

# Joint Strike Fighter – Lightning II Monthly Assessment Report

Prepared by DCMA Lockheed Martin Fort Worth



December 2009

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## Table of Contents

Program Summary .....	3
Report Scope.....	5
Maintain LRIP Aircraft Delivery Rate .....	6
Improve Supplier Delivery Rate .....	8
Improve Supplier Quality Rate .....	8
Maintain Cost and Schedule .....	9
Non-Conformance Reduction .....	13
Improve Software Productivity.....	14
Improve FCA/PCA .....	15
Earned Value.....	15
Appendix A – EV Assessment Criteria .....	15

## Program Summary

**Flight Test:** AF-1 will continue ground testing for the next few weeks – flights are planned to resume in March 2010. AF-2 IPP runs are planned for just prior to holiday break. Progress towards BF-2 ferry to Pax continues, with an endurance flight required prior to ferry. BF-3 first flight is scheduled for the fourth week of December pending completion of IPP/Engine runs and taxi testing (baseline first flight date 13 May 09).

SDD/LRIP Production Status		(As of 4 Dec 09)
Forward Fuselage	12 – Assembly 13 – Mate/Sub-Systems/Final	
Center Fuselage	17 – Assembly/On-Dock 13 – Mate/Sub-Systems/Final	
Aft Fuselage	10 – Assembly/On-Dock 13 – Mate/Sub-Systems/Final	
Wing	15 – Assembly 13 – Mate/Sub-Systems/Final	
EMAS	5 – (AF-9, AF-8, AF-7, AF-6 & AF-10)	
Moving Line/Final Assembly	6 – (AF-4, BF-5, CF-3, CF-1, AF-3 & CF-2)	
Run Stations	5 – (BF-2, AF-1, BF-3, BF-4 & AF-2)	
Labs	3 – (BG-1, CG-1 & CF-2)	
Deployed	5 – (AG-1, AJ-1, AA-1, CG-1 & BF-1)	

**Schedule / DD-250 Deliveries:** [REDACTED] is projected for mid-CY2010. This will be the Program's sixth schedule revision. For month-end October, AF-6 and AF-7 are ~4.5 months late to their DD-250 dates. LRIP 2 aircraft are averaging ~5 months late, and LRIP 3 aircraft that have passed their baseline start dates are averaging ~1 month late to their DD-250 dates in this early stage of build. The Maintain LRIP Aircraft Delivery section of this report provides more detail of LRIP build activities.

**LRIP 3 Integrated Baseline Review (IBR):** The LRIP 3 IBR was held at LMFW 8-10 Dec 09. LM Aero acknowledged that there are current and future challenges, combined with SDD pressures and LRIP 1 and LRIP 2 aircraft that are not projected to meet current contract dates. LM Aero affirmed that cost pressures are understood and have been entered into DCROM. LM Aero has indentified critical factors such as GFE deliveries, build target spans, and software risks that must be successful to achieve contractual deliveries, and deems LRIP 3 deliveries will be met. LM Aero's performance to date, has demonstrated these success oriented plans have been extremely challenging to execute.

[REDACTED] AF-12 [REDACTED] is to ship on 21 Dec 09, and AF-13 is now scheduled for 18 Jan 10. LM Aero has revised contract delivery dates for LRIP 2 [REDACTED] deliveries. The 1-2 month delivery slips are designed to better align assembly operations at LM Aero and allow [REDACTED] to incorporate more approved changes prior to delivery. This is the second schedule change for LRIP 2 deliveries. The initial schedule change resulted in a [REDACTED] increase to LRIP 2 target price and [REDACTED] is expected to submit a second equitable adjustment for this schedule change. Incorporating STOVV wire harness changes will require significant de-build of BF-6 through BF-11 and increase schedule risk.

[REDACTED] LM Aero has provided [REDACTED] a copy of LRIP 2 Purchase Order [REDACTED] signed 6 Nov 09, which shifted most major assembly Ex-works dates 1-2 months into the future to reflect LM Aero's actual need dates. This will have a major beneficial effect on [REDACTED] schedule recovery. All of [REDACTED] major assemblies for SDD and LRIP1 are now complete – the manufacture of 16 major assemblies in 3 months demonstrates real progress over the 20 assemblies delivered in the first 8 months of 2009.

**Earned Value:** The DCMA Earned Value Management (EVM) Center completed a series of reviews of the [REDACTED] Earned Value Management System (EVMS). As a result of these reviews, on 10 December 2009 - DCMA [REDACTED] Administrative Contract Officer (ACO) issued [REDACTED] a letter stating “ The Contract Management Office (CMO), in conjunction with the Earned Value Management Center (EVMC), has determined that your Earned Value Management System (EVMS) rating for your company is NON-COMPLIANT”

**LM Aero Earned Value:** DCMA White paper recommendations from the DCMA EV progress review conducted with LM Aero during the month of November 2009 follow:

1. DCMA recommends postponing the December 2009 follow-on Compliance Review of the LM-Aero EVMS. This is a mutually agreed to position with LM-Aero as a result of their self assessment and the likelihood of their ability to successfully complete the review.
2. DCMA also recommends that the Program Office use a contractual tool currently at its disposal. The existing incentive fee criteria could be used to enforce CAP progress, if necessary, the criteria could be modified to specifically address meeting CAP milestones. DCMA has broached this topic with the contractor and the Program Office. This is the only financial lever available to the Government at this time.
3. DCMA could revoke certification of LM Aero’s EVM System. This would , send a strong message, but it would not impact current JSF contracts. It would affect Lockheed Martin’s corporate EVMS standing. When competing for new work, the company would have to disclose that it did not have a certified system. Not only would this almost certainly bring additional scrutiny on JSF, but it would impact every buying command considering an award to any Lockheed Martin segment.
4. OSD, DCMA, and PEO get together soonest to discuss all above.

Regardless of any other actions DCMA is pursuing the following way forward:

1. LM-Aero will revise the existing CAP and provide action items w/ milestones to include interim measures, exit criteria, artifacts to substantiate closure, and verification tests concluding with a follow-on Compliance Review in 2Q CY10.
2. LM-Aero will provide weekly status and updates to the DCMA on the progress made towards successfully completing a follow-on Compliance Review by 2Q CY10.
3. DCMA to pursue suspension or revocation of LM-Aero’s EVMS validation credentials if LM-Aero fails to demonstrate a compliant EVMS with all 32 ANSI-748 guidelines

**Maintenance and Quality Verification Stand-Down:** DCMA continues its independent review of LM Aero’s Maintenance and Quality Verification Stand-Down analysis. DCMA analysis includes reviewing data LM Aero used to make their recommendations and providing an independent assessment. The follow on for this activity is to identify specific areas DCMA has concern with and review those areas. DCMA will be issuing a Level II Corrective Action Request (CAR) the week of 7 Dec 09 based on a non-compliance found with redlining procedures as part of the stand-down review. A second CAR is being drafted due to non-compliances found with reoccurring process update requirements. This activity will have status updated monthly in the JSF MAR until completed.

**Interchangeability / Replaceability Corrective Action Request (CAR):** DCMA Lockheed Martin Ft. Worth has received and reviewed Lockheed Martin Aeronautics (LM Aero) Corrective Action Plan (CAP) associated with DCMA Corrective Action Request Level II (CAR) AJHD 09-005 –Contractual Noncompliance, Single Process Initiative (SPI) 2000-21, Interchangeability / Replaceability (I/R) Process. The LM Aero CAP has been accepted by DCMA 30 Nov 09. Closure of this CAR will be accomplished after all LM Aero CAP milestones have been completed and validated.

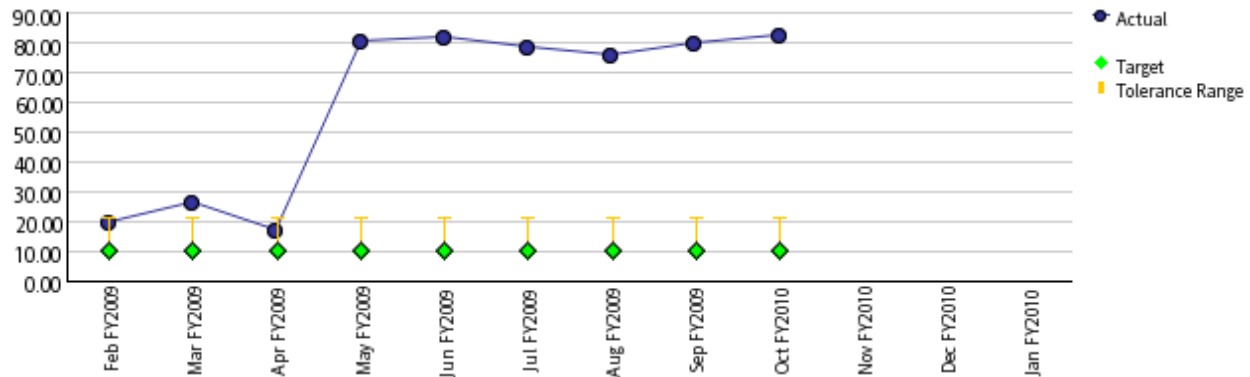
## Report Scope

Previous policy stated DCMA would create Agency/Division-Level Performance Commitments to represent the quantifiable results of the efforts of DCMA Strategies to influence customer outcomes. DCMA Performance Management policy will enable the identification of top-down performance indicators. DCMA will use performance indicators to focus on performance of DCMA's processes and supplier's performance. DCMA will use these indicators to support decision-making to improve results and shape future strategies to reach our vision while accomplishing our mission. As a result of this transition, the content of the DCMA JSF/Lighting II Monthly Assessment Report will be transitioning as well.

Title	Performance Indicator	Indicator Rating Criteria	Rating
Maintain LRIP Aircraft Delivery Rate	Maintain LRIP aircraft delivery to within 10 M-days of contract delivery date	Green: ≤10 M-day variance to delivery date Yellow : 11 – 21 M-day variance Red: >21 M-day variance to contract delivery date	R
Improve Supplier Delivery Rate	JSF Key Suppliers have an average delivery rating of greater than or equal to 96%	Green: 100.0 to 96.0% Yellow: 95.9 to 87.0% Red: ≤86.9%	R
Improve Supplier Quality Rate	Each delegated supplier has quality ratings >96%	Green: ≥ 96% Yellow: 87%-95% Red: <87%	Y
Maintain Cost and Schedule	Resource requirements are aligned in support of funding and budget allocations. IEAC data and projections match actual performance within + / - 10% of contractors budget at completion	Green: 1.0 to 0.95 variance (5%) Yellow: 0.95 to 0.90 variance (5% to 10%) Red: 0.90 or greater variance (>10%)	G
Non-Conformance Reduction	10% reduction in MRB discrepancies per year	Green: < the goal of 21 Yellow: within 10% of the goal Red: >10% above the goal of 21	G
Improve Software Productivity	[REDACTED]	[REDACTED]	G
Improve FCA/PCA	Ensure that at least 95% of systems reviewed in interim FCA/PCAs meet the design requirements	Green: % of parts meeting design requirements is ≥ 95% Yellow: 90-94% Red: <90%	G

## Maintain LRIP Aircraft Delivery Rate

**NSF198AJ17:** Description: Maintain LRIP aircraft delivery to within 10 M-days of contract delivery date. The Maintain LRIP Delivery Rate is an Integrated Master Schedule (IMS) based indicator of the monthly average (+/-) float manufacturing days (M-days) of all reported LRIP aircraft to their contract delivery schedule (DD-250). Goal is to maintain delivery of LRIP aircraft to within 10 M-days of contract delivery date. **Note: Float M-days are entered as positive values, but represent behind schedule status.** Monthly IMS LRIP CDRL data is directly used as data source. Data shall be updated NLT the 20th of each month. Total Float of all reported aircraft that have passed their baseline start date will be averaged monthly for indicator. Green: ≤10 M-day variance to delivery date, Yellow: 11 – 21 M-day variance, Red: >21 M-day variance to contract delivery date.



Indicator Status: Red

Trend: No appreciable change

Summary of Indicator Status: Indicator is -83 Mdays for month end October. This month's average consists of all LRIP 1 and 2 aircraft, and five LRIP 3 aircraft that have passed their baseline start dates.

Root Causes: AF-6 critical path driver is the [REDACTED] release for power-on. AF-7 critical path driver is the Structural Mate [REDACTED] AF-7 critical path improved 43 M-days from September month-end. For month-end October, AF-6 and AF-7 are ~4.5 months late to their DD-250 dates.

LRIP 2 – AF-8 (first CTOL) critical path is -115 M-day's total slack to Contract DD-250. BF-6 (first STOVL) is -93 M-day's total slack. LRIP 2 concerns continue to be timely availability of tooling (SDD/LRIP 1 units completing on time) and late part deliveries to various SWBS's. LM Aero has revised contract delivery dates for LRIP 2 [REDACTED] deliveries. The 1-2 month delivery slips are designed to better align assembly operations at LM Aero and allow [REDACTED] to incorporate more approved changes prior to delivery. Incorporating STOVL wire harness changes will require significant de-build of BF-6 through BF-11 and increase schedule risk.

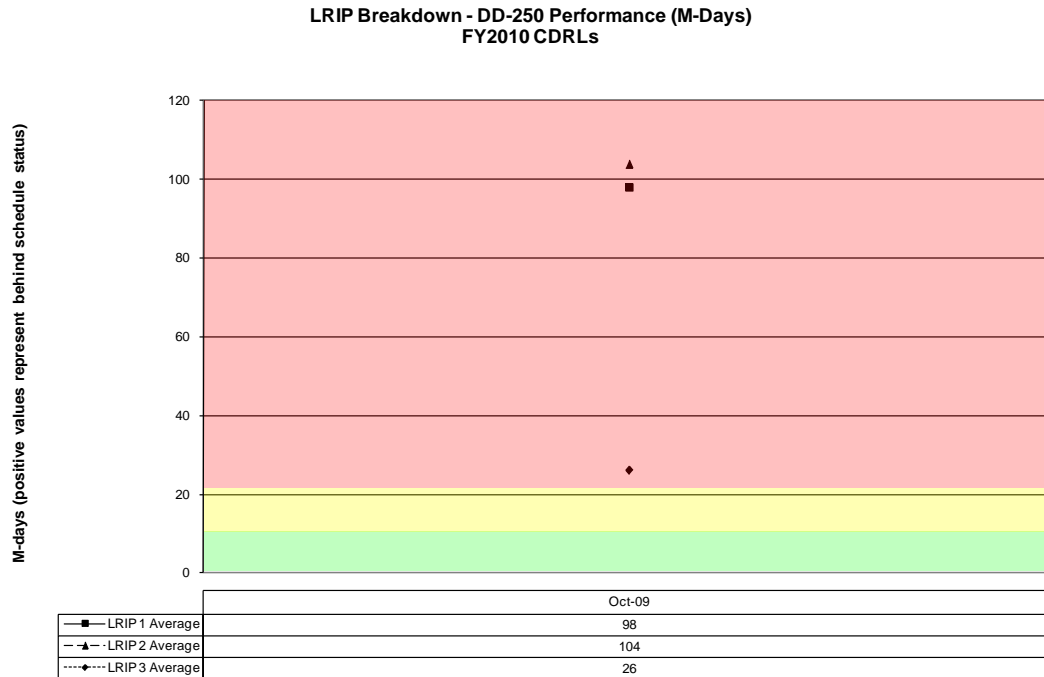
The movement of LRIP 2 Forward Fuselages to Mate is currently averaging ~3 months late to [REDACTED] as of month-end October. This is a slight improvement over AF-6 and AF-7 moves that were ~3.75 months late. AF-10 Forward moved to Mate on 30 Sep 09 (baseline was 22 Jun 09). BF-7 and BF-8 completed Autodrill activities ~2 months late to their baseline. BF-9 Forward finished PMM activities ~2 months late as well.

AF-12 and AF-13 Inner to Outer Wing Mate activities finished on 28 Sep 09 and 16 Oct 09, respectively, and were ~1.5 months late to their baseline. The movement of LRIP 2 Wings to Mate is currently averaging ~2 months late to MS 6.1. This is a slight degradation compared to AF-6 and AF-7 Wing moves. AF-10 Wing moved to Mate on 28 Sep 09 (baseline was 20 Jul 09), and AF-11 Wing moved on 16 Oct 09 (baseline was 10 Aug 09).

For month-end October, LRIP 2 aircraft are averaging ~5 months late to their DD-250 dates.

LRIP 3 – Progress continues on BF-12 (Wing and Forward), AF-14 (Wing), and BF-13 (Wing) with work projected to start on AF-14 and BF-13 in November. [REDACTED] continues work on LRIP 3 [REDACTED] [REDACTED] LRIP 3 IBR was conducted the 13-15 October with no delivery issues projected. BF-12 (first STOVL) critical path is -44 M-day's total slack to Contract DD-250 due to projected late delivery of the Lift Fan – mitigation is being explored. AF-14 (first CTOL) critical path is showing 0 M-day's total slack to Contract DD-250. LRIP 3 concerns are GFE deliveries – mitigation is being reviewed.

For month-end October, the LRIP 3 aircraft that have passed their baseline start dates are averaging ~1 month late to their DD-250 dates in this early stage of build.



Contractor Actions: Mitigation activities such as the use of overtime, span adjustments, and out of station installations for late parts continues. Another revised Program schedule (currently called [REDACTED]) will occur. This will be the sixth schedule revision since Program inception.

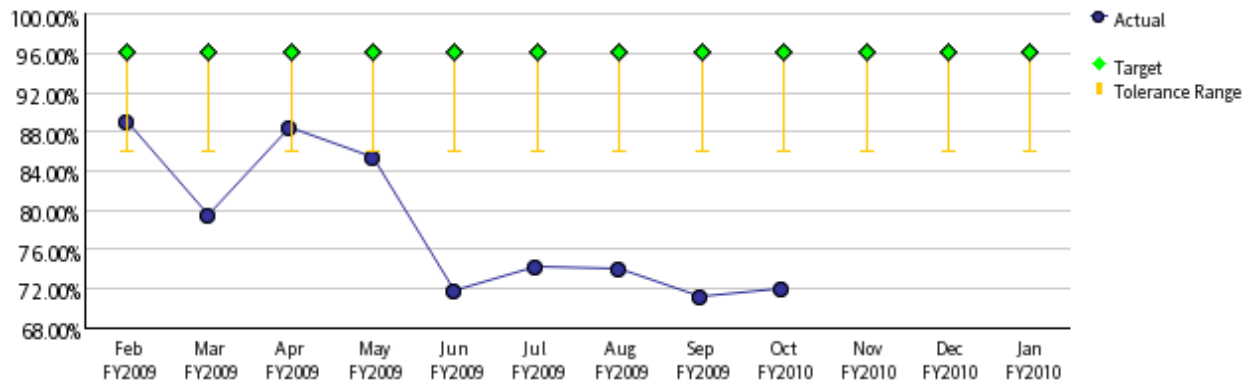
Although AF-8 and AF-9 EMAS activities started ~2 months late to the baseline, this was an improvement when compared to AF-6 and AF-7 EMAS starts.

DCMA Actions: DCMA LMFW P/SI, PA Production and PA D&I Team members continue to mature performance indicator sub-indicators to assess key build event progress on LRIP aircraft. These indicators will utilize data from the IMS and various shop floor systems.

Estimate when indicator will achieve goal: Estimate when indicator will achieve goal: LRIP deliveries are not projected to be met until sometime in LRIP 3, and are largely dependent upon Wing-at-Mate overlap elimination, timely availability of tooling, change integration, part deliveries and alignment of EBOM, MBOM and As-Built data. BF-13 is the pacing aircraft for schedule recovery.

## Improve Supplier Delivery Rate

**NSF198AJ21:** Description: JSF Key Suppliers have an average delivery rating of greater than or equal to 96 percent. JSF Key Suppliers are determined by analyzing category 3 and 4 shortages to jig load. JSF Key Suppliers may be adjusted on a quarterly basis as new issues emerge. This indicator is a monthly average percent of lots delivered on-time for JSF Key Suppliers. The goal is to achieve an average of 96 percent or greater on-time lot delivery rate. Supplier delivery data is obtained from LM Aero's Supplier Quality Management and Procurement Quality Network databases. These databases are updated on approximately the 15th of each month. The monthly data from each database is reflective of the previous month's performance. This indicator will be updated within one week of the LM Aero database updates. Green: 100.0 to 96.0%, Yellow: 95.9 to 87.0%, Red: ≤86.9%.



Indicator Status: Red

Trend: No appreciable trend

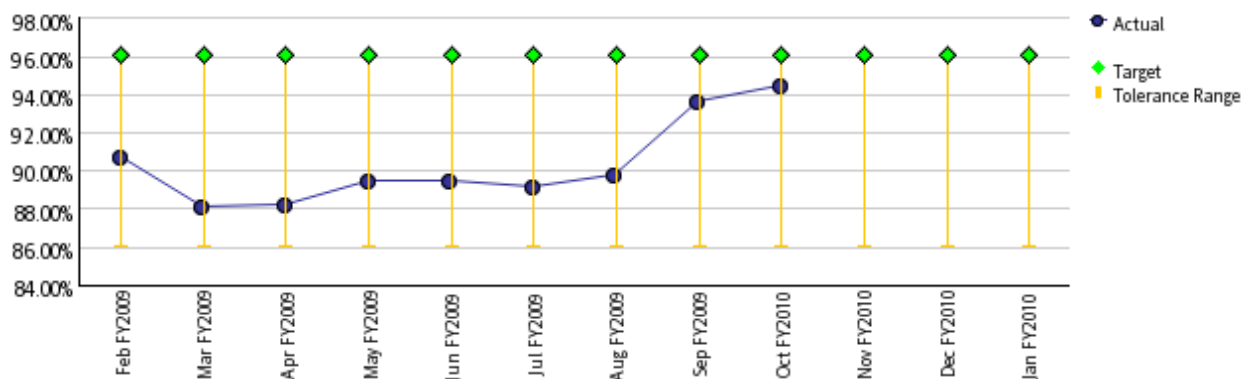
Summary of Indicator Status: DCMA assessment of 53 F-35 Key Suppliers shows an average 71.96 % for the October 2009 data.

Root Causes: Drivers contributing to the 71.96 % are deliveries of system related units such as: [REDACTED]

Estimate when PC will achieve goal: LRIP 3 to LRIP 4 (2011 to 2013).

## Improve Supplier Quality Rate

**NSF198AJ10:** Description: Each delegated supplier has quality ratings greater than 96 percent. The total LM Aero Quality rating for key suppliers (areas of consideration are: cost, issues, technical, criticality). The top suppliers are summed and divided by quantity which gives an average QA rating per month. The goal is to achieve an average of greater than 96%. Supplier quality data is obtained from LM Aero's Procurement Quality Assurance database and indicator updated no later than the 20th of each month. Green: ≥96%, Yellow: 87 to 95%, Red: <87%.



Indicator Status: Yellow



Trend: Improving

Summary of Indicator Status: DCMA assessment of 53 F-35 Key Suppliers shows an average 94.54% for the October 2009 data. Supplier quality trend has demonstrated an improving trend, for the last six months.

Root Causes: Current contributing drivers are the lower quality ratings of system related units such as:

[REDACTED]

### Maintain Cost and Schedule

**NSF198AJ08:** Description: Resource requirements are aligned in support of funding and budget allocations. IEAC data and projections match actual performance within +/- 10% of contractors budget at completion. DCMA Independent EAC is measured against the prime contractor's BAC. DCMA includes risk, pressures, cost and schedule variances as compared to LM Aero BAC. The source of EV data comes from the monthly JSF SDD Cost Performance Report which lags by 1 month. Indicator is updated in Indicators Manager as soon as data is received from contractor (**approximately 45-60 days after end-of-month**). This is represented as the contractor's BAC as the Numerator divided by DCMA's IEAC as the Denominator - with a 10 percent tolerance band. Green: 1.0 to 0.95 variance (5%), Yellow: 0.95 to 0.90 variance (5% to 10%), Red: 0.90 or greater variance (>10%).

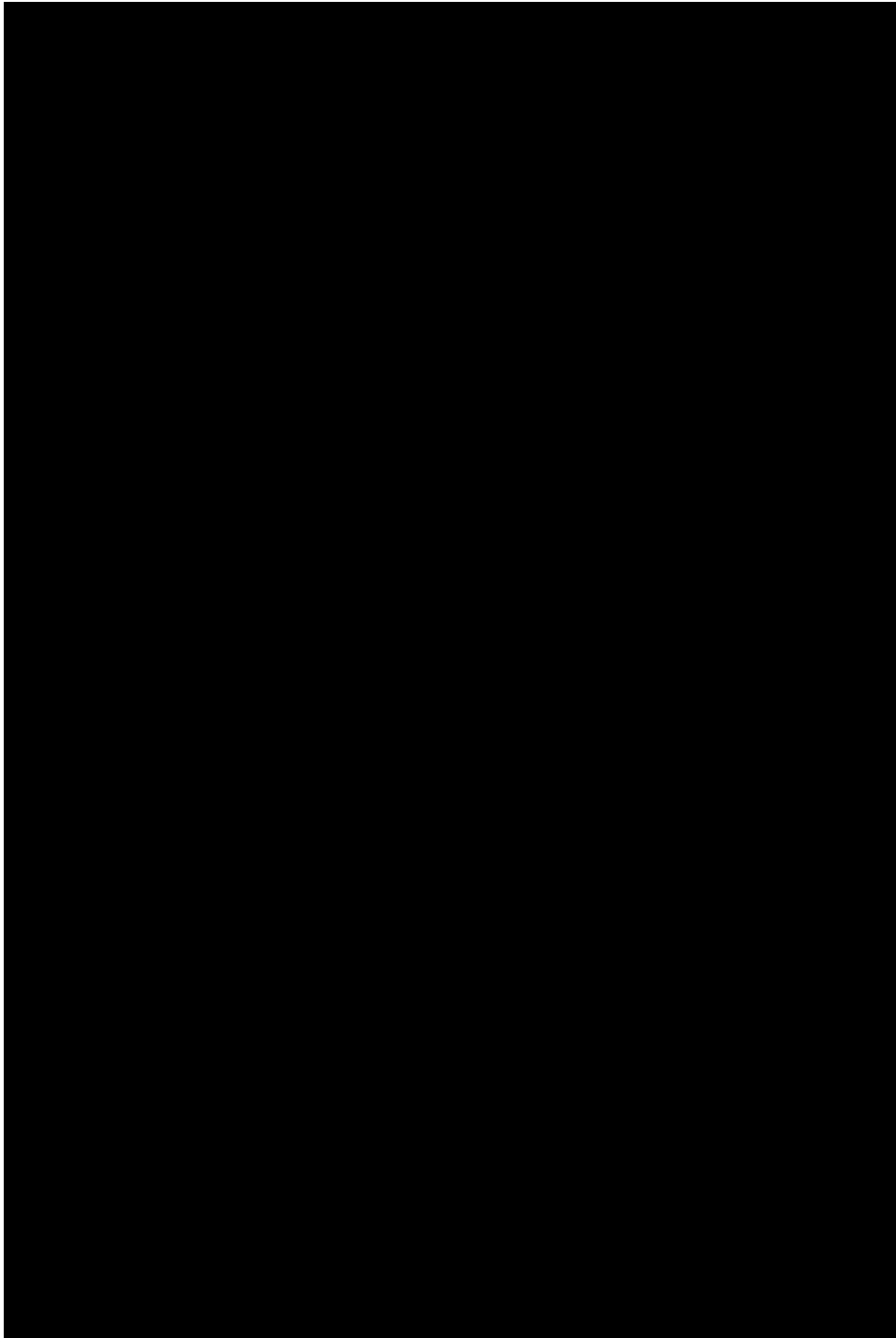
Lockheed Martin is now reporting to an Over Target Baseline of [REDACTED] reported in the October 2009 Cost Performance Report (CPR). DCMA IEAC is [REDACTED] for the SDD contract. This DCMA IEAC is based upon the October 2009 CPR report.

LM Aero has expended an average of [REDACTED] per month over the last six months. Assuming a continuance of this expenditure rate, DCMA projects the existing SDD budget with OTB may be depleted in FY2011, [REDACTED]

LM Aero has prepared EAC8 Cycle 1 incorporating DCROM base of potential threats and pressures in the July 09 CPR report. The EAC8 has no MR remaining, further straining the financial management of the Program. The EAC8 is under DCMA review to verify that potential suppliers' cost growth, future TCRs, etc., are considered in the DCROM. The LM Aero's EAC8 projected MR is zero and therefore will be unavailable to offset any risks remaining in flight testing and software coding. Without that reserve, and assuming the same efficiencies, the Program is likely to require additional funding for completion of the SDD contract. LM Aero has completed EAC9 and will incorporate in the Nov 09 CPR report. Preliminary assessment by LM Aero indicates that an additional amount of [REDACTED] will be required to complete the contract.

Using the Standard formula based on cumulative SPI and CPI (since replan) yields an SDD increase of [REDACTED] over current LM Aero BAC. With the addition of risk factors such as, Suppliers' cost growth, Late-to-Need parts, Schedule Impacts, Production Delays, etc DCMA's EAC is [REDACTED] against LM Aero BAC of [REDACTED]. Thus the DCMA's IEAC is [REDACTED] higher than LM Aero's BAC or [REDACTED] higher than LM Aero's EAC. The DCMA's IEAC includes the threats and pressures at [REDACTED] replacement of BF-4 STOVL lift door, repairs and/or replacement of WB Doors and LF Exhaust Doors. The repair/replacement costs have been estimated to be close to [REDACTED] dollars.

The graphs below illustrate the DCMA's past projections of IEAC against LM Aero's BAC and LRE.



The October 2009 SDD/LRIP cost summary and Program status is as follows:

SDD	BAC	LM EAC CPR	DCMA IEAC
Performance Measurement Baseline (PMB)	[REDACTED]	[REDACTED]	[REDACTED]
Management Reserve (MR)	[REDACTED]	[REDACTED]	[REDACTED]
Total:	[REDACTED]	[REDACTED]	[REDACTED]

LRIP 1	BAC	LM EAC CPR	DCMA IEAC
Performance Measurement Baseline (PMB)			
Management Reserve (MR)			
Total:			

LRIP 2	BAC	LM EAC CPR	DCMA IEAC
Performance Measurement Baseline (PMB)			
Management Reserve (MR)			
Total:			

LRIP 3	BAC	LM EAC CPR	DCMA IEAC
Performance Measurement Baseline (PMB)			
Management Reserve (MR)			
Total:			

Budget Baseline and EAC Summaries

Contract Data	KT 1	KT 2	KT 3	KT 4
Contract #	N00019-02-C-3002	N00019-06-C-0291	N00019-07-C-0097	N00019-08-C-0028
Name	JSF SDD	LRIP 1	LRIP 2	LRIP 3
Contract Type	Cost Plus Award Fee	Cost Plus Award Fee	Cost Plus Award Fee	Cost Plus Award Fee
Obligated Amount				
ULO				
Performance Start/End	Oct 2001/Oct 2014	May 2007/Feb2010	Apr 2010/Feb 2011	Mar 2011/Dec 2011

Primary Trip Wires		Secondary Trip Wires						
System Indicator	Baseline Indicator	Cum BEI	SPI	Cum CPLI	CPI	CPI/TCPI 10%	Contract Mods 10%	Baseline Revs 5%
						9.2%		N/A

**Primary Trip Wires –**

- (a) System Indicator: Please see EV section of report.
- (b) Baseline Indicators: A baseline assessment shows the contractors SDD BAC and EAC to be optimistic. To complete the contract within the CBB, the contractor needs to be about 9.2 percent more efficient. The BAC has increased by 40% since the start up in Oct of 2001.

**Secondary Trip Wires –**

- SDD Baseline Execution Index (BEI): Cumulative tasks from October 2001 thru November 2009: Cum BEI = 145,894 Completed Tasks/149,719 Planned Tasks = 0.97
- SDD Monthly (November 2009) Tasks: 340 Completed Tasks vs. 942 Baselined to Complete Tasks
- SPI (since replan) = BCWP/BCWS= 0.974

- $SDD\ CPLI = (1220 + (110)/1220 = 0.91$  (Time Now = 29 Nov 09)
- $CPI$  (since replan) =  $BCWP/ACWP = 0.952$
- $CPI/TCPI = 0.951/1.043 = .92$
- $Contracts\ Mods - (BAC\ now)/original\ BAC\ 10/01 = \blacksquare = 1.40$

The DCMA Risk Rating for EVMS at the total Program level is rated green, using the parameter of VAC (-4.991%).

Similarly, the  $TCPI_{EAC}$  is different, for the DCMA IEAC versus the contractor's EAC:

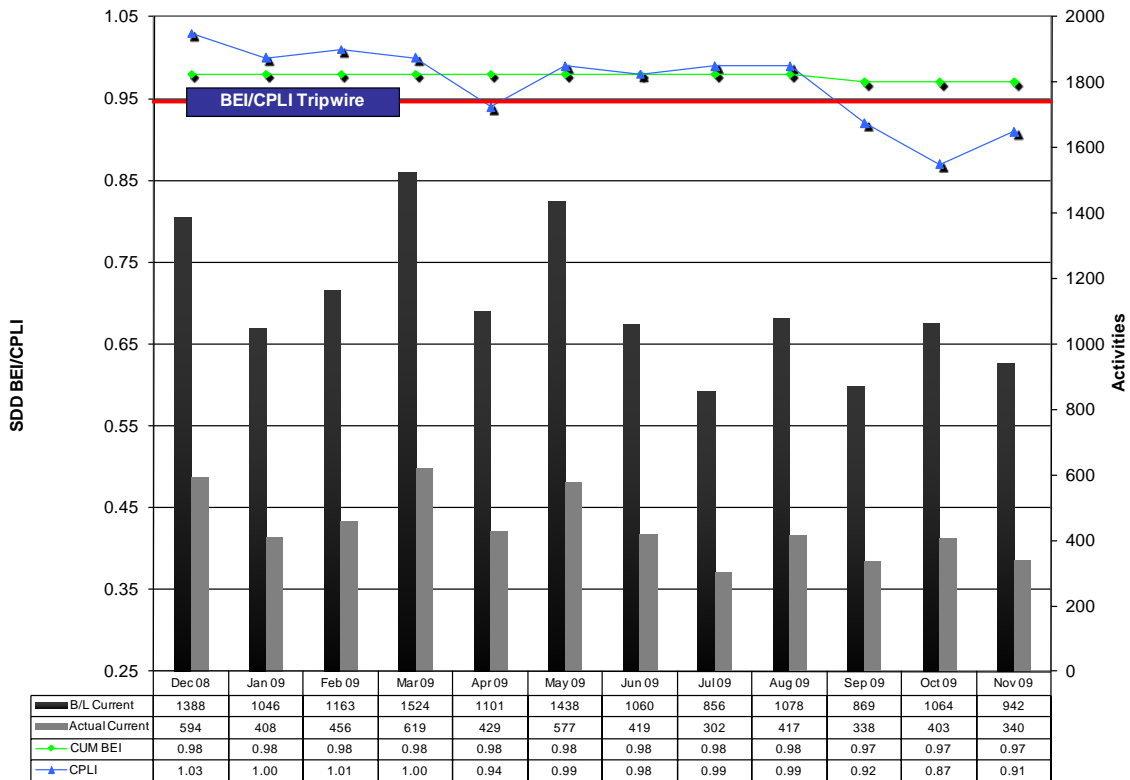
$$TCPI_{DCMA\ IEAC} = 0.879$$

$$TCPI_{LM\ EAC} = 1.043$$

**NSF198AJ08 Sub-Indicators:** Description: The SDD Baseline Execution Index (BEI) indicator is an Integrated Master Schedule (IMS) based indicator that calculates the efficiency with which actual work has been accomplished when measured against the baseline. The BEI provides insight into the realism of Program cost, resource, and schedule estimates. For BEI, an index of <.95 is used as a warning indication of schedule execution underperformance. Goal is to achieve BEI values  $\geq .95$ . Cumulative BEI equals actual tasks/activities completed divided by the baseline total tasks/activities.

The SDD Critical Path Length Index (CPLI) indicates whether or not the Program schedule can be completed on time. This is an Integrated Master Schedule (IMS) based indicator that utilizes the critical path methodology definition being: the longest, continuous sequence of tasks through the network schedule with the least amount of float, from contract start to contract completion. After contract start, the critical path is always measured from "time now" until contract completion. For CPLI, an index of <.95 is used as a warning indication that the Program will not complete on time. Goal is to maintain CPLI values  $\geq .95$ . Critical Path Length Index (CPLI) equals the Critical Path Length (CPL) plus or minus the Total Float (TF) divided by the Critical Path Length (CPL). The target efficiency ratio for both indicators is 1.00. An index greater than 1.00 is favorable, and an index less than 1.00 is unfavorable.  $\geq .95$  = Green .90 to <.95 = Yellow <.90 = Red

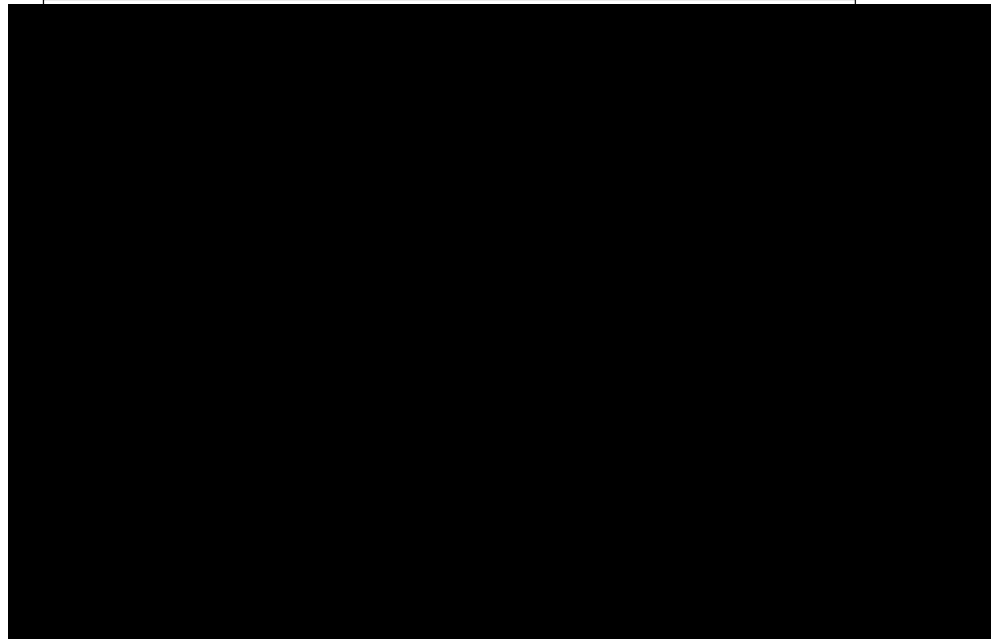
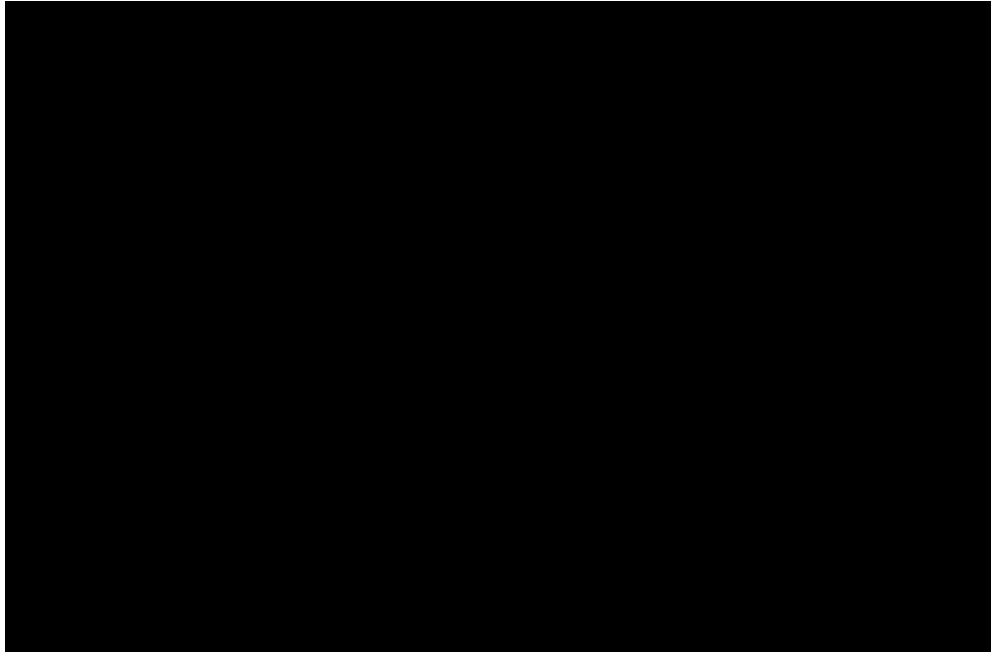
SDD Baseline Current vs. Actual Current Finishes/Month  
Program Cum BEI / CPLI Trend



Cumulative SDD Program BEI is at 0.97, while Cum CPLI is at .91 for month end November 2009. Monthly planned finishes versus actual performance continues to average an approximate 40% completion rate. MS 6.1 baseline replan dates were incorporated into the IMS month-end May 2008. Master Schedule 6.2 is currently projected for mid-CY2010.

### Non-Conformance Reduction

**NSF198AJ06:** Description: 10% reduction in MRB discrepancies per year. Indicator shows the average number of MR defects per 1000 actual manufacturing hours. Metric is based on contractor provided data that is collected updated in metrics manager NLT the 20th of each month and averaged against all prior months to illustrate normalized trend. Green: <goal of 18.90, Yellow: within 10% of the goal, Red: >10% above the goal of 18.90.



Indicator Status: Green

Trend: Improving with approximately [REDACTED] November was [REDACTED] 14 months normalization is [REDACTED] to be the high drives for the past 6 months.

Summary of Indicator Status: Indicator illustrates improving trend – maintained for the last 12 months.

Contractor Actions: LM Aero has reduced their goal for MR actions for 2009, meeting the goal to date.

DCMA Actions: Reducing the goal to reflect an effort to further reduce the amount of MRB actions for this year. DCMA is evaluating the new contractor goal to see if a more than 10% reduction in MRB actions is warranted.

## Improve Software Productivity

Trend: Degrading; however, based on the slope of the trend line, DCMA estimates we will achieve or exceed our target.

Summary of Indicator Status: Current performance is exceeding our target of [REDACTED]. The value this month is [REDACTED] which is a small negative change over last month's value of [REDACTED].

Root Causes: DCMA LMFV performed a risk assessment for this revised PC. Process areas of focus include [REDACTED]. Another focus area is improved communication through consistent use of [REDACTED].

DCMA Actions: DCMA is currently engaged in an independent internal review regarding the recent F-35 stand down events. An agenda and some initial questions have been developed. Data mining, discovery and research and analysis are being conducted in an effort to gain insight.

DCMA [REDACTED] testing discovered that [REDACTED] has significant processing throughput issues (as the additional capability required for [REDACTED]).

DCMA [REDACTED] (Responsibility for NAV functionality relocated to [REDACTED]).

DCMA

DCMA conducted system surveillance on the contractor's Indirect Management Process. No corrective action requests were generated from this review. The contractor kicked off a CEAC effort that is planned for approval in December 2009, with delivery to LM Aero in January 2010. The contractor also started a Significant Improvement Activity (SIA) on the EVM process to address the large number of open CARs, and lack of closeout progress. An SIA meeting was held on Nov 19th that included representatives from LM finance and quality organizations, along with DCMA.

Estimate when PC will achieve goal: Current performance exceeds target and the trend continues to improve.

## Improve FCA/PCA

**NSF198AJ20:** Description: Ensure that at least 95% of systems reviewed in interim FCA/PCAs meet the design requirements. Technical Description: Verification of the F-35's physical configuration to the design requirements by performing PCAs (physical configuration audits). Percentage of part and assembly numbers reviewed in interim audits in accordance with engineering drawings divided by total population of parts and assemblies assessed. The data used to assess this comes from interim audits from suppliers. Green: % of parts meeting design requirements is  $\geq 95\%$ , Yellow: 90-94%, Red:  $< 90\%$ .

Indicator Status: Green with a score of 99% for November 2009

Trend: Improving

Contractor Actions: Meetings with DCMA personnel, conducting FCA PCA audits. LMFV signed CM Certification for the FCA/PCA event held with 15-17 June 2009. This was the result of closure of all action items resulting from the audit.

LMFV signed CM Certification for the AC Contactor Module FCA/PCA event held with 11-12 August 2009. This was the result of closure of all action items resulting from the audit.

There were no audits or pre-audit meetings held in November 2009.

DCMA Actions: Review of contractor processes and reports.

## Earned Value

The complete EV report is attached:



09-12-16 JSF EV

## Appendix A – EV Assessment Criteria

Rating Criteria is based on the DCMA VAC% and when possible should include MR in the DCMA IEAC

**Green** - VAC%  $> -5\%$

**Yellow** -  $-10\% < \text{VAC}\% < -5\%$

**Red** - VAC%  $< -10\%$

N/R - Not Rated or Not Reported