temperature, per EPA Methods 1 & 2;
 - Oxygen (O₂) & Carbon Dioxide (CO₂), per EPA Method 3A;
 - Moisture content, per EPA Method 4;
 - Particulate Matter (PM), per EPA Method 5 and Method 202
 - Oxides of Nitrogen (NO_x), per EPA Method 7E;
 - Carbon Monoxide (CO), per EPA Method 10;
 - Volatile Organic Compounds (VOC), per EPA Method 25A, Method 18, Method 320, or TO-15 (Note: methane emissions should be excluded from the results)
 - d. A performance test report shall be prepared and submitted to SRCAA within 45 calendar days of completion of the initial performance test.
 - e. Records of the performance test shall be kept in accordance with Condition #21
9. The owner or operator shall conduct periodic combustion tests on Boilers #1-6 to verify compliance with the NO_x and CO emission limits given in Condition 8. Boiler #7, #8, #9, and #10 shall begin the periodic combustion testing the calendar year following the initial

performance test described in Condition 8. The tests shall be performed with the boiler operating on high fire (80% or higher load) using a combustion analyzer or SRCAA approved alternative test method. Testing shall be done per the following requirements:

- a. The combustion tests must be conducted on each boiler at least once per calendar year, unless SRCAA approves an alternate testing schedule. The test shall reflect the boiler's operation under actual conditions.
- b. The combustion test shall be capable of analyzing for NO_x and CO emissions.
- c. The combustion analyzer shall be calibrated using manufacturer recommended procedures and certified calibration gases, immediately prior to the test.
- d. During each combustion test, the following operational parameters shall be measured and recorded:
 - i. NO_x and CO concentrations (ppmv) in the exhaust stream;
 - ii. Temperature;
 - iii. Percent O₂ for each NO_x and CO reading; and
 - iv. Average Load

e. Reports, documenting the results of each combustion test, shall be submitted to SRCAA within 45 day of completion. Each report shall include:

- i. A calibration report for the combustion analyzer;
- ii. A summary of the NO_x and CO emissions given in ppmv and corrected to 3% oxygen;
[NO_x, or CO] ppmv (@ 3% O₂) = Measured [NO_x, or CO] ppmv x (20.9-3)/(20.9-Measured [NO_x, or CO] %O₂)

(Example: Measured NO_x = 20 ppmv @ 7.5% O₂, & CO = 30 ppmv @ 8.5% O₂;

therefore, NO_x @ 3% O₂ = 20 x $\frac{(20.9-3)}{(20.9-7.5)}$ = **26.7** ppmv NO_x @ 3% O₂, and

CO @ 3% O₂ = 30 x $\frac{(20.9-3)}{(20.9-8.5)}$ = **43.3** ppmv CO @ 3% O₂

- iii. The parameters listed under e.; and
- iv. Copies of actual data sheets.

f. Records of each performance test shall be kept in accordance with Condition #21

10. SRCAA may require performance testing of any boiler in accordance with the methods required under Condition 8 at any time, including but not limited to, occasions when a boiler fails to demonstrate compliance with the NO_x and CO emissions limits during the combustion testing required under Condition 9.

11. Visible emissions from the boilers exhaust stacks shall not exceed 10% during any six-minute average, as determined using EPA Reference Method 9.

12. The boiler stacks shall each have a minimum height of 34 feet above the ground and shall exhaust vertically. No elbows, tees, or stack caps that impede exhaust air vertical flow shall

be installed at the end of stacks.

13. In accordance with 40 CFR Part 60 Subpart Dc and SRCAA Regulation I Section 2.16(A)(1), monthly fuel usage records of both natural gas and residual gas burned in each boiler shall be reported to SRCAA annually. Records must be kept in accordance with Condition #21.

Cooling Tower Requirements

14. The cooling towers shall be maintained in good operating condition. An operation and maintenance (O&M) plan or plans covering all cooling towers must be approved by SRCAA. New Equipment must be added to O&M Plan no later than 30 days after the finalization of commissioning of the equipment. Manufacturer O&M manuals and/or existing O&M plans, that include the information described in Conditions 14.a – 14.e below, are acceptable. New Equipment may be incorporated into an existing O&M plan or have its own stand-alone plan. O&M Plans may apply to multiple cooling towers. Once approved, the O&M plan(s) shall be followed. The O&M plan(s) shall be kept on-site and made available to SRCAA personnel upon request.

The O&M plan(s) shall, at a minimum, include the following:

- a. Normal operating parameters for the cooling tower
- b. A maintenance schedule for the cooling tower
- c. Monitoring and record keeping requirements for the cooling tower
- d. A description of the monitoring procedures for the cooling tower
- e. Corrective actions for abnormal cooling tower operation

Records, including the recordkeeping forms used to document maintenance activities and corrective actions taken, shall be kept in accordance with Condition #21 below.

15. The cooling tower treatment system shall not use chemicals containing hexavalent chromium in its treatment system. Annual usage of these cooling tower chemicals shall be reported on forms provided by SRCAA. Annual usage records and Safety Data Sheets (SDS) shall be kept for all products used in the cooling tower treatment system in accordance with Condition #21.
16. The cooling towers shall use high efficiency drift eliminators guaranteed by the manufacturer to limit drift to the values in the table below:

Cooling Tower #	% Drift
1-5	0.005
6-8	0.0005

Records of the manufacturer guaranteeing the drift to be less than or equal to drift percentage above must be kept in accordance with Condition #21.

17. The conductivity of the cooling tower water shall not exceed **2,770 micro-ohms**. The conductivity of the cooling tower water shall be measured and recorded at least once per

month for the first twelve months of operation. After the first twelve months of operation, the conductivity shall be measured and recorded at least once per quarter. An alternate conductivity monitoring frequency may be approved by SRCAA, upon request. Records shall be kept in accordance with Condition #21.

18. The deposition of particulate matter or mist emissions from the cooling tower onto the property of others or beyond the property line is prohibited, per SRCAA Regulation I, Section 6.05.

CLEANING & MAINTENANCE

19. All products used for cleaning and maintenance that contain VOCs and/or toxic air pollutants (TAPs) listed in WAC 173-460 must be kept in tightly sealed containers. This includes fresh and dirty VOC and/or TAP containing products and shop towels used with these products. Normally closed pump top cans shall be used to dispense VOC and/or TAP containing products. If spills occur, they shall be cleaned up promptly.
20. Annual usage records and Material Safety Data Sheets (MSDS) shall be kept for all products used for cleaning and maintenance that contain VOCs and/or toxic air pollutants listed in WAC 173-460. Annual usage of these products shall be reported to SRCAA. Records shall be kept in accordance with Condition #21. Credit for materials recycled or disposed of as waste shall be allowed if records documenting the amount of material recycled / disposed are kept and submitted to SRCAA.

RECORDKEEPING AND REPORTING REQUIREMENTS

21. The following records shall be retained for at least the most recent 24-month period of operation and made available to SRCAA personnel upon request:
- a. Boiler and CVD furnace operation and maintenance records (Condition 3);
 - b. Records of the CVD furnaces not venting to the boilers (Condition 4);
 - c. Boiler performance tests (Condition 8);
 - d. Boiler combustion tests (Condition 9);
 - e. Monthly Fuel Usage Records (Condition 13);
 - f. Cooling tower operation and maintenance records (Condition 14);
 - g. Cooling tower chemical treatment used and SDS Sheets (Condition 15);
 - h. Cooling tower drift eliminator manufacturer drift guarantee (Condition 16);
 - i. Cooling tower conductivity records (Condition 17); and
 - j. VOC containing material records (Conditions 20).
22. The following records must be reported to SRCAA, these documents may be submitted as stand-alone documents or as part of the annual registration form submittal:

- a. Annual records of the CVD furnaces not venting to the boilers (Condition 4);
- b. Performance tests within 45 days of completion (Condition 8);
- c. Combustion tests within 45 days of completion (Condition 9);
- d. Annual Records of cooling tower chemical treatment used and SDS Sheets (Condition 15);
- e. Annual VOC containing material usage (Condition 20); and

GENERAL REQUIREMENTS

23. A copy of the signed CVD Process Expansion (originally designated NOC #1944), NOC #1932 and NOC #927 applications including all revisions and the NOC #1932 approval conditions shall be kept on site and made available to SRCAA personnel upon request.
24. Except as provided in Condition 4, SRCAA shall be notified of any upset conditions, breakdowns, or failures associated with the equipment covered under this NOC. The notification shall occur within 24 hours of the occurrence and in accordance with WAC 173-400-108, WAC 173-400-109, and SRCAA Regulation I, Section 6.08.
25. The Control Officer, or duly authorized representative, shall be allowed to enter the facility premises at reasonable times to inspect equipment and/or records specific to the control, recovery, or release of contaminants into the atmosphere, in accordance with SRCAA Regulation I, Article II and RCW 70A.15.2500. For the purposes of this NOC approval, reasonable times include, but are not limited to, any of the following: normal business and/or equipment operating hours, periods of equipment breakdown or malfunction, and times when the Control Officer, or duly authorized representative are investigating air quality complaints filed with agency and/or have reason to believe that air quality violations have occurred or may be occurring. No person shall obstruct, hamper or interfere with any such inspection.
26. It is an ongoing condition of this NOC approval that the source be registered with the Agency. Registration includes the following:
- a. Submittal of updated registration information at least annually as required by SRCAA, using forms provided by SRCAA. The forms provided by the Agency shall be completed and returned to the Agency within 45 days of issuance.
 - b. Timely payment of annual registration fees to SRCAA in the amount required by SRCAA Regulations, as periodically amended. In accordance with SRCAA Regulation I, Section 4.05, Failure to pay registration fees and other related fees within 120 days of the annual registration billing due date will result in an administrative closure of the facility. Re-opening may require a new Notice of Construction application and receipt of an Order of Approval prior to resumption of operation.

This condition is in addition to any other remedies available to the agency for non-compliance with agency regulations, state law or federal law.

General Information

The equipment is subject to registration with SRCAA. Annual updates to the registration must be submitted to SRCAA on forms provided by SRCAA. The equipment is subject to periodic SRCAA inspections and annual registration fees.

This Notice of Construction approval is specific to the present location (11135 W Westbow Blvd., Spokane, WA 99224) and is not transferable to a new location. If the equipment is moved from this site to a new site in Spokane County, a new Notice of Construction may be required.

It should be noted that the approval of this Notice of Construction does not relieve the proponent of the obligation to comply with all other applicable federal, state and local regulations and requirements.

This order of approval may be modified, suspended or revoked in whole or in part for just cause including, but not limited to, the following:

1. Violation of any terms or conditions of this order of approval.
2. Obtaining this order of approval by misrepresentation or failure to disclose fully all relevant facts.

This order of approval may be appealed as described below:

Pursuant to the Revised Code of Washington (RCW) 43.21B.310, you have the right to appeal this Order by filing a notice of appeal with both the Pollution Control Hearings Board (PCHB) and the Spokane Regional Clean Air Agency (SRCAA) on or before the 30th day of receipt of SRCAA's order, permit, license, Notice and Order of Assessment of Civil Penalty, or Notice of Disposition.

Required procedures are detailed in state law (Chapter 43.21B RCW and Chapter 70A.15 RCW) and the PCHB's own regulations (Chapter 371.08 Washington Administrative Code) which may be found in many public libraries, county and municipal law libraries or on the Internet at www.access.wa.gov/. Since others publish these documents, copies are not available from SRCAA.

If you are filing an appeal, mail, deliver, or fax it to SRCAA and the PCHB at:

SRCAA Address

SRCAA
1610 S Technology Blvd
STE 101
Spokane, WA 99224

SRCAA Fax Number

(509) 477-6828

PCHB Mailing Address

PCHB
Environmental Hearings Office
P.O. Box 40903
Olympia, WA 98504-0903

PCHB Fax Number

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PCHB Physical Address

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1111 Israel Rd. SW. Ste 301
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