

**Notice of Decision to Certify Emission Reduction Credits
October 23, 2017**

Pursuant to the requirements of California Health and Safety Code Section 40713 and District Rule 26.7.B.4, all interested persons are notified of the Air Pollution Control Officer's (APCO) decision to certify an Emission Reduction Credit (ERC) for the following applicant(s). The proposed ERC is in units of tons per year.

The public may submit written comments on the preliminary decisions during the 30-day period following the date of publication of this notice. The public is welcome to inspect, at the District office, the information submitted by the applicants and the supporting analyses for the preliminary decisions. After reviewing all comments received, the APCO shall provide written notification of the final decision to grant or deny any ERC to any person or agency submitting comments on the proposed ERC during the comment period.

If you have any questions regarding this notice, please contact Kerby E. Zozula at 805/645-1421.

Company	ROC	NOx	PM₁₀	SOx
Arcturus Manufacturing Corp. 6001 Arcturus Avenue, Oxnard, CA Application No. 00244-171 ERC Certificate No. 1241	0.06	1.84	2.33	0.04

The emission reduction will result from the shutdown the Arcturus Manufacturing Corp. facility in Oxnard. This facility operated metal forging and heat treating operations to produce aerospace parts and components. The shutdown included several natural gas-fired units, including a 116 MMBTU/Hr Union Steam Boiler, heat treating furnaces, and a steam hammer metal forging operation.

**VENTURA COUNTY
AIR POLLUTION CONTROL DISTRICT**

Memorandum

TO: Permit File No. 00244 DATE: October 11, 2017

FROM: John Harader

SUBJECT: Engineering Analysis of Application No. 00244-171
Arcturus Manufacturing Company – Shutdown / Request for ERCs

FACILITY DESCRIPTION

Arcturus Manufacturing Corporation has been in the business of manufacturing and heat treating aerospace parts. The facility has been shutdown. The last day of operation was September 27, 2017. Emissions units included a 116 MMBTU/hr Steam Boiler, ten (10) heat treating furnaces ranging in size from 12 MMBTU/hr to 2 MMBTU/hr, one 1.4 MMBTU/hr die oven, and forging operations.

APPLICATION DESCRIPTION

Application No. 00244-171 was submitted on September 21, 2017 to request Emission Reduction Credits for the shutdown of the facility. As stated above, the facility is closing down as of September 27, 2017. The permit will not be renewed.

Rule 26.4 allows for the banking of emissions of emission reductions of ROC, NO_x, PM-10, and SO_x. There is no banking of CO. Rule 26.4.B.1 requires that only emission reductions that are real, quantifiable, permanent, enforceable, and surplus shall be eligible for banking.

Rule 26.6.E.3 states that emission reductions which result from the shutdown of an emissions unit shall be calculated as the actual emissions.

Rule 26.6.C states that the actual emissions are to be based on the actual operating history of the emissions unit. The actual operating history shall be averaged from a two year period within the five year period preceding the application. The actual emissions shall not exceed the permitted emissions.

Pursuant to Rule 26.4.C.1, emission reductions which result from a shutdown shall be discounted by the greater of (1) the amount of emission reduction that could be controlled by the application of BACT at the time of the application; or (2) 20 percent. Pursuant to Rule 26.5.B.1, this discount will be deposited in the essential public service bank.

EMISSION REDUCTION CALCULATIONS

Steam Boiler

1 – 116 MMBTU/hr Union Steam Boiler permitted at 135.5 MMcf natural gas per year with a permitted NOx limit of 40 ppm at 3% oxygen.

Two years of natural gas consumption (August 2015 through July 2017) has been provided which resulted in an average use of 151.5 MMcf/yr. The actual use exceeds the permitted limit; therefore, the permitted limit of 135.5 MMcf/yr will be used for the actual emissions calculation. Source test results from a July 14, 2015 source test have been used in the actual emissions calculation. The source test results are: 39 ppm NOx at 3% oxygen. BACT for a natural gas boiler of this size has been determined to be a NOx limit of 5 ppm at 3% oxygen based on SCAQMD and SBCAPCD BACT databases. Therefore, the NOx BACT discount is 87%; and the 20% discount is not used for NOx. EPA AP-42 for external combustion states that the PM emission factor can be used for PM-10. Calculations are shown on the attached spreadsheet.

116 MMBTU/hr Boiler	Tons Per Year			
	ROC	NOx	PM-10	SOx
Permitted Emissions (135.5 MMcf/yr – 40 ppm NOx)	0.37	3.39	0.51	0.04
Actual Emissions (135.5 MMcf/yr – 39 ppm NOx)	0.37	3.37	0.51	0.04
20% Discount	0.07	0.67	0.10	0.01
BACT Discount 87%		2.93		
ERC	0.30	0.44	0.41	0.03

Two 3 MMBTU/hr Heat Treating Furnaces (Nos. 602 and 801)

2 – 3 MMBTU/hr Heat Treating Furnaces permitted with a combined limit of 8.0 MMcf natural gas per year with a permitted NOx limit of 50 ppm at 3% oxygen.

Two years of natural gas consumption (August 2015 through July 2017) has been provided which resulted in an average use of 3.56 MMcf/yr. Source test results from a January 28, 2016 source test have been used in the actual emissions calculation. The source test results for the two furnaces are 28.8 ppm and 32.8 ppm which have been averaged at 30 ppm at 3% oxygen. BACT for these furnaces has been determined to be 50 ppm at 3% oxygen which they are already limited to; therefore the discount will be the 20% discount. EPA AP-42 for external combustion states that the PM emission factor can be used for PM-10. Calculations are shown on the attached spreadsheet.

2 - 3 MMBTU/hr Furnaces	Tons Per Year			
	ROC	NOx	PM-10	SOx
Permitted Emissions (8.0 MMcf/yr – 50 ppm NOx)	0.02	0.25	0.03	0.00
Actual Emissions (3.56 MMcf/yr – 30 ppm NOx)	0.01	0.07	0.01	0.00
20% Discount	0.00	0.01	0.00	0.00
ERC	0.01	0.06	0.01	0.00

Metal Heat Treating Furnaces**3 – 12 MMBTU/hr Units****3 – 6.2 MMBTU/hr Units****1 – 2 MMBTU/hr Unit****1 – 1.4 MMBTU/hr Die Oven**

All of the above units limited to a combined annual natural gas limit of 90.0 MMcf/yr. No current permitted NOx exhaust concentration limits.

The application did not provide two years of natural gas consumption for these units; application included data for a 17 month period from March 2016 to July 2017. The District has chosen to use a two year data period that was submitted for a November 30, 2016 inspection. The data period covers a two year period from November 2014 to October 2016; and results in an average natural gas use of 43.92 MMcf. (Note that the submitted 17 month data also averages out to 43 MMcf/yr.)

There is no source test data for these units. The six units that are greater than 5 MMBTU/hr are subject to District Rule 74.34, “NOx Reductions From Miscellaneous Sources,” which was adopted on December 13, 2016. The rule requires that these units meet a NOx limit of 60 ppm (at 3% oxygen) by July 1, 2018. Also SCAQMD Rule 1147, “NOx Reductions From Miscellaneous Sources,” requires a 60 ppm NOx limit (at 3% oxygen) for all units greater than 325,000 BTU/hr. Therefore, actual emissions are calculated with a NOx emission factor of 60 ppm at 3% oxygen and EPA AP-42 emission factors. As discussed above for the 3 MMBTU/hr furnaces; BACT has been determined to be 50 ppm at 3% oxygen which is a 16.7% reduction from 60 ppm; therefore the 20% shutdown discount will be utilized. EPA AP-42 for external combustion states that the PM emission factor can be used for PM-10. Calculations are shown on the attached spreadsheet.

Various Furnaces	Tons Per Year			
	ROC	NOx	PM-10	SOx
Permitted Emissions (90.0 MMcf/yr – uncontrolled NOx – 100.0 lb/MMcf)	0.25	4.50	0.34	0.03
Actual Emissions (43.92 MMcf/yr – 60 ppm NOx / 76.55 lb/MMcf)	0.12	1.68	0.17	0.01
20% Discount	0.02	0.34	0.03	0.00
ERC	0.10	1.34	0.14	0.01

Forging Operations Using Water-Based Only Forge Compounds

Particulate matter permitted emissions are based on an annual limit of 97.5 ton water-based forge compounds with a 34% solid content and a 90% transfer efficiency. No actual use data was submitted. The District has chosen to use a two year data period that was submitted for a November 30, 2016 inspection. The data period covers a two year period from November 2014 to October 2016; and results in an average water-based forging compound usage of 65 tons per

year. With no BACT data available for the particulate content of the water-based forging compound; the District will use the 20% shutdown discount. District assumes that all PM is PM-10.

Forging Operations using Water-Based Forge Compounds	PM-10 Tons Per Year
Permitted Emissions based on 97.5 tpy (97.5)(0.34)(0.10)	3.32
Actual Emissions based on 65 tpy (65)(0.34)(0.10)	2.21
20% Discount	0.44
ERC	1.77

Forging Operations Using ROC Materials as Components in Lubricants

Permitted emissions are based on 110 gallons per year at 8.5 pound ROC per gallon. Actual emissions have been presented in the application as 191 drum per year (55 gal/drum) with an ROC content of 1.85 gram per liter or 0.0154 pounds per gallon. BACT is determined to be the actual the ROC content of 0.0154 lb ROC per gallon. Since the actual emissions are determined to be BACT, the discount will be 20%.

Forging Ops Using ROC Mat'ls as Components in Lubricants	ROC Tons Per Year
Permitted Emissions: (110 gal/yr)(8.5 lb/gal)	0.47
Actual Emissions: (191 drum/yr)(55 gal/drum)(0.0154 lb/gal)	0.08
20% Discount	0.02
ERC	0.06

Summary of Changes in Permitted Emissions

Rule 26.4.B.7 requires that any ROC or NOx emission increases not offset with emission reduction credits since October 22, 1991 are not eligible for banking. These emissions are returned to the community bank. Arcturus had two ROC emission increases that were offset with the community bank. Application No. 00244-141 used 0.47 tpy ROC from the community bank on June 15, 2000; and Application No. 00244-161 used 0.01 tpy ROC from the community bank on February 11, 2014. Therefore, 0.48 tpy ROC is not eligible for banking and will be returned to the community bank. There were no uses of the NOx community bank after October 22, 1991.

Tons Per Year	ROC	NOx	PM-10	SOx	CO
Total Permitted Emissions	1.11	8.14	4.20	0.07	9.81
Total Emission Reduction = Actuals	0.58	5.12	2.90	0.05	
Total Unbankable Reductions = PE – Actual	0.53	3.02	1.30	0.02	9.81
Return to Community Bank	0.48				
Available Emission Reduction	0.10	5.12	2.90	0.05	
Total Discounts	0.04	3.28	0.57	0.01	
Total ERC	0.06	1.84	2.33	0.04	

As shown above, the ROC actual emissions have been reduced by the amount that was offset from the community bank pursuant to Application Nos. 00244-141 and 00244-161. Therefore, the Rule 26.4.C.1 discount will be taken from the remaining emission reduction of 0.10 tons per year.

The natural gas consumption records were reviewed and found to have an even use throughout the year; therefore, the ERC certificate will have a 25%, 25%, 25%, 25% profile. Since the ERC certificate is based on a shutdown of emission units, the ERC certificate will include the Rule 26.4.D.3 limitation. The ROC or NOx ERCs will not be available for use at a stationary source where the ROC or NOx permitted emissions exceed 25.0 tons per year.

PUBLIC NOTICE

Pursuant to Rule 26.7.B.4, a notice of the preliminary decision to certify the emission reduction credits will be published on the VCAPCD website. A 30 day public comment period will be included in the notice.

CONCLUSION

As outlined above, the emission reductions are real and quantifiable based on the submitted actual use data submitted with the application or submitted based on recent inspection reports. The emission reductions will remain permanent and enforceable due to the facility closing down and not renewing its permit as of September 30, 2017. The emission reductions are surplus; they are not required by any rule or regulation. Note that the emission reductions from the furnaces are surplus because the emission reductions are based on the limits of Rule 74.34 (adopted 12/13/16) which take effect on July 1, 2018. Therefore, the Emission Reduction Credit meets the requirements as discussed. The ERC will be granted as Certificate No. 1241.