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ENVIRONMENTAL PROTECTION COMMISSION OF  
HILLSBOROUGH COUNTY, as Delegated by

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

NOTICE OF PERMIT

Bryan Williams  
Chromalloy Castings Tampa Corporation  
3401 Queen Palm Dr.  
Tampa, Fl 33619

Dear Mr. Williams:

Enclosed is Permit Number 0571408-007-AC to construct a new afterburner at your metal casting product facility. The new afterburner will control emissions from the Casting Molds Oven No. 1, which is a natural gas fired, Pacific Kiln wax burn-off oven, issued pursuant to Section 403.087, Florida Statutes.

Any party to this order (permit) has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the EPC in the Legal Department at 3629 Queen Palm Drive, Tampa, Florida 33619; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this Notice is filed with the clerk of the EPC.

Executed in Tampa, Florida.

Sincerely,

Janet L. Dougherty  
Executive Director

JLD /LAW/law



FINAL DETERMINATION

FOR

Chromalloy Castings, Tampa Corporation

Hillsborough County

Construction Permit

Application Number

0571408-007-AC

Environmental Protection Commission of

Hillsborough County

Tampa, FL

December 1, 2015

## FINAL DETERMINATION

The Environmental Protection Commission of Hillsborough County mailed a public notice package on October 27, 2015 that included an Intent to Issue Permit No. 0571408-007-AC to Chromalloy Castings Tampa Corporation. The facility is located at 3401 Queen Palm Dr., Tampa, Hillsborough County, FL 33619. This permit authorizes the construction of one new afterburner to control emissions from one of the wax burn-off ovens at the metal casting product facility.

The Public Notice of Intent to Issue was published in the Tampa Bay Times on November 12, 2015.

### COMMENTS/CHANGES

No comments were received from the applicant or the public.

### CONCLUSION

The final action of the Environmental Protection Commission of Hillsborough County is to issue the permit as drafted with the changes noted above.

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**PERMITTEE:**

Chromalloy Castings Tampa Corporation  
3401 Queen Palm Dr.  
Tampa, FL 33619

**PERMIT/CERTIFICATION**

Permit No: 0571408-007-AC  
County: Hillsborough  
Expiration Date: April 30, 2017  
Project: New Afterburner for the Wax Burn-Off  
Oven No. 1

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rules 62-204, 62-210, 62-212, 62-296, 62-297, and 62-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans and other documents, attached hereto or on file with the EPC and made a part of hereof and specifically described as follows:

This permit authorizes the construction of one new afterburner at a metal casting product facility. The facility has six wax burn-off ovens all of which vent to an afterburner. Currently, two of the 1.0 MMBtu/hr, Pacific Kiln wax burn-off ovens, Oven Nos. 1 and 2, vent to one 0.75 MMBtu/hr afterburner. The new 1.0 MMBtu/hr afterburner will control emissions from the Casting Molds Oven No. 1, which is a natural gas fired, 1.0 MMBtu/hr, Pacific Kiln wax burn-off oven. Oven No. 2 will continue to venting to the existing 0.75 MMBtu/hr afterburner.

The metal casting product process begins with wax injection molding. Casting molds are injected with wax and stored inside the building to allow for cooling. Once cooled, the molds are dipped into a tank containing a VOC based solvent to clean the mold. The molds are then covered with sand or stucco using an automated system to create a ceramic covering over the wax mold.

Once the ceramic covering has dried, the molds are put into one of two electric powered steam autoclaves which use high temperatures to melt the wax out of the mold. The autoclaves are exempt from permitting because the wax is not volatilized, therefore, there are no emissions associated with the autoclaves. To burn off any residual wax which may remain inside of the mold, the molds are placed in one of four identical, natural gas fired, 1.0 MMBtu/hr Pacific Kiln wax burn-off ovens. Oven Nos. 3 and 4 each have their own afterburners rated at 1.0 MMBtu/hr each.

The molds are placed in one of four pre-heat ovens and then into one of eight vacuum furnaces where metal ingots are melted down and the molds are filled with molten metal. Once cast, the molds are moved to an adjacent area where they are left for several days to cool. The facility uses natural gas for fueling the wax burn-off ovens and the pre-heat ovens.

Once the mold has cooled, the parts are separated from the mold and grit blasted; placed in a heated tank containing sodium hydroxide to leach the core(s); and/or buffed, as needed, to ensure that all of the ceramic and the core(s) is removed from the metal part. The metal parts are then placed into one of six vacuum heat treat ovens, which use negative pressure and heat to harden the part. The finished parts are stored onsite until ready to be shipped to customers.

Emission Unit No. 002 - Wax Burn-Off Ovens

<b>Emission Point No.</b>	<b>Process</b>	<b>Manufacturer</b>	<b>Model No.</b>	<b>Control Device</b>
EP 001	Casting Molds	Pacific Kiln	PBF-CB-727252NG	1.0 MMBtu/hr afterburner
EP 002	Casting Molds	Pacific Kiln	PBF-CB-727252NG	0.75 MMBtu/hr afterburner
EP 003	Casting Molds	Pacific Kiln	FFDWS-9487236D8	1.0 MMBtu/hr afterburner
EP 004	Casting Molds	Pacific Kiln	FFDWS-6487236D8	1.0 MMBtu/hr afterburner
EP 005	Core Making	Harrop	GF-SG-38/36/72-3000-2600	0.8 MMBtu/hr afterburner
EP 006	Core Making	Harrop	GF-SG-48/48/96-3000-2450	0.8 MMBtu/hr afterburner

Location: 3401 Queen Palm Dr., Tampa, FL 33619

UTM: 17- 349.00E and 3100.00N NEDS No: 1408

Replaces Permit No.: NA

References Permit No.: 0571408-002-AC and 0571408-003-AC

PERMITTEE:  
Chromalloy Castings Tampa Corporation

PERMIT/CERTIFICATION NO.: 0571408-007-AC  
PROJECT: New Afterburner for the Wax Burn-Off  
Oven No. 1

SPECIFIC CONDITIONS:

1. A part of this permit is the attached General Conditions. [Rule 62-4.160, F.A.C.]
2. All applicable rules of the Environmental Protection Commission of Hillsborough County including design discharge limitations specified in the application shall be adhered to. The permit holder may also need to comply with county, municipal, federal, or other state regulations prior to construction. [Rule 62-4.070(7), F.A.C.]
3. Issuance of this permit does not relieve the permittee from complying with applicable emission limiting standards or other requirements of Chapters 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C., or any other requirements under federal, state, or local law. [Rule 62-210.300, F.A.C.]
4. The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. [Rule 62-296.320(2), F.A.C.]
5. The permittee shall not cause, permit, or allow any visible emissions (5% opacity) from any afterburner or activity associated with Emission Unit No. 002. [Rule 62-296.712(2), F.A.C.]
6. The hours of operation of the facility are not limited. [Rule 62-4.070(3), F.A.C. and Permit Nos. 0571408-002-AC and 0571408-003-AC]
7. The maximum combined natural gas usage of the pre-heat ovens and the wax burn-off ovens shall not exceed 238 million cubic feet. [Rule 62-4.070(3), F.A.C. and Permit Nos. 0571408-002-AC and 0571408-003-AC]
8. In order to ensure compliance with Specific Condition Nos. 5 and 7, the following restrictions and limitations shall apply to the Casting Molds Wax Burn-Off Ovens with Afterburners (Emission Unit No. 002) for any twelve consecutive month period: [Rule 62-4.070(3), F.A.C. and Permit Nos. 0571408-002-AC and 0571408-003-AC]
  - A) All casting molds shall be placed in an autoclave to remove the wax prior to being placed in the burn-off ovens to remove any residual wax.
  - B) The throughput of each Pacific Kiln oven shall not exceed 1,600 lb/hour of molds.
  - C) The number of molds placed in each oven per load shall not exceed 18 molds.
  - D) The wax content of each mold shall not exceed 3% of the mold weight.
  - E) The minimum destruction efficiency of each afterburner shall be 99%.
  - F) The following practices shall be followed during the operation of each casting molds wax burn-off oven:
    - i. Preheat the afterburner chamber until it reaches a minimum temperature of 1,425°F prior to the initial charge upon startup.
    - ii. Maintain the afterburner temperature at a minimum of 1,425°F during operation, including during the charging operation.

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SPECIFIC CONDITIONS:

- iii. Observe the stack, furnace doors/openings, and seals for visible emissions at least once per shift. Make note of any problems and correct promptly.
- iv. Record the temperature of each afterburner at least once per shift.
- v. Turn on the afterburner during ash removal or cleaning of the burn-off chamber.

9. Test the new 1.0 MMBtu/hr afterburner and the associated wax burn-off oven for visible emissions within 30 days of startup and annually thereafter. Submit two copies of the test data to the Air Management Division of the Environmental Protection Commission of Hillsborough County within 45 days of such testing. The EPA Method 9 test for the emission unit shall be a minimum of thirty (30) minutes in duration. Testing procedures shall be consistent with the requirements of Rule 62-297, F.A.C. [Rule 62-297.310(5)(b) and (10), F.A.C. and Ch. 1-3.52 of the Rules of the EPCHC]

10. Compliance with the emission limitations of Specific Condition No. 5 shall be determined using EPA Method 9 contained in 40 CFR 60, Appendix A and adopted by reference in Rule 62-297, F.A.C. The minimum requirements for stack sampling facilities, source sampling and reporting, shall be in accordance with Rule 62-297, F.A.C. and 40 CFR 60, Appendix A. [Rules 62-297.310(5)(b) and (7) and 62-4.070(3), F.A.C.]

11. Testing of emissions shall be conducted with the source operating at capacity. Capacity is defined as 90-100% of processing 18 molds per load per oven for the wax burn-off ovens associated with the casting mold process. If it is impracticable to test at the testing capacity, an emissions unit may be tested at less than the testing capacity. If an emissions unit is tested at less than the testing capacity, another emissions test shall be conducted and completed no later than 60 days after the emissions unit operation exceeds 110% of the capacity at which its most recent emissions test was conducted. Failure to submit the input rates and actual operating conditions, including the number of molds or pounds of wax processed during the test and the afterburner temperature (°F), may invalidate the test. [Rules 62-4.070(3) and 62-297.310(3), F.A.C.]

12. At least 15 days prior to the date on which each required emissions test is to begin, the owner or operator shall notify the EPCHC, unless shorter notice is agreed to by the EPCHC. The notification shall include the date, time, place of each such test, Facility ID Number, Emission Unit ID Number(s) and description(s), Emission Point Number(s) and description(s), test method(s), pollutant(s) to be tested, along with the name and telephone number of the person who will be responsible for conducting such test(s) for the owner or operator. If a scheduled emissions test needs to be re-scheduled, the owner or operator shall submit to the appropriate air compliance program a revised notification at least seven days prior to the re-scheduled emissions test date or arrange a re-scheduled test date with the appropriate air compliance program by mutual agreement.. [Rule 62-297.310(9), F.A.C.]

13. In order to demonstrate compliance with Specific Condition Nos. 5, 7, and 8 the permittee shall maintain a monthly recordkeeping system. The records shall be maintained onsite for three years and shall be made available to any local, state, or federal air pollution agency upon request. The records shall include, but not limited to, the following: [Rules 62-4.070(3) and 62-4.160(14), F.A.C.]

PERMITTEE:  
Chromalloy Castings Tampa Corporation

PERMIT/CERTIFICATION NO.: 0571408-007-AC  
PROJECT: New Afterburner for the Wax Burn-Off  
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SPECIFIC CONDITIONS:

- A) Month, Year
- B) Number of molds per load processed through each wax burn-off oven used in the casting molds process
- C) Combined natural gas usage of the wax burn-off ovens and the pre-heat ovens
- D) Rolling twelve month totals of B) and C) above
- E) Record the observations specified in 8.F)iii. and iv.

14. The afterburners associated with the wax burn-off ovens shall be maintained in accordance with the manufacturer's specifications in order to provide reasonable assurance that the control devices will perform adequately the function for which they are intended. [Rules 62-296.700(6) and 62-4.070(3), F.A.C.]

15. All reasonable precautions shall be taken to prevent and control generation of unconfined emissions of particulate matter in accordance with the provision in Rule 62-296.320, F.A.C. These provisions are applicable to any source, including, but not limited to, vehicular movement, transportation of materials, construction, alterations, demolition or wrecking, or industrial related activities such as loading, unloading, storing and handling. Reasonable precautions shall include, but are not limited to, the following: [Rule 62-296.320(4)(c), F.A.C. and Permit No. 0571408-002-AC]

- A) Removal of particulate matter from paved areas, buildings, and work areas under the control of the owner/operator.
- B) Clean accidental spills promptly.
- C) Exercise good housekeeping at all times.
- D) Carefully place ash or residue from the burn-off oven chamber in a leak tight container and dispose of properly. Moisten ash/residue, if necessary.

16. When the Environmental Protection Commission of Hillsborough County (EPC) after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rules 62-204, 62-210, 62-212, 62-296, or 62-297, F.A.C., or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the source to conduct compliance tests which identify the nature and quantity of pollutant emissions from the source and to provide a report on the results of said tests to the EPC. [Rules 62-297.310(7)(b) and 62-4.070(3), F.A.C.]

17. The permittee shall provide timely notification to the Environmental Protection Commission of Hillsborough County prior to implementing any changes that may result in a modification to this permit pursuant to Rule 62-210.200(185), F.A.C., Modification. The changes do not include normal maintenance, but may include, and are not limited to, the following, and may also require prior authorization before implementation: [Rules 62-210.300 and 62-4.070(3), F.A.C.]

- A) Alteration or replacement of any equipment or major component of such equipment.

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SPECIFIC CONDITIONS:

B) Installation or addition of any equipment which is a source of air pollution.

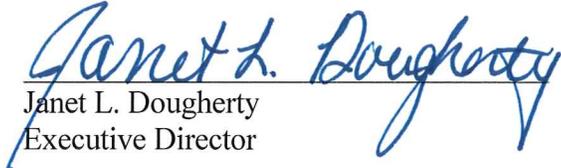
18. If the permittee wishes to transfer this permit to another owner, an "Application for Transfer of Permit" (DEP Form 62-210.900(7)) shall be submitted, in duplicate, to the Environmental Protection Commission of Hillsborough County within 30 days after the sale or legal transfer of the permitted facility. [Rule 62-4.120, F.A.C.]

19. Submit to the Environmental Protection Commission of Hillsborough County each calendar year on or before April 1, completed DEP Form 62-210.900(5), "Annual Operating Report for Air Pollutant Emitting Facility", for the preceding calendar year. [Rule 62-210.370(3)(c), F.A.C.]

20. In order to provide reasonable assurance that the afterburners associated with the wax burn-off ovens (EU No. 002) will operate and be maintained to perform adequately the function for which it is intended, an Operation and Maintenance Plan (O & M plan) shall be submitted with the air operation permit application. The O & M Plan shall include daily, weekly, and monthly maintenance checks for the afterburners. [Rules 62-296.700(6) and 62-4.070(3), F.A.C.]

21. A minimum of two copies of an air operating permit application shall be submitted to the Environmental Protection Commission of Hillsborough County within 60 days of completion of the compliance test, along with an Operation and Maintenance (O & M) Plan for the afterburners (EU No. 002), the scrubber (EU No. 005), and the baghouse (EU No. 010), or at least 90 days prior to the expiration date of this permit, whichever occurs first. [Rules 62-296.700(6), 62-4.050(2), and 62-4.090, F.A.C.]

ENVIRONMENTAL PROTECTION COMMISSION  
OF HILLSBOROUGH COUNTY

  
Janet L. Dougherty  
Executive Director

## ATTACHMENT - GENERAL CONDITIONS

(1) The terms, conditions, requirements, limitations and restrictions set forth in this permit, are “permit conditions” and are binding and enforceable pursuant to Sections 403.141, 403.727, or 403.859 through 403.861, F.S. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.

(2) This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

(3) As provided in subsections 403.987(6) and 403.722(5), F.S., the issuance of this permit does not convey any vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state, or local laws or regulations. This permit is not a waiver of or approval of any other department permit that may be required for other aspects of the total project which are not addressed in this permit.

(4) This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.

(5) This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

(6) The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed and used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

(7) The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at reasonable times, access to the premises where the permitted activity is located or conducted to:

- (a) Have access to and copy any records that must be kept under conditions of the permit;
- (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit; and
- (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules. Reasonable time may depend on the nature of the concern being investigated.

## ATTACHMENT - GENERAL CONDITIONS

(8) If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:

- (a) A description of and cause of noncompliance; and
- (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the noncompliance. The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

(9) In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.111 and 403.73, F.S. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.

(10) The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance; provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules. A reasonable time for compliance with a new or amended surface water quality standard, other than those standards addressed in Rule 62-302.500, F.A.C., shall include a reasonable time to obtain or be denied a mixing zone for the new or amended standard.

(11) This permit is transferable only upon Department approval in accordance with Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

(12) This permit or a copy thereof shall be kept at the work site of the permitted activity.

(13) This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- ( ) Compliance with New Source Performance Standards

(14) The permittee shall comply with the following:

- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
- (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring

## ATTACHMENT - GENERAL CONDITIONS

instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application for this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.

(c) Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements;
2. The person responsible for performing the sampling or measurements;
3. The dates analyses were performed;
4. The person responsible for performing the analyses;
5. The analytical techniques or methods used;
6. The results of such analyses.

(15) When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware the relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.