



**Lockheed Martin Aeronautics  
Company**

**Pinellas Park, Florida Facility**

**FDEP ID 1030400**

**Petition for Extension of Rule Variance**

**August 2012**

RECEIVED

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DIVISION OF AIR  
RESOURCE MANAGEMENT

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION

In Re: Lockheed Martin Aeronautics Company  
Pinellas Park Facility  
9300 28<sup>th</sup> Street North  
Pinellas Park, Florida 33782-6122

PETITION FOR EXTENSION OF VARIANCE

Petitioner, Lockheed Martin Aeronautics Company ("LM Aero"), pursuant to Section 403.201(1)(c), Florida Statutes, and Rule 62-110.104, Florida Administrative Code (FAC), files this request for the extension of the Petition for Variance granted on March 16, 2005 (OGC File No. 04-1938) and the extensions granted on February 16, 2007 (OGC File No. 06-2014), September 16, 2009 (OGC File No. 08-2082), and March 4, 2011 (OGC File No. 10-3711). This variance granted to LM Aero provides alternate air quality requirements for aerospace manufacturing operations instead of the provisions of Rule 62-296.513, FAC. In support of this extension request, the Petitioner states as follows:

1. The LM Aero Pinellas Park facility ("LM Aero – Pinellas") is located at 9300 28<sup>th</sup> Street North, Pinellas Park, Florida 33782-6122. This petition is submitted and signed by Mr. Steve Cobb, General Manager of the LM Aero – Pinellas facility. His telephone number is 727/578-6941.
2. The LM Aero – Pinellas facility mainly produces aerospace parts and components, primarily in support of the manufacture and sustainability of military aircraft. These operations are currently operating under the authority of a rule variance dated March 16, 2005 and extended on February 16, 2007, September 16, 2009, and March 4, 2011. This rule variance provided alternate requirements for LM Aero's aerospace parts and components manufacturing operations instead of those of Rule 62-296.513, FAC, the Miscellaneous Metal Parts and Products (MMPP) Reasonably Achievable Control Technology (RACT) Rule.
3. A secondary operation at the LM Aero – Pinellas facility involves the manufacture and surface coating of miscellaneous metal parts and products. These surface coating operations are subject to the requirements of the MMPP RACT Rule, 62-513, FAC. These secondary operations are currently operating under the authority of the Florida Department of Environmental Protection Air Quality Permit Number 1030400-012-AF and 1030400-014-AC.

4. This variance only addresses the aerospace related manufacturing activities at the facility, that is, those that are permitted as Emission Unit No. 001 in FDEP Air Quality Operating Permits 1030400-012-AF, 1030400-013-AC, and 1030400-14-AC. This permit implements the industry specific emission control guidance presented by the United States Environmental Protection Agency (US EPA) in the Aerospace Industry Control Technology Guideline<sup>1</sup> (Aerospace CTG). This permit provides authority to operate the aerospace operations that are tied to the expiration date (including extensions) of the issued variance<sup>2</sup>. Hence, no changes to the operating permit are requested as part of this variance extension request.
5. This variance does not address the non-aerospace miscellaneous metal parts and products manufacturing operations at the facility, that is, those that are permitted as Emission Unit No. 002 in FDEP Air Quality Permit 1030400-012-AF.
6. This variance does not address operations that are considered insignificant or trivial activities, such as the use of janitorial products.
7. The aerospace coatings used at LM Aero – Pinellas in Emission Unit No. 001 are required to meet and / or are specified by various United States Department of Defense (DOD) Military Specifications (MILSPECS). As such, the choice of coatings is dictated by the MILSPEC associated with the function of the coating and the specific role of each part or component in the completed aerospace vehicle. Hence, the use of aerospace specialty coatings that may not individually meet the VOC content requirement of the MMPP Rule is dictated by the nature of the process, and is not self-imposed.
8. The LM Aero – Pinellas facility requests an extension of the granted variance and extension from the requirements of Rule 62-296.513, FAC for what is currently classified as Emission Unit No. 001. Under the MMPP rule (62-296.513, FAC), LM Aero – Pinellas would be subject to a VOC content limit of 3.5 pounds per gallon for extreme performance coatings applied at this facility.
9. The LM Aero – Pinellas facility requests that the aerospace manufacturing operations (Emission Unit No. 001), including the surface coating operations potentially subject to Rule 62-296.513, FAC, continue to be regulated according to the guidance presented by the United States Environmental Protection Agency (US EPA) in the Aerospace Industry Control Technology Guideline<sup>3</sup> (Aerospace CTG).

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<sup>1</sup> Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711. EPA-453/R-97-004.

<sup>2</sup> Permit Number 1030400-009-AF, Condition Number 17.

<sup>3</sup> Control of Volatile Organic Compound Emissions from Coating Operations at Aerospace Manufacturing and Rework Operations, United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Research Triangle Park, North Carolina, 27711. EPA-453/R-97-004.

10. These alternate requirements as contained in the Aerospace CTG encompass considerably more air emission sources at the facility than would be subject to the requirements of the MMPP Rule. These additional requirements are listed in item number 14 of this petition, and are further detailed in the current facility operating permit for Emission Unit No. 001. Operational experience at the LM Aero – Pinellas and other LM Aero facilities subject to the Aerospace CTG requirements leads to the assertion that on a facility wide basis, the Aerospace CTG requirements lead to considerably lesser emissions than are otherwise allowed under the MMPP rule.

The attachments to this petition contain a summary of operational data for the LM Aero – Pinellas facility for the 12-month period of July 2011 through June 2012. This period is selected as it is a representative recent operational period during which the facility operated under the requirements of the granted rule variance.

Figure 1 graphically presents the monthly and annual volume weighted average VOC content of aerospace surface coating materials that are potentially subject to the requirements of the MMPP rule. The annual volume weighted average VOC content of these materials is 2.81 pounds per gallon, which is approximately 20% less than the MMPP rule allowable limit of 3.5 pounds per gallon. This reduction in VOC content from the MMPP rule allowable emissions results in 2,101 less pounds of VOC released to the atmosphere over this twelve month period.

LM Aero – Pinellas does not anticipate any considerable change in these emission rates during the requested variance extension period. In addition to the lesser average VOC content for those coatings potentially subject to the MMPP rule, additional emission reductions were realized given the additional breadth of the requirements of the Aerospace CTG requirements as contrasted with the singular requirement of the MMPP rule. For example, the workpractice requirements associated with solvent usage have led to emission reductions that would not be required by the MMPP rule.

As can be seen in the attached figure and summary emission report, each month during this 12-month period had a monthly weighted average VOC content of less than the 3.5 pounds per gallon limit of the MMPP rule. However, prior experience has demonstrated that the monthly weighted average VOC content can exceed the 3.5 pounds per gallon limit of the MMPP rule. For example, two of the twelve months (December 2009 and February 2010) that comprised the data set used for the previous Petition for Extension of Variance had a monthly weighted average VOC content in excess of the 3.5 pounds per gallon limit of the MMPP rule. These two monthly averages resulted from the high percentage of certain specialty coatings (i.e., fuel tank interior coatings) being applied in these two months. The February 2010 value was also due to an overall low volume of coatings applied.

The Aerospace CTG provides category specific limits for specialty coatings, operational flexibility that is not provided in the MMPP Rule. As further discussed in the following point of this petition, the data from December 2009 and February 2010 substantiate LM Aero's assertion that the facility cannot comply with the daily emission averaging provision of the MMPP rule, although on an annual basis, the VOC content will likely be less than the MMPP rule allowable limit.

11. The imposition of the MMPP Rule requirements to Emission Unit No. 001 would cause a considerable economic expense to this facility with little, if any, overall environmental benefit. To comply with the MMPP rule for this emission unit, the facility would install a control device (such as a thermal oxidizer) to abate VOC emissions to assure compliance with the limits contained in the MMPP rule. Although the MMPP rule does provide for emissions averaging, this averaging has an associated daily demonstration period, and based on an analysis of historical production data, LM Aero – Pinellas has ruled out the daily averaging provisions as a viable compliance strategy. As discussed previously, the operational data for the month of December 2009 and February 2010 substantiate this assertion.

The following projected costs are associated with the installation and continued operation of a thermal oxidizer (catalytic oxidizer) control device. The initial installation cost is estimated as \$400,000, including anticipated required parametric monitoring equipment. Annual operation and maintenance costs are estimated as \$113,000, including fuel, instrumentation calibration, repairs, and labor involved with compliance demonstration.

Another control option is to install and operate a regenerative thermal oxidize (RTO) control device. The initial installation cost is estimated as \$675,000, including anticipated required parametric monitoring equipment. Annual operation and maintenance costs are estimated as \$213,000, including fuel, instrumentation calibration, repairs, and labor involved with compliance demonstration.

For each of these two options, anticipated annual performance testing is estimated as \$15,000 per year, including both contracted testing and internal costs.

The operation of either type of thermal oxidizer will require additional fuel (presumably natural gas or propane), and electricity. The catalytic oxidizer will require substantially more fuel than the RTO.

The fuel combustion by this control device will cause emissions of criteria pollutants such as oxides of nitrogen (NO<sub>x</sub>), carbon monoxide (CO) and particulate matter (PM) in total quantities that would approach the amount of volatile organic compounds (VOC) abated by this device. The alternately requested restrictions based on the Aerospace CTG will provide additional emissions reductions than required by the MMPP rule, without the associated costs and secondary emissions associated with the operation of an add-on control device. These additional reductions are largely associated with the greater breadth of the operations subject to the Aerospace CTG requirements, as summarized in Item 14 of this petition. This petition therefore requests this issuance of this variance based on this economic expense at no identifiable environmental benefit.

12. The U.S. EPA states in the Aerospace CTG that this rule is intended to replace the MMPP rule for aerospace facilities, as indicated on page 1-1 of the Aerospace CTG:

*This CTG is intended to supersede any potential applicability of the Miscellaneous Metal Part and Products CTG (RACT) requirements for manufacturing and rework operations of aerospace vehicles and components.*

13. This variance extension is requested for a period of 24 months (i.e., through March 4, 2015), or until the MMPP rule is no longer required in Pinellas County, whichever occurs first. Should the FDEP adopt an Aerospace CTG-based RACT rule that governs the operations at this facility, this rule will likely clarify that the MMPP rule does not apply to Emission Unit No. 001, hence this variance would no longer be required.
14. LM Aero – Pinellas will meet the applicable requirements of the Aerospace CTG for Emission Unit No. 001. These requirements are summarized following as listed bullets, and are detailed in the terms and provisions (i.e., conditions) of the current facility operating permit. These conditions reflect the greater breadth of the operations subject to the Aerospace CTG requirements than are otherwise subject to the MMPP Rule. The MMPP Rule institutes VOC content limits for primers, topcoats, and a portion of the specialty coatings. The Aerospace CTG requirements include the following:

- Surface coating operations
  - VOC content limits for primers, topcoats, and specialty coatings
  - Application method requirements
- Solvent cleaning operations
  - Housekeeping measures
  - Hand-wipe cleaning
  - Flush cleaning
  - Paint gun cleaning
- Adhesive and sealant application
- Other specialty coating materials that are not applied in a paint booth
  - Mold release compounds
  - Maskants
  - Wet fastener insulation coatings
  - Solid film lubricants
  - Dry film lubricants
- Waste handling operations

15. LM Aero requests no substantial changes to the terms and conditions of the current operating permit to implement these requirements, as the current requirements are based on the currently issued variance. As such, LM Aero – Pinellas is currently operating in accordance with the requirements of the requested variance extension. The only changes that may be required to the permit are administrative in nature, namely changing the dates associated with the approval of the variance request and the deadline for renewal of the variance.

16. LM Aero – Pinellas anticipates that overall air quality emissions will be less for the aerospace operations (Emission Unit No. 001) as regulated by the Aerospace CTG based requirements than are allowed by the MMPP rule requirements. Supporting data are provided in Attachments 1 and 2 of this request.

17. The social, economic, and environmental impacts on residents of the area and the state if this variance is granted are described following. The continued LM Aero – Pinellas facility expansion of operations, including staffing, depends upon the issuance of this requested variance extension. A facility expansion was completed in 2012, which included the addition of 56,000 square feet of manufacturing space. This expansion involved approximately \$3 million in renovations to an adjacent building. The majority of the expenditures for the renovation were spent with local contractors and suppliers. Additionally, a staff expansion is planned for calendar years 2012 and 2013, which involves the creation of additional employment, currently projected as 20 jobs with a total payroll of approximately \$800,000 per year. This additional work would account for approximately \$4 million per year in additional revenue for the facility. LM Aero – Pinellas anticipates the majority of these jobs will be filled through local hiring, directly contributing to additional employment and revenues for the local economy. Because LM Aero – Pinellas

anticipates air quality emissions to be less under the Aerospace CTG based requirements than the MMPP requirements, there are no adverse environmental impacts associated with granting this variance.

18. The social, economic, and environmental impacts on residents of the area and the state if this variance is denied are discussed following. The imposition of the MMPP rule requirements (Rule 62-296.513, FAC) on aerospace operations would likely cause considerable additional operational costs that will make it cost prohibitive for the facility to win additional work involving surface coating operations. The facility expansion and growth, including staffing growth described above would likely not happen. Hence, the social and economic impacts are a considerable loss of employment and revenue for the local economy. The rejection of this petition would likely cause LM Aero – Pinellas to install an add-on control device that will create secondary emissions of criteria pollutants such as NO<sub>x</sub>, CO, and PM. These secondary emissions are likely to be of the same order of magnitude of the VOC emissions abated, and may cause adverse environmental impacts.

WHEREFORE, LM Aero – Pinellas requests the extension of the Variance initially granted on March 16, 2005 and extended on February 16, 2007, September 16, 2009; and March 4, 2011 for the aerospace operations (i.e., Emission Unit 001) from Rule 62-296.513, FAC, be extended for 24 months or until this rule no longer applies to this facility, whichever is earlier.

RESPECTFULLY SUBMITTED, this 20<sup>th</sup> day of August 2012.



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Mr. Steve Cobb  
General Manager  
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Pinellas Park Facility  
9300 28<sup>th</sup> Street North  
Pinellas Park, Florida 33782-6122  
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Attachments:

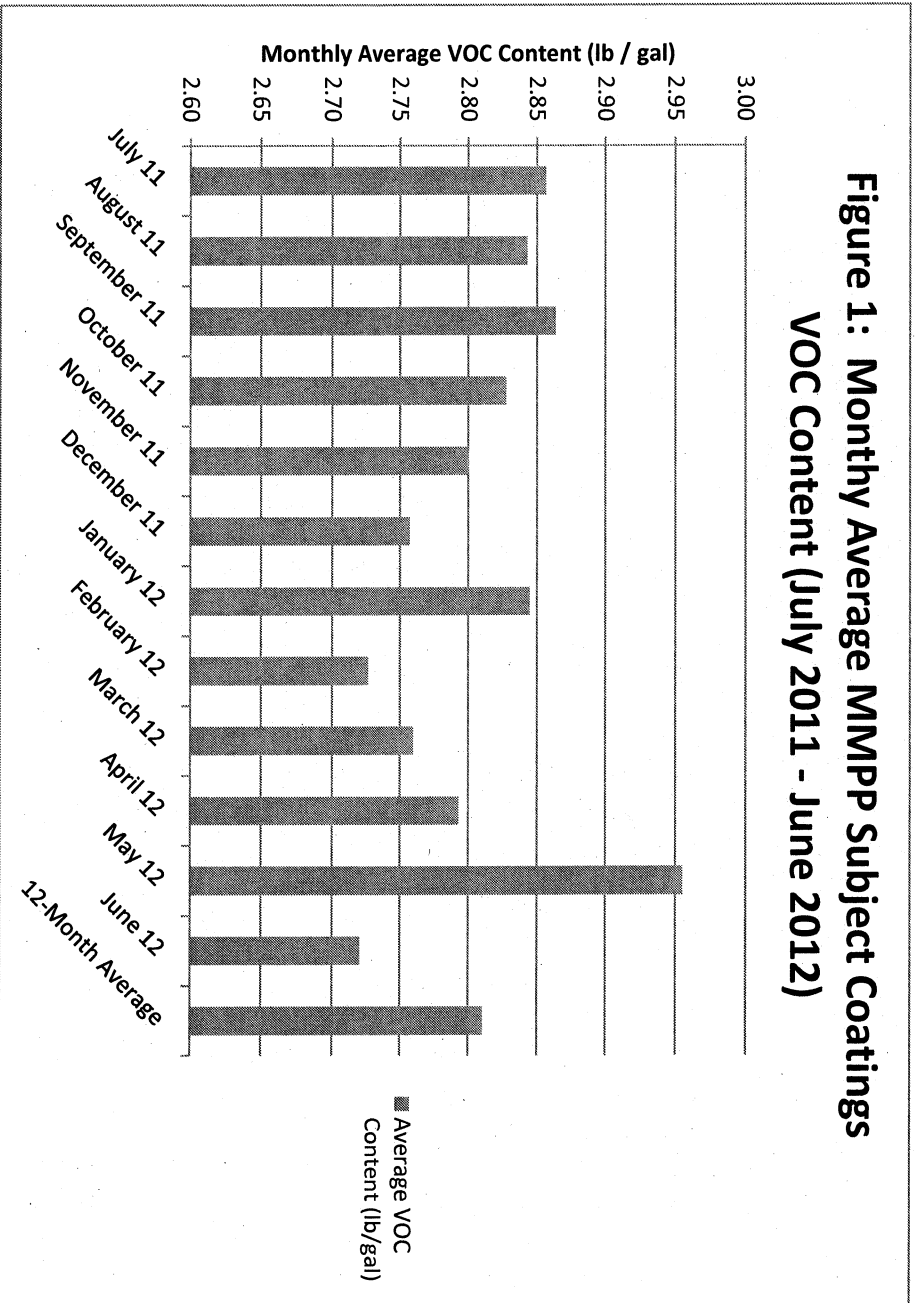
- 1 –Figure 1: Monthly Average MMPP Subject Coating VOC Content Chart
- 2 –Table 1: MMPP Rule Potentially Subject Coatings – Monthly VOC Content / Emissions Summary Table



Lockheed Martin Aeronautics Company - Pinellas Park Facility

MMPP Rule Potentially Subject Coatings - Summary Chart

Figure 1: Monthly Average MMPP Subject Coatings  
VOC Content (July 2011 - June 2012)



**Lockheed Martin Aeronautics Company  
Pinellas Park Facility**

Table 1: MMPP Rule Potentially Subject Coatings  
Monthly VOC Content / Emissions Summary Table

Month	Year	MMPP Subject Coatings (gal)	Total VOC (lbs)	Average VOC (lb/gal)
July	2011	276.16	788.81	2.86
August	2011	618.84	1759.33	2.84
September	2011	198.69	568.93	2.86
October	2011	128.05	362.05	2.83
November	2011	180.64	505.64	2.80
December	2011	245.44	676.72	2.76
January	2012	138.11	392.87	2.84
February	2012	333.69	909.72	2.73
March	2012	312.94	863.66	2.76
April	2012	134.66	376.09	2.79
May	2012	231.13	683.03	2.96
June	2012	248.44	675.70	2.72
<b>Total</b>		<b>3,046.78</b>	<b>8,562.56</b>	<b>2.81</b>
<b>MMPP Allowable</b>		<b>3,046.78</b>	<b>10,663.71</b>	<b>3.50</b>

Annual Emission  
Reduction (relative  
to MMPP Limit)

2,101

pounds

12-Month average as % of MMPP Limit  
Compliance margin

80.30%

19.70%