

DOE EVMS Metric List



Metric ID	Method	Metric Short Description	Tolerance
A ORGANIZING			
A.01 Product-Oriented Work Breakdown Structure (WBS)			
A.01.05 (01.02.03)	automated	WBS, index <> BL IMS	0 ^a A
A.01.04 (01.02.01)	automated/manual verification	CA DB, RAM <> IPMR F1	0 ^a
A.01.02 (01.01.02)	automated/manual verification	WBS scope, dictionary <> WAD	0 ^a
A.01.01 (01.01.01)	automated/manual	WBS dictionary unsubstantiated	0 ⁱ
A.02 Work Breakdown Structure (WBS) Hierarchy			
A.02.02 (01.04.01)	automated/manual	WBS not further decomposed	0 ⁱ
A.02.01 (01.03.01)	automated/manual verification	CA and SLPP WBS or DB, current <> prior	0
A.03 Organizational Breakdown Structure (OBS)			
A.03.01 (02.01.01)	manual	DB, IPMR F2 <> dollarized RAM	0 ^a
A.04 Integrated System with Common Structures			
A.04.09 (03.01.09)	automated	WBS identifier in BL IMS not in EVMS cost tool	0 ^a A
A.04.08 (03.01.08)	automated	DB, cost tool <> IPMR F1	0 ^a
A.04.05 (03.01.05)	automated	DB, EVMS cost tool <> WAD	5% ^a
A.04.04 (03.01.04)	automated	start or finish dates, EVMS cost tool <> WAD	5% ^a
A.04.03 (03.01.03)	automated	start or finish dates by EOC, FC IMS <> EVMS cost tool	0 ^a A
A.04.02 (03.01.02)	automated	start or finish dates, BL IMS <> EVMS cost tool	0 ^a A
A.04.01 (03.01.01)	automated/manual verification	labor % complete, FC IMS <> EVMS cost tool	5% ^a A
A.05 Control Account (CA) to Organizational Element			
A.05.07 (05.04.02)	automated	CA with 3 consecutive SV or CV threshold trips	0 ^a A
A.05.06 (05.04.01)	automated	CAM or DB, WAD <> dollarized RAM	0 ^a
A.05.05 (05.03.01)	automated	CA does not have just 1 CAM assigned	0 ^a A
A.05.04 (05.02.01)	automated/manual	CAM, BCR <> WAD	0
A.05.03 (05.01.02)	automated	CA is not assigned just 1 WBS in EVMS cost tool	0 ^a
A.05.02 (05.01.01)	automated	CA does not have just 1 responsible organization	0 ^a A
A.05.01 (01.02.02)	automated/manual	WBS descriptions, dictionary <> CAM	0 ⁱ

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B PLANNING AND SCHEDULING			
B.01 Authorized, Time-Phased Work Scope			
B.01.02 (06.01.02)	automated	discrete in EVMS cost tool not in FC IMS	0 ^a A
B.01.01 (06.01.01)	automated	HDV-CI, index <> BL IMS	0 ^a
B.02 Schedule Provides Current Status			
B.02.07 (06.02.07)	automated	FC IMS not in BL IMS	1% ^a F
B.02.06 (06.02.06)	automated	FC IMS in freeze period not in BL IMS	5% ^a F A
B.02.05 (06.02.05)	automated	BL IMS not in FC IMS	0 ^a B A
B.02.04 (06.02.04)	automated	FC IMS actual start or finish date, prior <> current	0 ^a A
B.02.03 (06.02.03)	automated	FC IMS out-of-sequence relationships	0 ^a A
B.02.02 (06.02.02)	automated	> 0% complete without actual start	0 ^a F A
B.02.01 (06.02.01)	automated	100% complete without actual finish	0 ^a F A
B.03 Horizontal Integration			
B.03.09 (06.03.09)	automated/manual verification	BL IMS lags > 22 work day relationships	0 ^a B A
B.03.02 (06.03.02)	automated/manual verification	FC IMS without relationships	1% ^a F A
B.03.03 (06.03.03)	automated	BL IMS SF relationships	0 ^a B A
B.03.04 (06.03.04)	automated	FC IMS SF relationships	0 ^a F A
B.03.05 (06.03.05)	automated/manual verification	BL IMS SS or FF relationships	15% ^a B A
B.03.06 (06.03.06)	automated/manual verification	FC IMS SS or FF relationships	15% ^a F A
B.03.01 (06.03.01)	automated/manual verification	BL IMS without relationships	0 ^a B A
B.03.08 (06.03.08)	automated	FC IMS lead relationships	1% ^a F A
B.03.16 (06.07.04)	automated	FC IMS discrete successor with LOE predecessor relationships	0 ^a A
B.03.10 (06.03.10)	automated/manual verification	FC IMS lags > 22 work day relationships	0 ^a F A
B.03.11 (06.03.11)	automated/manual verification	BL IMS with hard constraints	0 ^a B H
B.03.12 (06.03.12)	automated/manual verification	FC IMS with hard constraints	0 ^a F H
B.03.13 (06.03.13)	automated/manual verification	BL IMS soft constraints relationships	15% ^a B H
B.03.14 (06.03.14)	automated/manual verification	FC IMS soft constraints relationships	15% ^a F H
B.03.15 (06.07.03)	automated	BL IMS discrete successor with LOE predecessor relationships	0 ^a A
B.03.07 (06.03.07)	automated	BL IMS lead relationships	1% ^a B A
B.04 Vertical Integration			
B.04.03 (06.04.03)	automated/manual	FC IMS start or finish dates different from supplemental FC schedule	0 ⁱ
B.04.02 (06.04.02)	automated/manual	FC IMS start or finish dates outside top level schedule	0 ⁱ
B.04.01 (06.04.01)	automated/manual	BL IMS start or finish dates outside top level schedule	0 ⁱ
B.05 Integrated Master Schedule (IMS) Resources			
B.05.08 (06.06.03)	manual	FC IMS resource loading not reasonable	0 ⁱ H
B.05.07 (06.06.02)	manual	BL IMS resource loading not reasonable	0 ⁱ H
B.05.06 (06.05.06)	automated/manual verification	FC IMS SVT with resources and ZBA unsubstantiated	20% ^a
B.05.04 (06.05.04)	automated	FC IMS milestones, SMs, SVTs, and ZBAs with resources	0 ^a F H
B.05.03 (06.05.03)	automated	BL IMS milestones, SMs, SVTs, and ZBAs with resources	0 ^a B H
B.05.02 (06.05.02)	automated	FC IMS without resources	0 ^a F H
B.05.01 (06.05.01)	automated	BL IMS without resources	0 ^a B H
B.06 Schedule Detail			
B.06.01 (06.06.01)	automated	BL IMS > 44 work days	10% ^a B A

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B.07 Critical Path and Float			
B.07.13 (06.07.11)	automated	BL IMS with negative total float	0 ^{a B}
B.07.12 (06.07.10)	automated/manual verification	FC IMS total float not reasonable	10%
B.07.11 (06.07.09)	automated/manual verification	BL IMS total float not reasonable	10%
B.07.10 (06.07.08)	automated/manual	FC IMS longest path not reasonable	0 ⁱ
B.07.09 (06.07.07)	automated/manual	BL IMS longest path not reasonable	0 ⁱ
B.07.08 (06.07.06)	automated	FC IMS with > 15 predecessors	5% ^{a F A}
B.07.07 (06.07.05)	automated	BL IMS with > 15 predecessors	5% ^{a B A}
B.07.06 (06.07.02)	automated/manual verification	FC IMS, LOE on longest path	0 ^{a F A}
B.07.05 (06.07.01)	automated	BL IMS, LOE on longest path	0 ^{a B A}
B.07.04 (06.03.18)	automated/manual verification	FC IMS on longest path	40% ^{a F A}
B.07.03 (06.03.17)	automated/manual verification	BL IMS on longest path	40% ^{a B A}
B.07.02 (06.03.16)	manual	FC IMS pull test	0
B.07.01 (06.03.15)	manual	FC IMS push test	0
B.08 Schedule Margin (SM)			
B.08.03 (06.08.05)	automated/manual verification	FC IMS SM remaining duration low	0 ^{a H}
B.08.02 (06.08.02)	automated/manual verification	FC IMS no SM or not linked to DOE	0 ^{a H}
B.08.01 (06.08.01)	automated/manual verification	BL IMS no SM or not linked to DOE	0 ^{a H}
B.09 Progress Measures and Indicators			
B.09.01 (07.01.01)	automated/manual	BL IMS missing key activities	0 ^{i H}
B.10 Time-Phased Performance Measurement Baseline (PMB)			
B.10.02 (08.02.02)	manual	BL IMS pull test	0
B.10.01 (08.02.01)	manual	BL IMS push test	0

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C BUDGETING AND WORK AUTHORIZATION			
C.01 Scope, Schedule and Budget Alignment			
C.01.03 (08.01.03)	automated/manual verification	DB, UB, PMB, MR, CBB, NCC, and AUW not aligned	0 ^a
C.01.02 (08.01.02)	automated	DB labor units, EVMS cost tool <> BL IMS	5% ^a
C.01.01 (08.01.01)	manual	PMB, IPMR F1 <> dollarized RAM	0 ^{a A}
C.02 Summary Level Planning Packages (SLPP)			
C.02.01 (08.04.01)	automated	SLPP without scope, schedule, or budget	0 ^a
C.03 Work Authorization Documents (WAD)			
C.03.01 (09.01.01)	automated/manual verification	WAD without scope, schedule, or budget by EOC	0 ^a
C.04 Work Authorization Prior to Performance			
C.04.01 (09.02.01)	automated	CA started prior WAD approved	0 ^a
C.05 Budgeting by Elements of Cost (EOC)			
C.05.02 (09.03.02)	automated/manual	CA by EOC not reasonable	0 ⁱ
C.05.01 (09.03.01)	automated	CA/WP/PP/SLPP by EOC DB <= 0	0 ^{a A}
C.06 Work Package Planning, Distinguishability, and Duration			
C.06.01 (10.01.01)	automated	discrete WP > 132 work days	5% ^a
C.07 Measurable Units and Budget Substantiation			
C.07.05 (11.01.01)	automated	CA DB <> WAD budget	0 ^a
C.07.04 (10.08.01)	automated/manual	WBS BOE unsubstantiated	0 ⁱ
C.07.01 (10.02.02)	automated/manual	PP activities unsubstantiated	0 ⁱ
C.07.02 (10.07.01)	automated	PP with actual start, ACWP, or BCWP	0 ^{a A}
C.08 Appropriate Assignment of Earned Value Techniques (EVT)			
C.08.03 (10.06.02)	automated/manual	schedule or cost time-phased resources <> QBD time-phased resources	5% ^{i H}
C.08.02 (10.06.01)	automated	0-100 > 22 work days	0 ^{a A}
C.08.01 (10.04.01)	automated	WP with EVT LOE and non-LOE	0 ^{a A}
C.08.05 (10.06.04)	automated	50-50 > 44 work days	0 ^{a A}
C.08.04 (10.06.03)	automated/manual	apportioned unsubstantiated	0 ⁱ
C.09 Identify and Control Level of Effort (LOE) Work Scope			
C.09.03 (12.03.01)	automated/manual	LOE unsubstantiated	5% ⁱ
C.09.02 (12.02.02)	automated	CA SPI delta discrete and LOE >= 0.1	0 ^{a A}
C.09.01 (12.02.01)	automated	CA CPI delta discrete and LOE >= 0.1	0 ^{a A}
C.09.05 (12.01.02)	automated	FC IMS, LOE on longest pathff	0 ^{a A}
C.09.04 (12.01.01)	automated	BL IMS, LOE on longest path	0 ^{a A}
C.10 Identify Management Reserve (MR) Budget			
C.10.01 (14.01.01)	automated	TAB - PMB - MR <> 0	0 ^{a A}
C.11 Undistributed Budget (UB)			
C.11.03 (14.03.02)	automated	UB, change control log <> IPMR F1	0
C.11.02 (14.03.01)	automated	DB, change control log <> IPMR F1	0
C.12 Reconcile to Target Cost Goal			
C.12.02 (15.01.01)	automated	NCC + AUW + OTB overrun <> PMB + MR	0 ^a
C.12.01 (14.03.03)	manual	AUW unsubstantiated	0

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Metric ID	Method	Metric Short Description	Tolerance
D ACCOUNTING CONSIDERATIONS			
D.01 Direct Costs			
D.01.01 (16.02.01)	automated/manual	direct costs, EVMS cost tool <> accounting system	0 ⁱ
D.02 Actual Cost Reconciliation			
D.02.01 (16.01.01)	automated/manual	ACWPC, EVMS cost tool <> accounting system	1,000 ^{i A}
D.03 Recording Direct Costs to Control Accounts (CAs) and/or Work Packages (WP)			
D.03.06 (16.04.01)	automated	A without P (incremental) non-material/overhead completed	1,000 ^{a A}
D.03.05 (16.03.05)	automated	P without A (cumulative) non-material/overhead completed	1% ^{a A}
D.03.04 (16.03.04)	automated	A without P (incremental) non-material/overhead	1% ^{a A}
D.03.03 (16.03.03)	automated	P without A (incremental) non-material/overhead	1% ^{a A}
D.03.02 (16.03.02)	automated	P without A (cumulative) non-material/overhead	1% ^{a A}
D.03.01 (16.03.01)	automated	A without P (cumulative) non-material/overhead	1% ^{a A}
D.04 Direct Cost Breakdown Summary			
D.04.02 (18.01.01)	automated	EVMS cost tool ACWP <> IPMR F2 ACWP (cumulative)	0 ^a
D.04.01 (17.01.01)	automated	EVMS cost tool ACWP <> IPMR F1 ACWP (incremental)	0 ^a
E INDIRECT BUDGET AND COST MANAGEMENT			
E.01 Indirect Account Organization Structure			
E.01.01 (04.01.01)	manual	disclosure statement indirect budgets unsubstantiated	0
E.02 Indirect Budget Management			
E.02.03 (13.01.03)	automated/manual	BCR rates <> EVMS cost tool table	5%
E.02.02 (13.01.02)	automated/manual	rates <> EVMS cost tool table or BL IMS or FC IMSs	5%
E.02.01 (13.01.01)	manual	indirect process in not place	0
E.03 Record/Allocate Indirect Costs			
E.03.01 (19.01.01)	manual	indirect costs unsubstantiated	0
E.04 Indirect Variance Analysis			
E.04.02 (24.02.01)	manual	indirect rate thresholds unsubstantiated	0
E.04.01 (24.01.01)	manual	VAR analysis or actions unsubstantiated	0

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Metric ID	Method	Metric Short Description	Tolerance
F ANALYSIS AND MANAGEMENT REPORTING			
F.01 Calculating Variances			
F.01.02 (22.02.01)	automated/manual	BCWPI not consistent with budget and EVT	0 ^l ^H
F.01.01 (22.01.01)	automated	VAR, EVMS cost tool <> IPMR F1	0 ^a
F.02 Variances to Control Accounts (CA)			
F.02.03 (23.02.01)	automated/manual verification	VAR thresholds unsubstantiated	0 ^a
F.02.02 (23.01.02)	automated/manual	VAR inadequate	10% ^l
F.02.01 (23.01.01)	automated	VAR without narrative	0 ^l
F.03 Performance Measurement Information			
F.03.03 (25.01.03)	automated	EVMS cost tool <> IPMR F2 CA WBS BCWSi/c, BCWPI/c, ACWPI/c, DB, EAC	0 ^a
F.03.02 (25.01.02)	automated	EVMS cost tool <> IPMR F1 project BCWSi, BCWPI, ACWPI	0 ^a
F.03.01 (25.01.01)	automated	EVMS cost tool <> IPMR F1 CA WBS BCWSi/c, BCWPI/c, ACWPI/c, DB, EAC	0 ^a
F.04 Management Analysis and Corrective Actions			
F.04.03 (26.02.01)	automated/manual	VAR analysis or corrective actions unsubstantiated	0
F.04.02 (26.01.02)	manual	EVMS use unsubstantiated	0
F.04.01 (26.01.01)	manual	monthly EVMS review unsubstantiated	0
F.05 Estimates at Completion (EAC)			
F.05.08 (27.04.01)	manual	annual comprehensive EAC unsubstantiated	0
F.05.07 (27.03.03)	automated/manual	direct and indirect rates not correctly applied	0 ^l ^H
F.05.06 (27.03.02)	automated	abs(CPIc – EAC TCPIc) > 0.1	5% ^a ^A
F.05.05 (27.03.01)	automated/manual verification	ETC labor units, EVMS cost tool <> FC IMS	0 ^a ^A
F.05.03 (27.02.01)	automated	ETC <= 0	5% ^a ^A
F.05.02 (27.01.02)	automated/manual	EAC unsubstantiated	5% ^l ^H
F.05.01 (27.01.01)	automated	EAC < ACWPC	0 ^a ^A

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G CHANGE CONTROL			
G.01 Controlling Management Reserve (MR) and Undistributed Budget (UB)			
G.02 Incorporate Changes in a Timely Manner			
G.02.09 (32.01.02)	automated/manual verification	CBB with contingency usage unsubstantiated	0 ^{a A}
G.02.08 (32.01.01)	automated	TAB, IPMR F1 <> IPMR F3	0
G.02.03 (28.01.02)	automated	change implemented prior approval or not implemented	10%
G.02.02 (28.01.01)	automated	change implementation delayed	10%
G.02.06 (28.02.01)	manual	AUW partially implemented	0
G.02.05 (28.01.04)	automated/manual	contingency usage not documented	0
G.02.04 (28.01.03)	automated	UB distribution delayed	0
G.03 Baseline Changes Reconciliation			
G.03.10 (29.03.01)	automated/manual	MR transaction unsubstantiated	5%
G.03.09 (29.02.02)	automated	DB change unsubstantiated	5% ^{a A}
G.03.08 (29.02.01)	automated/manual	PMB change unsubstantiated in freeze period	5%
G.03.07 (29.01.03)	automated/manual	BCWS profile change unsubstantiated	0 ^l
G.03.06 (29.01.02)	automated	CBB change, IPMR F1 <> change control log	0 ^l
G.03.05 (29.01.01)	automated/manual	BCWS change unsubstantiated in freeze period	0 ^l
G.03.03 (14.02.01)	automated	MR, change control log <> IPMR F1	0
G.03.04 (28.03.01)	automated/manual	DB change unsubstantiated	0 ^l
G.04 Control of Retroactive Changes			
G.04.03 (30.01.03)	automated/manual	ACWPI < 0 unsubstantiated	0 ^l
G.04.02 (30.01.02)	automated/manual	BCWPI < 0 unsubstantiated	0 ^l
G.04.01 (30.01.01)	automated/manual	BCWSi < 0 unsubstantiated	0 ^l
G.05 Preventing Unauthorized Revisions to the Contract Budget Base (CBB)/Project Budget Base (PBB)			
G.05.03 (31.01.03)	automated/manual	change implemented prior DOE authorization	0
G.05.02 (31.01.02)	automated/manual	OTB not approved by DOE	1,000 ^{l H}
G.05.01 (31.01.01)	automated	CBB log, current <> prior <> 2 prior	0
G.06 Over Target Baseline (OTB)/Over Target Schedule (OTS) Authorization			
G.06.01 (08.03.01)	automated/manual verification	OTB unsubstantiated	0 ^{a A}
H MATERIAL MANAGEMENT			
H.01 Recording Actual Material Costs			
H.01.05 (21.01.05)	automated	A without P (incremental) discrete material completed	1,000 ^{a A}
H.01.04 (21.01.04)	automated	A without P (incremental) discrete material	1% ^{a A}
H.01.03 (21.01.03)	automated	P without A (incremental) discrete material	1% ^{a A}
H.01.02 (21.01.02)	automated	P without A (cumulative) discrete material	1% ^{a A}
H.01.01 (21.01.01)	automated	A without P (cumulative) discrete material	1% ^{a A}
H.02 Material Performance			
H.02.03 (21.02.03)	automated/manual	material EVT unsubstantiated	5% ^a
H.02.02 (21.02.02)	automated	HDV-CI LOE	0 ^{a A}
H.02.01 (21.02.01)	automated/manual	HDV-CI not negotiated	0 ^l
H.03 Residual Material			
H.03.01 (21.03.01)	manual	material accounting system lacks accountability	0
H.04 Material Price/Usage Variance			
H.04.01 (21.04.01)	manual	material price/usage unsubstantiated	0
H.05 Identification of Unit Costs and Lot Costs			
H.05.01 (20.01.01)	manual	material accounting system unsubstantiated	0

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I SUBCONTRACT MANAGEMENT			
I.01 Subcontract Identification and Requirements Flow Down			
I.02 Subcontractor Integration and Analysis			
I.02.08 (06.04.04)	automated/manual verification	BL IMS missing key subcontractor activities	0
I.02.07 (03.02.03)	automated	start or finish dates, subcontractor schedule <> FC IMS	5%
I.02.06 (03.02.02)	automated	start or finish dates, subcontractor schedule <> BL IMS	5%
I.02.05 (03.02.01)	automated	subcontractor BCWPC, ACWPC, DB, and EAC, BL IMS <> EVMS cost tool	5%
I.02.03 (01.04.02)	automated/manual	HDV-CI not identified	0 ¹
I.02.04 (02.02.01)	automated/manual	HDV-CI subcontractor or inter-organization work unsubstantiated	0 ¹
I.03 Subcontract Oversight			

J RISK MANAGEMENT			
J.01 Identify and Analyze Risk			
J.02 Risk Integration			
J.02.05 (27.05.03)	manual	IPMR F1 EACs <> EAC reported to leadership or DOE	0
J.02.04 (27.05.02)	automated/manual verification	best, likely, and worst case EACs unsubstantiated	0 ^a
J.02.03 (27.05.01)	automated/manual verification	most likely EAC unsubstantiated	0 ^a
J.02.02 (06.09.02)	automated	risks, index <> FC IMS	0
J.02.01 (06.09.01)	automated	risks, index <> BL IMS	0

count	method
89	automated
32	automated/manual verification
40	automated/manual
22	manual
188	sub-total
11	<i>Reserved.</i>
199	<i>total</i>