

EFCOG Best Practice #258

Best Practice Title: Washington River Protection Solutions (WRPS) Earned Value Management System (EVMS) Self-Governance Assessment Battle Rhythm.

Facility: Tank Operations Contractor Washington River Protection Solutions (WRPS), Hanford Site, Richland Washington

Point of Contact: Tony Spillman, Manager, Project Management Programs, WRPS Hanford 509-372-9986, Anthony_W_Spillman@rl.gov

Brief Description of Best Practice: This best practice is based on the Department of Energy (DOE) Office of Project Management (PM) Project Controls Division, Earned Value Management Systems Compliance Review Standard Procedure (ECRSOP), Appendix A Compliance Assessment Governance (CAG) requirements (below) and identifies a useful approach to the establishment of an effective, and scalable implementation and roll-out of the IP2M METRR process.

While DOE-PM's IP2M METRR approach is effective in determining earned value (EV) compliance, it must be supported by a contractors EV self-governance plan, approach, and implementation of frequent EV assessments to assure compliance with both the contractors EV system description, and the DOE requirements.

Frequent assessment through contractor self-governance provides the best opportunity to validate process implementation and the related data and information are current, accurate, complete, repeatable, auditable, and compliant (CACRAC). The assessment "Battle Rhythm" also provides an early warning of data and information that indicate the process, tools, or resources are not being implemented as intended, and/or the data and information is indicating a deviation from the plan. Metric thresholds should be analyzed carefully, with corrective actions for the conditions allowing or facilitating the issues/concerns.

This best practice provides demonstration of the type of contractor self-governance assessments (**see Figure 1, below**), necessary to assure the health and effectiveness of Earned Value Management System (EVMS). Demonstration of the self-governance assessments validates the EVMS is working as intended, it can also provide objective evidence to a review team in the case of an uncertified system, or may, with customer approval, provide the necessary checks and balances necessary, when a certified EVMS is not required.

Once the accounting/reporting period closes, scheduled (along with any current special emphasis concerns), assessments are performed consistent with the Project Controls System Description - TFC-PLN-147 and the EVMS Self-Governance Surveillance Plan, as described below. Once performed, the results are shared with the projects/programs/functions and the management chain for factual accuracy or "Faccuracy." If necessary, adjustments are made and the results of all assessments are summarized and presented to the WRPS EVMS Governance Board by the Project Management Programs Manager (**see Figure 2, below**).

The monthly WRPS Self-Governance Board Presentation Meeting is chaired by the Project Manager (PM)/Company President and attended by the PMs direct reports. Other team members include project specific PMs, functional managers, and Project Integration.

WRPS Project Controls System Description - TFC-PLN-147

WRPS management will ensure compliance of the EVMS through surveillance programs. EVMS surveillance is the process to review the health of the WRPS EVMS applied to one or more projects and will validate that the WRPS EVMS is effectively used to manage technical, schedule and cost performance. A routine surveillance process ensures that key elements of the EVMS process are maintained over time and on subsequent applications. A formal EVMS surveillance is prepared and issued at least annually for submittal to the DOE-ORP. The WRPS surveillance plan is found in TFC PLN 141.

Tank Operations Contractor EVMS Self-Governance Surveillance Plan - TFC-PLN-141

The EVMS self-governance surveillance program is used to assure compliance to DOE's Office of Project Management Oversight and Assessments (PM-30) current requirements (as expressed in the ECRSOP CAG and Guideline Attributes Tests to evaluate and assure the ongoing health of the EVMS process applied to the Tank Operations Contract (Contract) (DE AC27 08RV14800) (5.1.1), in accordance with Electronic Industries Alliance (EIA)-748 (current version) "Earned Value Management Systems." (5.1.2)

This EVMS self-governance surveillance program assesses the compliant application of the Electronic Industries Alliance (EIA) -748 32 Guidelines using the Office of Project Management (PM) Earned Value Management Systems Compliance Review Standard Operating Procedure (ECRSOP) - Appendix A: Compliance Assessment Guidance (CAG).

In-addition, WRPS uses the surveillance program to further assess the earned value quality data and information (QDI) level using the "Code of Business Ethics and Conduct" tenets of CACRAC. CACRAC is defined as:

- **Current.** As agreed to or directed, such as time now, end of reporting period, or a predetermined specific period of time. Unless the data is current, any use of the data to reflect, project, or trend will be yesterday's news. Current is the linchpin of each of the other characteristics. If your data and information is not current, there is no need to worry about accurate, complete, repeatable, or auditable. It would be better to start over.
- **Accurate.** Without error, mistake, miscalculations, or anomalies. If the data is not accurate, there is no need to be concerned about current, complete, repeatable, or auditable. It would be better to start over.
- **Complete.** Comprehensive, all-inclusive, total, or entire. If the data is not complete, then current, accurate, repeatable, and auditable do not provide the intended value because you are not seeing the entire picture.
- **Repeatable.** The ability to reproduce current, accurate, complete, and auditable results. If the process is not repeatable, it cannot be demonstrated or validated, and deficiencies cannot be pinpointed and resolved.
- **Auditable.** The ability to trace the source through the entire system/process to validate the results. The inability to audit data or information places both the process and results in an indeterminate status with respect to data/information credibility/trustworthiness.
- **Compliant.** Demonstrated as meeting the "current, accurate, complete, repeatable, and auditable" characteristics described above and as meeting specific requirements of applicable governing policies, requirements, procedures, guides, or practices.

In addition, the WRPS Code of Business Ethics and Conduct “Fundamentals of Business Data and Information” requires:

- TOC team members are required to ensure that all data and information are Current, Accurate, Complete, Repeatable, Auditable, and Compliant/Trustworthy with applicable governing requirements. This condition is achieved through the performance of validation checks, which ensure our data and information are trustworthy and can be reliably used by stakeholders to make informed decisions.
- These are business fundamentals that apply to individually, organizationally, and/or system-generated data and information. Knowingly passing data, which is NOT Current, Accurate, Complete, Repeatable, Auditable, or Compliant/Trustworthy or willfully bypassing/manipulating validation checks or the lack of validation checks, without full disclosure/identification/annotation is considered a violation of these “Ethical and Compliant Business Practices” found in this “WRPS Code of Business Ethics and Conduct.”

Figure 1

EVMS Self-Governance Assessment Schedule/Metrics

EVMS Self-Governance (iCAS MOPs)	Type	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23		
Daily and Monthly Discrete BCWP	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
PMB BCWR Analysis	Performance										1	1	1		
Month-End Forecast BCWP Analysis	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
Total Performance Forecast (BCWP) 6-Mo	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
6-month Forecast SV Analysis (SV)	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
Carryover SV Impact Analysis	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
Summary of Contract Lifecycle Performance	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
EV Technique Analysis Assessment	Compliance	1	1	1	1	1	1	1	1	1	1	1	1		
Cost Data Quality Analysis	Compliance	1	1	1	1	1	1	1	1	1	1	1	1		
Cost Data Quality Analysis - CPI Focus	Compliance	1	1	1	1	1	1								
Skills Mix FTE Analysis	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
Summary of FY23 Projected Performance	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
Total Performance Forecast (EAC) 6-Mo	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
6-mo Forecast Cost Recovery and CV Impact Analysis	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
EAC Realism - TCPI to CPI Analysis	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
Labor EOC Impact Analysis	Performance						1	1	1	1	1	1	1		
Accrual Impact Analysis	Compliance	1	1	1	1	1	1	1	1	1	1	1	1		
VAR Assessment (CTD SV)	Compliance	1	1	1	1	1	1	1	1	1	1	1	1		
VAR Assessment (CTD CV)	Compliance	1	1	1	1	1	1	1	1	1	1	1	1		
MEAC Analysis	Performance	1	1	1	1	1	1	1	1	1	1	1	1		
EVMS Test Metric - IPMR Validation Analysis	Compliance				1	1	1	1	1	1	1	1	1		
Overall EVMS Health - 7 Core Principles	Compliance	1	1	1	1	1	1	1	1	1	1	1	1		
EVMS Governance Board - Environmental Factors Review	Compliance				1		1			1			1		
EVMS Governance Board - EVMS Maturity Review	Compliance		1	1			1			1			1		
EVMS and PM Training	Compliance									2	2	2	2		
IPMR to Contract Alignment Analysis	Compliance									1	1	1	1		
Data-Driven Analysis	Compliance					1		2		2		3			
DOE Project Management - EVMS Analysis	Compliance	2	2		1			1			1		1		
Procedure Compliance	Compliance							1		2		2			
Monthly Total		21	22	20	22	21	23	24	20	29	25	29	27		
<i>Running Total</i>		<i>21</i>	<i>43</i>	<i>63</i>	<i>85</i>	<i>106</i>	<i>129</i>	<i>153</i>	<i>173</i>	<i>202</i>	<i>227</i>	<i>256</i>	<i>283</i>		
Annual Total		283													
Compliance		9	10	8	10	9	10	11	7	16	11	15	13	129	46%
Performance		12	12	12	12	12	13	13	13	13	14	14	14	154	54%

Figure 2

EVMS Governance Board Presentation

washington river protection solutions
an amentum-led company

EVMS Governance Board/Performance Analysis Report

May 2023

Tony Spillman
Project Management Programs/EVMS Reporting
June 14, 2023

Word cloud terms: MAN, COST, FRAMEWORK, PROJECT, DEVELOPMENT, GOAL, PLAN, STRATEGY.

washington river protection solutions

Safety Topic – Home Fire Protection

focus

Fire Safety Tips for your Home

- Test and Charge Detector batteries every 6 months – Fall and Spring clock changes
- Install Smoke and Carbon Monoxide Detectors – By garage doors or utility rooms
- A Detector and Fire Extinguisher on every Floor – Special for kitchen
- Inspect Fire Extinguisher Monthly - Replace if pressure drops
- Maintain Electrical Cords and Unplug Devices when not in use
- Double Check Appliances are “off” after use
- Check Dryer Vents and Clean out after Use – If use dryer sheets, clean filter screen with soap and water
- Have an Emergency Fire Escape plan for Family – How to get out, where to muster and who gets pet(s)

KEEP Action News

BREAKING: Active fire at Walmart in Richland. Several crews on scene and building is evacuated. Officials say it was recyclables that caught fire. Sootier traffic indicated flames as high as 20 feet. No word on the cause yet, officials calling it a “stubborn fire”. Heavy equipment has been brought in to break up the pile to further extinguish the blaze. More details to come.

“Sophie”
3 lbs. of Terror

FIRE SAFETY

WHAT YOU SHOULD KNOW

Every day at least one child dies in a home fire. And every day, 263 children are injured by fire and burns.

90% of home fires accounted for nearly 90 percent of all fire-related fatalities.

Working smoke alarms reduce the chance of dying in a home fire by half.

77% of fireplaces have not been inspected and protected a home fire escape plan, one of the most important components to surviving a home fire.

Fire can spread rapidly through a home, leaving a family in little or no time to escape unless you have an escape plan.

HAVE WORKING SMOKE ALARMS. PRACTICE AN ESCAPE PLAN.

SAFE KIDS

HOME FIRE SAFETY

- Test and charge detector batteries every 6 months
- Install smoke and carbon monoxide detectors
- Place at least 1 detector and fire extinguisher on each floor
- Have an emergency fire escape plan for your family
- Check dryer vents and clean out lint filter after each use
- Double check all appliances are switched off after use
- Inspect fire extinguishers monthly for pressurization and replace if needed
- Maintain electrical cords and unplug devices when they are not in use

MyCalGas.com California Casualty Auto and Home Insurance



EVMS Assessments – May-23 (real-time)



- Current Month - Key Focus Analysis**
- ✓ Daily Discrete Analysis (Schedule)
 - ✓ 6-Month Forecast SV/CV (Schedule/Cost)
 - ✓ EAC Realism – TCPI Analysis (EAC-Cost)
 - ✓ Labor Critical Skills Analysis (Schedule/ EAC-Cost)
 - ✓ MEAC Analysis (EAC-Cost)

Status of EVMS Surveillance-Self Governance

- For May-23 Reporting - **29 EVMS Assessments performed – 202 Assessments FYTD**
- All provided to EVMSG, PI, & ORP (w/iCAS Links)

EVMS Self-Governance (iCAS MOPs)	Type	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23
Daily and Monthly Discrete BCWP	Performance	1	1	1	1	1	1	1	1	1
Month and Forecast BCWP Analysis	Performance	1	1	1	1	1	1	1	1	1
Total Performance Forecast (BCWP) 6-Mo	Performance	1	1	1	1	1	1	1	1	1
6-Month Forecast SV Analysis (SV)	Performance	1	1	1	1	1	1	1	1	1
Carryover SV Impact Analysis	Performance	1	1	1	1	1	1	1	1	1
Summary of Contract Lifecycle Performance	Performance	1	1	1	1	1	1	1	1	1
EV Technology Analysis Assessment	Compliance	1	1	1	1	1	1	1	1	1
Cost Data Quality Analysis	Compliance	1	1	1	1	1	1	1	1	1
Cost Data Quality Analysis - CPI Focus	Compliance	1	1	1	1	1	1	1	1	1
Health Mix/FTE Analysis	Performance	1	1	1	1	1	1	1	1	1
Summary of FY23 Projected Performance	Performance	1	1	1	1	1	1	1	1	1
Total Performance Forecast (EAC) 6-Mo	Performance	1	1	1	1	1	1	1	1	1
6-Mo Forecast Cost Recovery and CV Impact Analysis	Performance	1	1	1	1	1	1	1	1	1
EAC Realism - TCPI to CPI Analysis	Performance	1	1	1	1	1	1	1	1	1
Labor CDC Impact Analysis	Performance	1	1	1	1	1	1	1	1	1
Accrual Impact Analysis	Compliance	1	1	1	1	1	1	1	1	1
WSPS Assessment (CTD/SV)	Compliance	1	1	1	1	1	1	1	1	1
WSPS Assessment (CTD/CV)	Compliance	1	1	1	1	1	1	1	1	1
MEAC Analysis	Performance	1	1	1	1	1	1	1	1	1
EVMS Team Metrics - PMB Validation Analysis	Compliance	1	1	1	1	1	1	1	1	1
Overall EVMS Health - 7 Core Principles	Compliance	1	1	1	1	1	1	1	1	1
EVMS Governance Board - Environmental Factors Review	Compliance	1	1	1	1	1	1	1	1	1
EVMS Governance Board - EVMS Maturity Review	Compliance	1	1	1	1	1	1	1	1	1
EVMS and PM Training	Compliance	1	1	1	1	1	1	1	1	1
WSPS to Contract Alignment Analysis	Compliance	1	1	1	1	1	1	1	1	1
Data-Driven Analysis	Compliance	1	1	1	1	1	1	1	1	1
EVMS Project Management - EVMS Analysis	Compliance	2	2	2	2	2	2	2	2	2
Procedure Compliance	Compliance	1	1	1	1	1	1	1	1	1
Monthly Total		21	22	20	22	21	25	26	20	20
Running Total		21	43	63	85	106	129	150	170	190

Date

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EVMS Governance Board Items

- Governance Board Action Tracking (Slide 5)
- Overall EVMS Health - 7 Core Principles (Slide 6)
- FY23 Contract Projected Performance (Slide 7)
- Remaining PMB Scope – BCWR (Slide 8) **added Nov-22**
- Top 10: SV and CV Analysis and Trending (Slide 9) **added Nov-22**
- MEAC Impact Analysis (Slide 10)
- EAC Realism (Slides 11-16)
 - EAC Realism - CPI and TCPI Analysis (Slides 11-12)
 - CV/EOC Driver Analysis (Slides 13-14) **added Jan-23**
 - Labor Critical Skills Mix/FTE Analysis (Slide 15)
- Data Quality and Accrual Impact Analysis (Slides 16-17)
- SV Carryover Analysis (Slide 18)
- Contextual Status Reports (Slides 19-22)
- 6-Month Schedule and Cost Recovery Forecasting (Slides 23-32)
- SEA 1 Aligned EVMS Recommendations (Slide 33)

EV Gov/Perf Analysis Takeaways

- Slide 6 - Overall EV Health**
 - Still have remaining UB **\$43.9m**
 - Data Quality is **High**
 - PP still in Sep-23 **\$7.3m**
 - VAR Corrective Action Log
- Slide 7 - FY23 Projected Performance**
 - Declining future Schedule execution **-\$34.9m**
 - CTD SV will be **-\$67.3m, -\$22m** more than FY22
- Slide 9 - Top 10 SV and CV Analysis**
 - Perceived "ConOps" **"culture"** issue w/ VAR quality
 - Time to act - demonstrate EV Env Factors
 - **Scores should be in the 90-95% range**
- Slide 11 - EAC Realism - CPI to TCPI Analysis**
 - Perceived "ConOps" **"culture"** issue w/ **+/-CV Drivers**
 - Time to act - demonstrate EV Env Factors
- Slide 15 - FY23 Labor Critical Skills Mix**
 - Net Change = **106** and **45** offset from OT
 - Monthly Change not realistic - expect delays and CV
 - **Added HR New Hire Analysis w/ May-23 Reporting (300)**
- Slide 25 and 26 - SV Analysis "Look Ahead"**
 - **-\$35m SV Jun-Sep** (see Slide 7)
 - Replan - Reshape the curve Sep-23? **SST and MI&O**
 - Time to act - demonstrate EV Env Factors
- Slide 27 - 32 - CV Analysis "Look Ahead"**
 - Big "puts and takes" in the OBS detail
 - Focus on MI&O, Eng and SST and Prod Ops
 - **VARs** Emphasis on Risk Mgmt (Risks and Opportunities)
 - Ascertain outstanding CALs not forecast
 - Time to act - demonstrate EV Env Factors

Date

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EVMS Governance Board Actions (14) – May-23

EVMS Self-Governance Topical Area	EVMS Classification	OFI Impact Ranking	Observation/Issue	Opportunity for Improvement
Month-End Forecast BCWP Analysis	Schedule	1-High	Optimistic Forecasting	Risk informed schedule executability and prioritization of scope pre-lock of forecast schedule - KPI trending analysis adjusted to "big 3"
6-month Forecast SV Analysis (SV)	Schedule	1-High	Extremely Optimistic	VAR Actions & Risk Registers for schedule alignment/recovery -18.6% Optimistic
Skills Mix FTE Analysis	Cost/EAC	1-High	Resource Volatility	Verify scope executability, Resource Constraints and Availability - Added 6-mo, OT Analysis and HR Onboarding with scope
EAC Realism - TCPI to CPI Analysis	Cost/EAC	1-High	EAC Realism Issues	Risk/Opportunity Mgmt, EOC Impact Analysis, Review of CPI/TCPI-PMR & BCRs - May-23 CAM Workshop, EV Everyday Newsletter
EVMS GB - Env Factors Review	Compliance	1-High	Sustain Current Levels	3rd Quarterly Review - Focus on re-evaluation of EF: Culture (52 checkpoint criteria) and People (32 checkpoint criteria). Published Newsletter Article, Presented to Industry
EVMS GB - EVMS Maturity Review	Compliance	1-High	Sustain Current Levels	3rd Quarterly Review - Focus on re-evaluation of highly weighted Subprocess areas, for FY24-25 PMB Update: B - Planning and Scheduling, C-Budgeting & Work Auth. and F - Analysis and Mgmt Reporting
EV Technique Analysis Assessment	Compliance	1-High	Co-Mingling of Scope	High level of LOE , Verify focus in VARs where co-mingling exists - Long duration CAs, Capital Line Item Co-Mingling at CA level
6-mo Forecast Cost Recovery and CV Impact Analysis	Cost/EAC	2-Medium	Significant Variances	Verify Cost Impact through VARs, Risk Reg. Verify Proc. Award Values
VAR Assessment (CTD SV)	Schedule	2-Medium	Impact to Sched Perf Rpt	Document risks and VAR corrective actions - Added 6-period Trending Analysis
VAR Assessment (CTD CV)	Cost/EAC	2-Medium	Impact to Cost Perf Rpt	Document corrective actions in VARs - Added 6-period Trending Analysis
Labor EOC Impact Analysis	Cost/EAC	2-Medium	Impact to Cost Perf Rpt	ORP Concerns - Incorporate into IPMR - Analysis of Drivers and EVTs
Carryover SV Impact Analysis	Schedule	3-Low	Significant Variances	Remove BCWS for scope in Distributed PMB to UB for disposition
Cost Data Quality Analysis	Cost/EAC	3-Low	Impact to Cost Perf Rpt	Expanded Analysis for Discrete/LOE - focus on Discrete scopes
Accrual Impact Analysis	Cost/EAC	3-Low	Impact to Cost Perf Rpt	Continue monitoring/assess impacts to cost perf reporting - +12 mo rolling

7- Cost/EACs (50%)

4- Schedule (29%)

3 – Compliance (21%)

Date

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Overall EVMS Health - 7 Core Principles

WRPS-MOP-2023-2375

EIA-748 Core Principle	Score	Observation
1. Plan all work scope for the program to completion.	●	WBS Dictionary quality to improve in Requirements (TOC Ref.) & risk of UB not in P6 (SLCS or CLCE) value declining
2. Break down program work scope into finite pieces that are assigned to a responsible person or organization for control of technical, schedule and cost objectives.	●	Product Oriented WBS, OBS Change Impact , CAM Span of Control (top 23 = 73% BCWR) ,CAM Qual 95%, HDV/CI
3. Integrate program work scope, schedule and cost objectives into a performance measurement based on the program's performance. Control changes to the baseline.	●	56% of BCRs breached freeze period (5 of 9) 5 BCRs improved (100%) – expanded justification ,
4. Use actual cost data to measure performance against the plan. Control performance.	●	Indirect Over/Under Liquidation Impact swings to MEAC for this reporting month, Data Quality is high
5. Objectively assess performance against the plan. Control performance.	●	Co-mingling of Discrete/LOE (\$15.9m or 4.5% of BCWR) - LOE = \$174.7m or 49.7%
6. Analyze significant variances from the plan, forecast impacts, and prepare an estimate at completion based on performance to date and the remaining work to be performed.	●	Monitoring Impacts of FY23 EAC to the total, MEAC Analysis in depth, CPI to TCPI within 0.01, Update VAR expectations to new SD – Roll out in Jun-23
7. Use the EVMS information in the organization's management processes.	●	EV Governance Board extensive – Focus: VAR Corrective Action Log , EV Maturity Scoring & EVMS Test Metrics

EV Gov/Perf Analysis Takeaways

Slide 6 - Overall EV Health

- Still have remaining UB **\$43.9m**
- Data Quality is **High**
- PP still in Sep-23 **\$7.3m**
- **VAR Corrective Action Log**

Continue focus on VAR CAs, HDV/CI, Freeze Period, Rolling Wave (PP), Reorgs (OBS/CAM), UB Balance and EAC Realism

Note: Comprehensive Compliance Road Map Tracker available for review

Date

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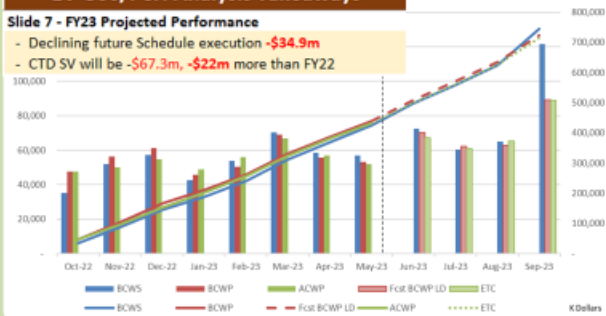
FY23 Contract Projected Performance

WRPS-MOP-2023-2365

EV Gov/Perf Analysis Takeaways

Slide 7 - FY23 Projected Performance

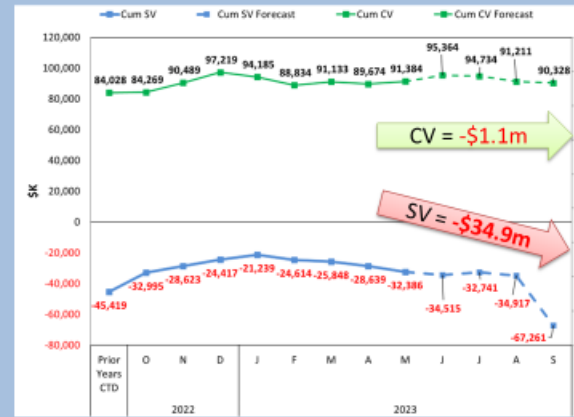
- Declining future Schedule execution **-\$34.9m**
- CTD SV will be **-\$67.3m, -\$22m** more than FY22



Note: this Forecast data is only FY-23

BCWS Future- Avg \$80m/month = \$319m Jun-Sep (\$121m Sep)
 BCWP Forecast - Avg \$71m/month = \$284m Jun-Sep
 ETC - TCPI 1.0, Avg \$71m/month = \$285m Jun-Sep

CV Forecast: FYTD CV \$7.4m - FY23 Cost Savings \$6.3m
 SV Forecast: FY23 SV Impact of **-\$34.9m, -\$67.3m** to FY24



CV = **-\$1.1m**

SV = **-\$34.9m**

Note: this Forecast data is CTD through Sep-23

Continue additional EAC Reviews and Schedule Executability Reviews for remaining scope

Note: Source data comes from PC Report-Month-Default Reports-"SPA Lockdown-Current"

Note: Source data comes from PC Report-Month-End Reporting-"TOC CTD SV-CV Forecast"

Date

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Remaining PMB BCWR - May-23

EV Technique	CTD BCWP	CTD SV	BAC
Level of Effort	\$5,739,206,353	\$0	\$5,913,930,265
% Complete	\$2,236,812,905	(\$27,370,219)	\$2,395,919,010
Planning Package	\$0	(\$0)	\$7,199,288
50-50	\$19,114,492	\$0	\$19,114,492
0-100	\$63,691,767	(\$5,015,408)	\$74,310,790
Grand Total	\$8,058,825,517	(\$32,385,626)	\$8,410,473,845

BCWR for May-23

- For the current month reporting - WRPS earned value was 71.8% LOE and 28.2% Discrete
- BCWR Total is \$351.6m
- Remaining scope (BCWR) by EVT:
 - LOE = \$174.7m (49.7%)
 - % Complete = \$159.1m (45.2%)
 - 0/100 = \$10.6m (3.0%)

It is noted that PPs account for \$7.2m (2.0%)

CTD SV for May-23

- Through the current month, WRPS has a **-\$32.4m** schedule variance
- % Complete - 85% of the SV ties to scope assigned this earned value technique **-\$27.4m**
- 50/50 - There is no SV attributed to this EVT, and there is no future budget with this EVT
- 0/100 - There is **-\$5.0** of SV tied to this EVT, which denotes that the baseline scope was planned as short duration, less than or equal to one reporting period.

EV Technique	BCWR	Contract %	Remaining	Cur Month
Level of Effort	\$174,723,911	70.3%	49.7%	71.8%
% Complete	\$159,106,105	28.5%	45.2%	27.4%
Planning Package	\$7,199,288	0.1%	2.0%	0.0%
50-50	\$0	0.2%	0.0%	0.0%
0-100	\$10,619,023	0.9%	3.0%	0.8%
Grand Total	\$351,648,328	100.0%	100.0%	100.0%

WRPS-MOP-2023-2357

Date

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Top 10 SV and CV Analysis & Trending

WRPS-MOP-2023-2371
WRPS-MOP-2023-2372

Observation:

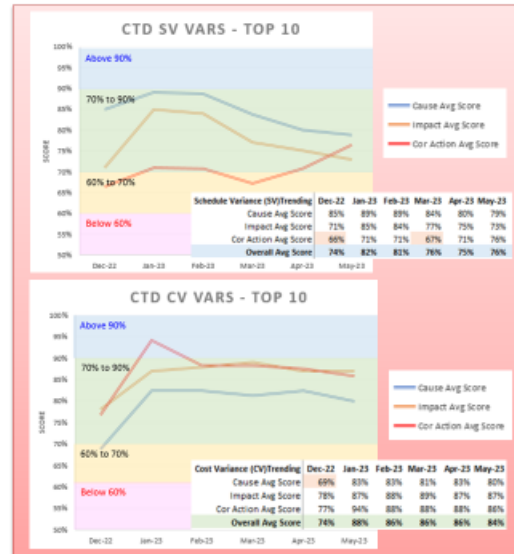
Trending analysis over the selected period demonstrates that CTD CV and CTD CV VAR quality needs to improve. **EV Gov/Perf Analysis Takeaways** and Corrective Actions.

Slide 9 - Top 10 SV and CV Analysis

- Perceived "ConOps" "culture" issue w/ VAR quality
- Time to act - demonstrate EV Env Factors
- Scores should be in the 90-95% range

Recommendations:

- (SV and CV) Provide these evaluations to the authors and reviewers of the VARs to allow for "checklist analysis" approach.
- (CV) Look for opportunities to use shorter duration Control Accounts.
- (SV and CV) Utilize change control to adjust baselines for known conditions such as vendor award values, revised tech approaches, poor estimates based on prelim information.
- (SV and CV) When systems are listed as a cause, such as a poor estimate, require an ICAS AR and corrective action.
- (SV and CV) Implement rolling wave using PPs for any work scope residing in WPs associated with unnegotiated vendors.
- (CV) Ensure CAMs and Project Teams are provided with data allowing for rate/hour and price/usage analysis when applicable.
- (SV) Ensure CAMs and Project Teams are provided with Driving Path to PBI or Delivery milestones, including float data.



Note: Comprehensive analysis and trending is provided in referenced assessments

Date



MEAC - Change from Apr-23 to May-23

WRPS-MOP-2023-2373

Most Likely Change this Month (\$000)			
Category	Current	Apr23	Change
EACs	\$8,326,046	\$8,322,825	\$3,222
Indirects	\$9,430	\$8,901	\$529
UB	\$43,856	\$48,221	-\$4,364
Risk	\$37,620	\$36,620	\$1,000
Total Change:	\$8,416,953	\$8,416,567	\$386

	Current	Apr23	Change
Expense EAC	\$8,190,149	\$8,186,961	\$3,188
Capital/TSCR EAC	\$135,807	\$135,864	-\$57
Expense Indirect	\$9,433	\$8,904	\$529
Capital/TSCR Indirect	-\$2	-\$3	\$1
Salary Actions	\$0	\$0	\$0
UB Expense	\$43,856	\$48,221	-\$4,364
UB Capital	\$0	\$0	\$0
UB Adjustment	\$0	\$0	\$0
Expense Risk	\$37,620	\$36,620	\$1,000
Capital/TSCR Risk	\$0	\$0	\$0
Total Change:	\$ 8,416,953	\$ 8,416,567	\$386

OBS	Apr-23			May-23			PM to CM Change		
	BAC	EAC	VAC	BAC	EAC	VAC	BAC	EAC	VAC
2A - Workforce Resources	14,282	14,282	-	14,282	14,282	-	-	-	-
2B - ESH&Q	467,841	432,725	35,116	467,841	431,789	36,053	(0)	(936)	936
2C - Project Integration	159,872	189,712	(29,840)	159,872	189,789	(29,917)	0	77	(77)
2D - Business Operations	404,484	405,200	(716)	404,484	405,200	(716)	0	0	-
2F - SST Retrievals	1,447,887	1,448,659	(772)	1,449,341	1,449,793	(452)	1,454	1,134	320
2H - Comms & Public Relations	2,825	2,825	-	2,825	2,825	-	-	-	-
2J - General Counsel	3,423	3,415	8	3,423	3,415	8	-	-	-
2K - Engineering	867,084	820,583	46,501	867,084	820,225	46,859	(0)	(358)	358
2L - Production Operations	2,149,335	2,063,434	85,901	2,149,335	2,063,988	85,347	-	554	(554)
2M - Tank Farm Projects	1,300,905	1,378,474	(77,569)	1,299,718	1,376,131	(76,413)	(1,187)	(2,343)	1,156
2P - Mission Intrag & Optimization	925,483	908,412	17,072	926,572	913,122	13,449	1,088	4,711	(3,623)
2Q - Organizational Performance Imprvmt	286,234	278,610	7,624	286,234	278,460	7,775	(0)	(150)	150
2U - Maintenance	320,147	322,432	(2,285)	320,508	323,018	(2,509)	362	586	(224)
2V - Proj Mgmt Prgms/Contract Mgmt	57,553	52,661	4,892	57,553	52,609	4,944	(0)	(52)	52
2Y - Field Labor Relations	1,403	1,403	-	1,403	1,403	-	0	0	-
Grand Total	8,408,757	8,322,825	85,932	8,410,474	8,326,046	84,427	1,717	3,222	(1,505)

- ### Changes for May-23
- BCR changed accounted for \$1.7m in BAC/EAC change for May-23 reporting
- \$1.3m 23-0076 DWRS Design
 - \$0.6m 23-078 LAWPS CD-1
 - 2P and 2F contributed the most significant changes (increases) to EACs
 - Control Account details by OBS available

CAM EAC Change driven by BCRs totaling \$1.7m and ETC Changes to ongoing scope

Date

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EAC Realism - CPI to TCPI Analysis

WRPS-MOP-2023-2368

OBS	Values	Actuals					Forecast ETCs					FY23 Total	CPI	TCPI	Delta
		FYTD	Jun-23	Jul-23	Aug-23	Sep-23	FY23 to Go	FY23 Total	CPI	TCPI	Delta				
2B - ESH&Q	BCWPI	30,477	5,293	4,061	4,088	5,777	15,220	45,697	1.26	1.08	(0.18)				
	ETC	24,214	4,437	3,863	3,836	5,740	17,876	42,090							
	CVF	6,263	856	199	251	37	1,543	7,606							
2C - Project Integration	BCWPI	8,165	1,303	1,004	1,124	1,539	4,970	13,131	1.02	1.02	0.00				
	ETC	8,035	1,347	949	1,087	1,510	4,893	12,928							
	CVF	126	(44)	55	37	30	77	208							
2F - SST Remediation	BCWPI	38,724	103,218	1,25	1.12	(0.14)	30,865	76,530	1.01	0.95	(0.06)				
	ETC	32,453	77,443				32,453	77,443							
	CVF	(1,587)	(913)				(1,587)	(913)							
2K - Engine	BCWPI	65,990	170,968	1.03	1.05	0.02	65,990	170,968							
	ETC	102,138	15,390	13,067	14,122	19,734	62,312	164,451							
	CVF	3,239	1,485	660	426	706	3,278	6,517							
2M - Tank Farm Projects	BCWPI	89,094	14,015	13,909	14,412	21,357	63,693	152,787	0.86	1.00	0.15				
	ETC	104,040	14,246	13,383	15,401	20,538	63,568	167,608							
	CVF	(14,947)	(231)	526	(988)	819	126	(14,821)							
2P - Mission Integr & Optimization	BCWPI	53,303	8,876	9,177	7,680	11,555	37,288	90,991	0.99	0.84	(0.15)				
	ETC	53,801	8,761	11,255	10,641	13,665	44,320	98,122							
	CVF	(498)	115	(2,078)	(2,962)	(2,111)	(7,032)	(7,530)							
2Q - Organizational Performance Imprvmt	BCWPI	18,088	2,910	2,242	2,308	3,225	10,685	28,773	1.07	0.98	(0.09)				
	ETC	16,974	2,856	2,469	2,506	3,080	10,913	27,887							
	CVF	1,114	53	(228)	(198)	145	(227)	887							
2U - Maintenance	BCWPI	22,584	3,211	2,368	3,305	3,412	12,296	34,880	0.92	0.92	(0.01)				
	ETC	24,479	3,157	2,646	4,132	3,498	13,433	37,912							
	CVF	(1,895)	55	(278)	(827)	(86)	(1,137)	(1,052)							
2V - Proj Mgmt Pgrms/Contract Mgmt	BCWPI	1,853	299	215	223	317	1,204	3,809	1.16	1.03	(0.13)				
	ETC	1,597	254	211	252	308	1,024	2,623							
	CVF	256	45	4	(29)	9	28	1,185							
Total BCWPI (for Lockdown Feat)	439,094	70,263	62,131	62,884	89,108	284,387	723,481	1.02	1.00	(0.02)					
Total ACWP (w_ETC)	431,738	66,284	62,700	66,408	89,991	285,444	717,181								
Total CV (Lockdown)	7,856	8,979	(629)	(3,524)	(883)	(1,057)	6,309								

EV Gov/Perf Analysis Takeaways

Slide 11 - EAC Realism - CPI to TCPI Analysis
 - Perceived "ConOps" "culture" issue w/ +/-CV Drivers
 - Time to act - demonstrate EV Env Factors

Observations:
 -\$1.1m in cost inefficiencies forecast for remainder of FY23 - CPI to TCPI change (TCPI Δ) of -0.02 from FYTD

Efficiencies
 • 2F SST \$4.1m forecast CV FY23 to go (-0.14) TCPI Δ
 • 2L Prod Ops \$3.3m forecast CV FY23 to go (0.02) TCPI Δ

Inefficiencies
 • 2P MI&O -\$7.0m forecast CV FY23 to go (-0.15) TCPI Δ
 • 2K - Eng -\$1.6m forecast CV FY23 to go (-0.06) TCPI Δ
 • 2U - Maint -\$1.1m forecast CV FY23 to go (-0.01) TCPI Δ

Detailed Analysis at WP level provided upon request

Recommendation:
 • Evaluate top monthly CV drivers, anticipated realization of risk and risk-related opportunities to cost in PMR for potential affects to MR, Alternatives Analysis for cost avoidance or cost savings

• Segregate and evaluate FY23 Cost Impact drivers by element of cost seek price or rate/usage analysis and contract award status for cost stability

• Conduct additional EAC reviews on applicable scope forecast for execution in FY23 based on FYTD CPI trending

Note: This analysis only evaluates the TCPI to CPI (EAC Realism) for the FY23 period of performance

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"

Date

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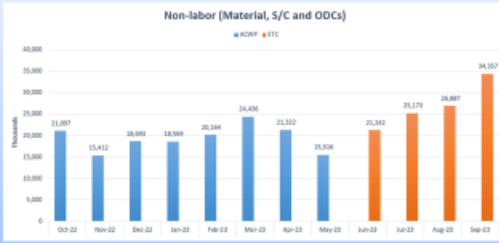


EAC Realism - ETC Driver Analysis

WRPS-MOP-2023-2368

Non-Labor Impact Analysis

FY 23 ETCs (Direct)		
EOC	FY23 ETC	% to Total
0 - Labor and Staff Aug	128,034,130	55%
1 - Materials	11,570,095	5%
2 - Subcontractors	95,776,705	40%
4 - Other Originated Cost	312,638	0%
	235,693,569	



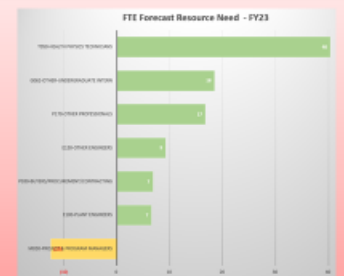
Observations:
 FY23 ETCs by Element of Cost (Direct Cost):
 • Labor = 55% (\$128.0m)
 • Non-Labor = 45% (\$107.7m)

Recommendation:
 • Labor centric scope - Resource smooth
 • Non-Labor - Review Cost Drivers - track and analyze BOM and awarded value deltas

Labor Impact Analysis

Skills Mix/FTE Analysis

Labor Type	Oct-May	FY23	Net Chng
Barg Unit	943	973	29
Mgmt	395	387	(8)
Prof/Admin	1,043	1,127	85
Grand Total	2,381	2,487	106



Note: This analysis only evaluates the EOCs (EAC Realism) thru Sep-23

Note 5: Source data PC Report-Default reports-EAC Resources & Month-End-Remaining FY ETC

Date

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EAC Realism – CV/EOC Driver & Impact Analysis

WRPS-MOP-2023-2369

Element of Cost - CV Impact Analysis

1. CAM EAC/CV reflects \$26.0m in Labor cost efficiencies and a total forecast VAC for FY23 of \$6.3m.
2. **-\$3.0m** - Merit Impact reflects increase in Labor ETCs from Jun-23 through Sep-23 as direct impact to CV
3. **-\$9.4m** - Indirect (Over)/Under Liquidation impact: ABS **-\$1.1m**, COS and COS-OT **\$0.2m** – allocated as “Labor cost” and COP **\$4.2m**. All in with G&A = **-\$9.4m**
4. Adjusted bottom-line Cost Impact currently forecasts a **-\$6.1m** cost challenge of scope performed in FY23

Element of Cost - CV Impact Analysis – Adjusted Values

EOC	CAM FYTD CV	CAM To Go CV	CAM FY23 VAC	Merit Impact Jun-Sep ETCs	(O)/U Liquidation	Adjusted FY23 VAC
0 - Labor and Staff Aug	15,108,408	10,851,178	25,959,586	(2,982,686)	(863,646)	22,113,253
1 - Materials	1,907,833	750,039	2,657,872			2,657,872
2 - Subcontractors	(14,031,525)	(14,272,134)	(28,303,658)			(28,303,658)
4 - Other Originated Cost	(353,391)	54,445	(298,946)			(298,946)
5 - Revenue	71,789	293	72,081			72,081
6 - Overhead Allocations	2,974,830	1,631,063	4,605,893		(8,566,768)	(3,960,875)
7 - G&A Exemptions	1,690,312	(72,067)	1,618,245			1,618,245
Grand Total	7,368,256	(1,057,184)	6,311,073	(2,982,686)	(9,430,414)	(6,102,027)

Note: This analysis only evaluates the EOCs (CV impact) thru Sep-23

Note 5: Source data PC Report-Newly Developed Report "SPA r1"

Date

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EVT/OBS - Labor CV/VAC Driver & Impact Analysis

WRPS-MOP-2023-2369

Labor - EV Technique Cost CV Impact Analysis

EV Technique	FYTD CV	To Go CV	FY23 VAC
Level-of Effort	11,848,306	3,862,079	15,710,385
(blank)	(399,117)	7,016	(392,101)
% Complete	3,659,219	6,963,851	10,623,070
Planning Package	0	18,231	18,231
Total	15,108,408	10,851,178	25,959,586

EVT and OBS - CV Impact Analysis – EOC Labor

- The LOE EVT contributes 78% of the favorable FYTD CV on Labor (\$11.8m of \$15.1m)
- Jun-23 thru Sep-23 – LOE contributes 36% of the favorable Labor To Go CV (\$3.9m of \$10.9m)
 - LOE forecasts appear to have been aligned to staff planning
 - Discrete (% Complete) forecast reflects some Make/Buy offsets with Subcontract cost overruns
- Top 3 OBS Drive 84% of the Labor To Go CV (2F – SST, 2M – TFP and 2L – Prod Ops)

CV Impact Analysis – LABOR Element of Cost by OBS

EOC	CAM FYTD CV	CAM To Go CV	CAM FY23 VAC
0 - Labor and Staff Aug	15,108,408	10,851,178	25,959,586
1 - Materials	1,907,833	750,039	2,657,872
2 - Subcontractors	(14,031,525)	(14,272,134)	(28,303,658)
4 - Other Originated Cost	(353,391)	54,445	(298,946)
5 - Revenue	71,789	293	72,081
6 - Overhead Allocations	2,974,830	1,631,063	4,605,893
7 - G&A Exemptions	1,690,312	(72,067)	1,618,245
Grand Total	7,368,256	(1,057,184)	6,311,073

RespOrgGroup	FYTD CV	To Go CV	FY23 VAC
2B - ESH&Q	3,077,005	742,963	3,819,968
2C - Project Integration	148,045	110,657	258,703
2F - SST Retrievals	7,202,842	2,730,818	9,933,660
2K - Engineering	1,585,586	1,325,582	2,911,168
2L - Production Operations	3,419,254	2,177,524	5,596,777
2M - Tank Farm Projects	(737,949)	4,188,242	3,450,293
2P - Mission Intgr & Optimization	1,275,140	8,517	1,283,657
2Q - Organizational Performance Imprvmt	175,403	(155,751)	19,652
2U - Maintenance	(1,115,832)	(309,349)	(1,425,181)
2V - Proj Mgmt Prgms/Contract Mgmt	78,914	31,976	110,890
Grand Total	15,108,408	10,851,178	25,959,586

Note: This analysis only evaluates the EOCs (CV impact) thru Sep-23

Note 5: Source data PC Report-Newly Developed Report "SPA r1"

Date

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FY23 Labor Critical Skills Mix/FTE Analysis

Staff Planning – FTE Skills Mix Analysis

- Skills Mix reflects increased changes in out months (Jun-23 – Sep-23)
- Focus on Critical **Job Family** (Engineers, Prof. Admin, **Technicians**, and **Crafts**)
- Evaluate Critical **Resources** (HTs, Ind. Hygienists, Chem Eng., Other Prof. and Plant Eng.)
- Overtime used FYTD affects the FYTD "Averages" for comparative Impact Analysis
Resource Constraining/Aligning is recommended for FAC realism and potential for "Resource Availability" SV Performance

EV Gov/Perf Analysis Takeaways

- Slide 15 - FY23 Labor Critical Skills Mix
- Net Change = **106** and **45** offset from OT
 - Monthly Change not realistic - expect delays and CV
 - Added HR New Hire Analysis w/ May-23 Reporting (300)

FY23 Skills Mix

Labor Type	Oct-May	FY23	Net Chng
Barg Unit	943	973	29
Mgmt	395	387	(8)
Prof/Admin	1,043	1,127	85
Grand Total	2,381	2,487	106

Overtime Impact

Labor Type	Oct-May	FY23	Net Chng
BU (OT)	89	52	(38)
Mgmt (OT)	8	4	(4)
P/A (OT)	8	5	(3)
Grand Total	106	60	(45)



FY23 Skills Mix/FTE Analysis Perf Org Summary

Perf. Org	Delta	% to Tot
24 - Facilities Maintenance	35	27%
2L - Production Operations	26	21%
2B - ESH&Q	25	20%
2K - Engineering	25	19%
2D - Business Operations	13	10%
2F - SST Retrieval	10	8%
22 - SST R&C Safety-Health/Radcon	10	8%
2M - Tank Farm Projects	(11)	-9%
2U - Maintenance	(17)	-13%
Grand Total	128	

New Hire Analysis

- WRPS has hired/on-boarded **300** people
- The top 6 hiring organizations account for **80%** of new hires (**240** people),
- The top 5 Job Families account for **81%** of new hires (**244** people)
- Prof/Adm account for **25%** of total new hires (**76** people)
- Current month (May-23) accounts for **20%** of all new Hires this Fiscal Year (**60** people)

Analysis does not compare attrition or "backfill" to New Hires for FY23

Note: This analysis only evaluates the EOCs (EAC Realism) thru Sep-22

Note 4: Source data comes from EAC Labor Report in PC Report

Date

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Current Month Data Quality Analysis

May-23 Data Quality Review – WRPS-MOP-2023-2363

Observation:

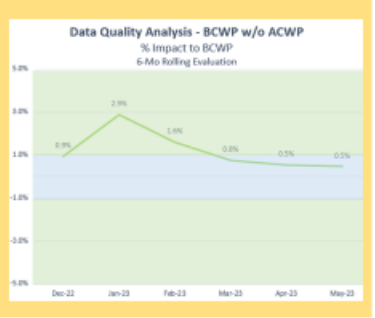
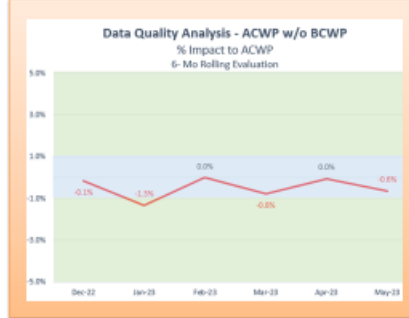
- ACWP (greater than \$10k), without BCWP – Impact = **-\$0.3m** to ACWP (-0.6%) (181% driven by LOE)
 - Threshold of @ >\$10k – Reflects **85%** of total – due to *routine accounting adjustment this month*
- BCWP (greater than \$10k), without ACWP – Impact = **-\$0.2m** to BCWP (0.5%) (30% driven by LOE)
 - Threshold of @ >\$10k – Reflects **86%** of total

Recommendation:

- Disposition anomalies - log for tracking. Focus mitigation efforts on significant ACWP w/o BCWP values
- Where applicable - address impact to ETCs in variance analysis
- Document any lessons learned of VAR corrective actions as applicable

EVMS Indices	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23
BCWS	57,071	42,617	53,826	70,206	58,349	56,826
BCWP (w Lockdown Fcst)	61,277	45,795	50,450	68,973	55,568	53,079
ACWP (w_ETC)	54,547	48,828	55,764	66,674	57,017	51,368
SV (Lockdown)	4,206	3,178	(3,375)	(1,234)	(2,791)	(3,747)
CV (Lockdown)	6,730	(3,034)	(5,314)	2,299	(1,459)	1,711

Impact Analysis	(77)	(645)	2	(516)	(22)	(323)
ACWP w/o BCWP						
BCWP w/o ACWP	573	1,317	804	518	298	245
% Impact to ACWP	-0.1%	-1.3%	0.0%	-0.8%	0.0%	-0.6%
% Impact to BCWP	0.9%	2.9%	1.6%	0.8%	0.5%	0.5%



Threshold Effectiveness Analysis

Sum of ACWP	EVT			Grand Total	
Driver	Discrete	LOE			
ACWP w/o BCWP	223	(497)	(274)	85%	
A w/o A Below Threshold	(25)	(24)	(49)	15%	
Grand Total	198	(522)	(323)	181%	

Sum of BCWP	EVT			Grand Total	
Driver	Discrete	LOE			
BCWP w/o ACWP	172	73	245	86%	
P w/o A Below Threshold	14	25	39	14%	
Grand Total	186	98	284	30%	

Note: Source data comes from HANDI

Date

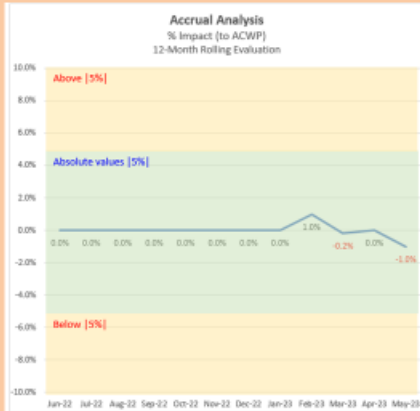
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Accrual Impact Analysis and Net Accrual Balances

Discussion Topic

- **Accrual Impacts:** For May-23, **-\$0.5m** in Accrual Impacts
Total Net Accruals \$33.8m, -\$2.6m from Apr-23, on 354 individual vendor accruals



WRPS-MOP-2023-2370

EVMS Performance Metrics	May-23
Total BCWS	56,826
Total BCWP (w Lockdown Fcst)	53,079
Total ACWP (w_ETC)	51,368
Total SV (Lockdown)	(3,747)
Total CV (Lockdown)	1,711
Accrual Impact	(531)
Adj CM Cost Variance	2,242
% Impact (to ACWP)	-1.0%
CTD Net Accrual Balance	33,788
No. of Vendor Accruals	354
@ Sum from VAR Sheets	(531)
Count Impacts by CA	2

Total Net Accrual Balance and Top 10 Vendor Running Total

Vendor	May-23 Net Accrual	Run Total
FOWLER GENERAL CONSTRUCTION	9,771,360	29%
ATKINS ENERGY FEDERAL EPC INC	5,039,538	44%
AMERICAN ELECTRIC INC	3,870,241	55%
PACIFIC NORTHWEST NATIONAL LAB	2,211,440	62%
PETERSEN INC	1,817,835	67%
ORAND FEDERAL SERVICES LLC	1,307,064	71%
INDEPENDENT TANK INTEGRITY VER	652,614	73%
SARGENT & LUNDY ENGINEERING SE	603,658	75%
ELITE CONSTRUCTION & DEVELOPME	569,186	76%
IONEX RESEARCH CORPORATION	556,797	78%
Grand Total	33,788,249	

Note 3: Source data comes from HANDI and TFPM (VARs)

Date

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Carryover SV Impacts (May-23)

Documented in WRPS-MOP-2023-2360

Remaining Carryover Scope by OBS

OBS	From FYTD FY23			% to Total
	FY22	Recovery	Balance	
2M - Tank Farm Projects	(25,919)	15,463	(10,456)	56%
2P - Mission Intgr & Optimization	(13,972)	6,554	(7,418)	40%
2L - Production Operations	(4,256)	1,720	(2,536)	14%
2K - Engineering	(2,692)	(28)	(2,720)	15%
2F - SST Retrievals	2,087	2,430	4,517	-24%
Grand Total	(45,419)	26,895	(18,524)	

Carry Over Driving Scores/OBS

Observation:

- **(\$45.4m)** of scope pushed from FY22 and Prior
- FY23 to date (May-23) schedule recovery = **\$26.9m**
- 5 OBS account for 100% of remaining **(\$18.5m)**

Recommendation:

- Prioritize and evaluate Float on scopes significantly behind (OBE – to Mission Technical Objectives)
- Be aware of scope performed out-of-sequence **early** as BCWS will normalize (negative BCWP in FY23)
- **Determine mission need – below line scope outside of Period of Performance**
- **Remove BCWS for scope in PMB to UB for disposition**

Require prioritization of remaining scopes significantly behind (OBE – to mission technical objectives)

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"

Date

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Contextual Status Reports

- Daily Performance Averages (FY20 through FY22)
- Current Month Performance to Forecast Analysis
- Summary of Contract Lifecycle Performance

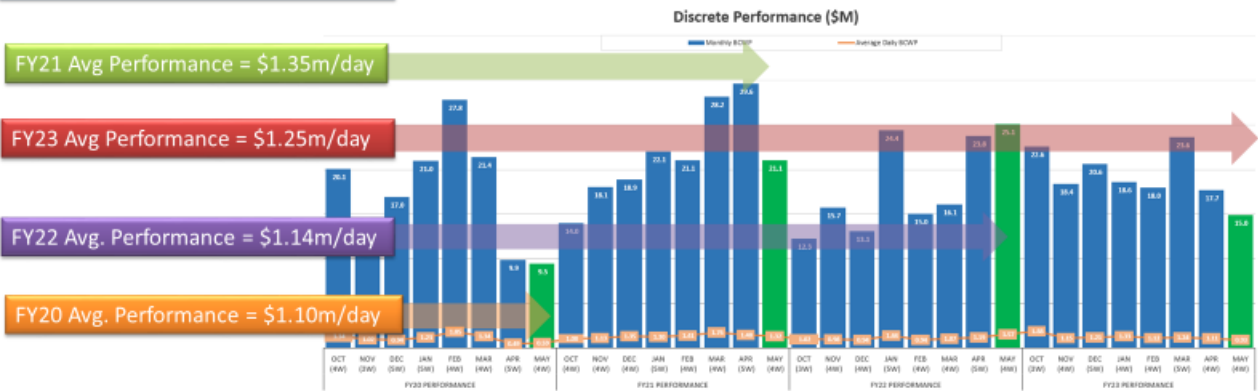
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Daily Performance Averages (May) FY20-FY23

FY20 (Oct-May) = \$138.9m Discrete BCWP
 FY21 (Oct-May) = \$173.0m Discrete BCWP
 FY22 (Oct-May) = \$145.5m Discrete BCWP
 FY23 (Oct-May) = \$154.5m Discrete BCWP



Note 4: Source data Monthly Lock email

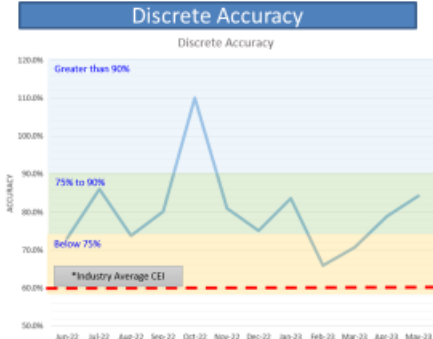
Date

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May-23 Accuracy and Optimism Analysis



	FY20	FY21	FY22	FY23
Discrete P	9,498,109	21,083,518	25,104,698	14,956,593
Wkly P	2,374,527	5,270,880	6,276,175	3,739,148
Wks	4	4	4	4
Daily P	593,632	1,317,720	1,569,044	934,787
Days	16	16	16	16

14,956,593	Discrete P
2,775,965	Missed P
17,732,558	Total Discrete
84.3%	Accuracy %

Optimistic
-18.6%

Observation:
This was the 3rd most productive **May** for discrete work performance for the last 4 years.

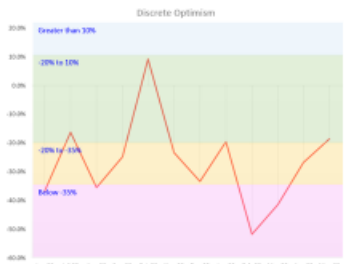
\$15.0m of discrete performance, which is **\$0.93m** performed on average, daily for the 16 days of the 4 weeks for the month.

When compared to forecast of **discrete** performance from last month, **84%** of discrete scope, and **95%** of total scope (including LOE) was performed.

Forecast Optimism is **18.6% over** optimistic, which is a loss of **-\$2.8m** in performance forecast from the prior month.

Recommendation:
• Continue **risk informed** schedule executability reviews and scope prioritization prior to locking SLCS-Cur.

ResOrg/Group/OBS	CM BCWP	Prior Month Forecast BCWP	Delta \$	Accuracy %
2B - ESH&Q	4,106,890	4,115,267	(8,377)	100%
2C - Project Integration	1,071,422	1,077,184	(5,763)	99%
2F - SSF Retrievals	7,219,972	7,644,551	(424,580)	94%
2K - Engineering	5,769,263	6,898,529	(1,129,266)	84%
2L - Production Operations	13,974,955	14,053,556	(78,601)	99%
2M - Tank Farm Projects	9,046,843	10,298,419	(1,251,576)	88%
2P - Mission Ingr & Optimization	6,630,388	6,449,278	181,110	103%
2Q - Organizational Performance Improvmt	2,477,200	2,475,794	1,409	100%
2U - Maintenance	2,540,775	2,621,939	(81,164)	98%
2V - Proj Mgmt Prgms/Contract Mgmt	221,105	220,263	842	100%
Grand Total	53,078,815	55,854,781	(2,775,965)	95%

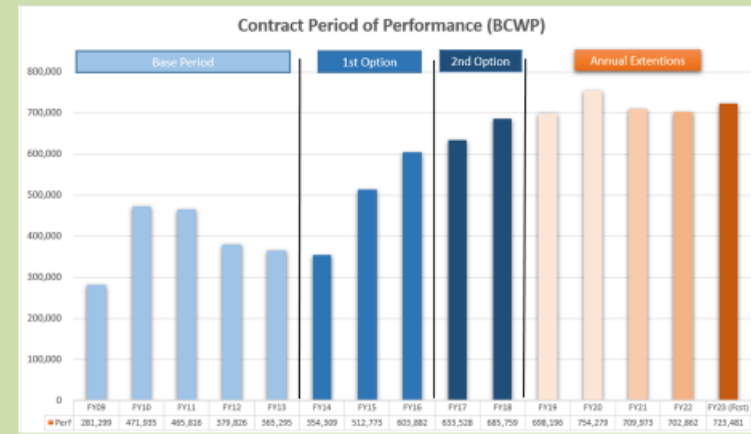


Date

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Summary of Contract Lifecycle Performance



Observations:

- FY23 BCWP = \$723.5m
 - \$20.6m increase from FY22
 - \$10.0m forecast from prior years
- FY24 BCWP = \$67.3m pushed from FY23

B-4 Table	Period	Avg	% to Total
Base Period	FY09-FY13	392,834	100%
1st Option	FY14-FY16	490,321	125%
2nd Option	FY17-FY18	659,644	168%
Extension	FY19-FY23	717,758	183%
Extension	FY21	709,973	181%
Extension	FY22	702,862	179%
Extension	FY23	723,481	184%

CTD	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17	FY18	FY19	FY20	FY21	FY22	FY23 (Fest)
Budget	286,740	760,056	1,225,168	1,604,100	2,023,111	2,343,906	2,850,840	3,455,949	4,092,790	4,783,726	5,522,597	6,319,815	6,951,701	7,665,150	8,410,474
Perf	281,299	753,234	1,219,050	1,598,876	1,964,171	2,318,480	2,831,253	3,435,135	4,068,663	4,754,422	5,452,618	6,206,897	6,916,870	7,619,731	8,343,212
Act	261,667	692,123	1,163,130	1,525,146	1,891,744	2,300,946	2,824,677	3,408,863	4,043,803	4,719,282	5,419,104	6,136,228	6,866,183	7,535,703	8,255,748
SV	(5,441)	(6,822)	(6,118)	(5,224)	(58,940)	(25,426)	(19,587)	(20,814)	(24,127)	(29,304)	(69,979)	(112,918)	(34,832)	(45,419)	(67,261)
CV	19,632	61,111	55,920	73,730	72,427	17,534	6,576	26,272	24,860	35,140	33,514	70,669	50,686	84,028	87,464

Note 5: Source data comes from PC Report-Month-End Reporting-"LRE Analysis" & IPMRs

Date

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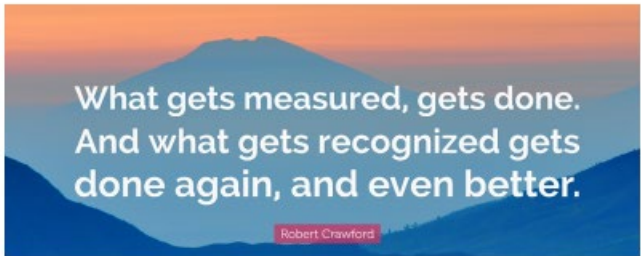
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6-Month Schedule and Cost Recovery Forecast



“That men do not learn very much from the lessons of history is the most important of all the lessons of history.” —Aldous Huxley



Date

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Mitigation Opportunities (Schedule and Cost)

Schedule Mitigation Opportunities

Focus on SV Mitigation/Recovery Strategies

- SST Retrievals (-\$12.8m)
- Mission Int. & Opt. (-\$9.7m)

Verify/Support Schedule Sustainability

- Tank Farm Projects (\$5.5m)
- Engineering (\$2.9m)

Seek Probability/Likelihood via Schedule Executability Analysis

SV (Lockdown)

RespOrgGroup/OBS	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Month
2B - ESH&Q	140	82	(73)	(88)	199	18	278
2C - Project Integration	7	3	10	14	-	-	33
2F - SST Retrievals	(2,728)	(1,352)	(847)	(12,296)	2,032	2,399	(12,790)
2K - Engineering	226	440	483	1,436	188	119	2,892
2L - Production Operations	(195)	336	(88)	(1,146)	228	3,003	2,137
2M - Tank Farm Projects	(409)	3,230	(1,418)	(2,216)	2,236	4,081	5,508
2P - Mission Intgr & Optimization	707	(1,033)	(722)	(18,033)	5,028	4,374	(9,679)
2Q - Organizational Performance Imprvmt	(1)	(0)	(1)	(2)	-	-	(4)
2U - Maintenance	132	46	484	(35)	-	-	627
2V - Proj Mgmt Prgms/Contract Mgmt	(7)	22	(4)	20	-	-	31
Grand Total	(2,129)	1,773	(2,176)	(32,344)	9,912	13,994	(10,970)

Cost Mitigation Opportunities

Focus on CV Mitigation/Recovery Strategies

- Mission Integration & Optimization (\$8.9m)
- Engineering (\$1.8m)

Verify/Support Cost Efficiencies/Savings

- SST Retrievals (\$4.8m)
- Production Ops (\$3.6m)

Seek Risk/Opportunity Analysis and potential PMB change

CV (Lockdown)

RespOrgGroup/OBS	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Month
2B - ESH&Q	856	199	251	37	34	(37)	1,340
2C - Project Integration	(44)	55	37	30	-	-	77
2F - SST Retrievals	1,030	1,381	1,466	198	582	115	4,773
2K - Engineering	615	(874)	(699)	(629)	(155)	(85)	(1,827)
2L - Production Operations	1,485	660	426	706	(30)	397	3,645
2M - Tank Farm Projects	(231)	526	(988)	819	(56)	138	207
2P - Mission Intgr & Optimization	115	(2,075)	(2,962)	(2,111)	(1,007)	(867)	(8,907)
2Q - Organizational Performance Imprvmt	53	(228)	(198)	145	-	-	(227)
2U - Maintenance	55	(278)	(827)	(86)	-	-	(1,137)
2V - Proj Mgmt Prgms/Contract Mgmt	45	4	(29)	9	-	-	28
Grand Total	3,979	(629)	(3,524)	(883)	(633)	(339)	(2,028)

Date

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6-Month Forecast (Performance and SV Recovery)

EVMS Indices	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Month
BCWS	72,392	60,358	65,060	121,453	-	-	319,263
BCWP (w Lockdown Fcst)	70,263	62,131	62,884	89,108	9,912	13,994	308,292
ACWP (w_ETC)	66,284	62,760	66,408	89,991	10,544	14,333	310,321
SV (Lockdown)	(2,129)	1,773	(2,176)	(32,344)	9,912	13,994	(10,970)
CV (Lockdown)	3,979	(629)	(3,524)	(883)	(633)	(339)	(2,028)

Analysis Documented in WRPS-MOP-2023-2358

Workdays 6-month Running

Observation:

Forecast of performance for the next 6 months appears to reflect significant decline

EV Gov/Perf Analysis Takeaways

Slide 25 and 26 - SV Analysis "Look Ahead"

- **-\$35m SV Jun-Sep** (see Slide 7)

- Replan - Reshape the curve Sep-23? SST and MI&O

- Time to act - demonstrate EV Env Factors
 verify schedule executability and challenges through assurance of articulated Variance Analysis Corrective actions and Risk Registers that demonstrate schedule alignment, recovery and challenges

Baseline Working Days ==>

19 15 16 23 16 16 105

SV (Lockdown)	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Month
2B - ESH&Q	140	82	(73)	(88)	199	18	278
2C - Project Integration	7	3	10	14	-	-	33
2F - SST Retrievals	(2,728)	(1,352)	(847)	(12,296)	2,032	2,399	(12,790)
2K - Engineering	226	440	483	1,436	188	119	2,892
2L - Production Operations	(195)	336	(88)	(1,146)	228	3,003	2,137
2M - Tank Farm Projects	(409)	3,230	(1,418)	(2,216)	2,236	4,081	5,503
2P - Mission Intgr & Optimization	707	(1,033)	(722)	(18,033)	5,028	4,374	(9,679)
2Q - Organizational Performance Imprvmt	(1)	(0)	(1)	(2)	-	-	(4)
2U - Maintenance	132	46	484	(35)	-	-	627
2V - Proj Mgmt Prgms/Contract Mgmt	(7)	22	(4)	20	-	-	31
Grand Total	(2,129)	1,773	(2,176)	(32,344)	9,912	13,994	(10,970)

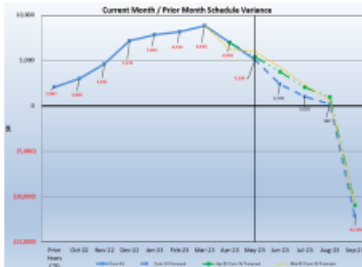
Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"

Date

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SV Analysis TFP, MI&O, SST - WRPS-MOP-2023-2359



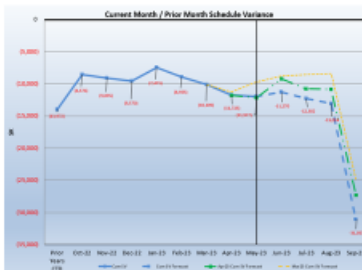
SST Observation:

Review of 6-month forecast EVMS detail reflects significant schedule swings and volatility with significant schedule deterioration in the top 8 WPs of **-\$12.6m**, with roughly **\$5.1m** of this "normalizing back to an SPI of 1.0", as these scopes were performed out-of-sequence early. Total loss of schedule progress is forecast to be **-\$12.8m**.

Recommendation:

- Verify that the HDV/CI are being managed compliantly
- Ensure schedule forecast is Risk Informed
- Give resource priority to ensure recovery sustainment
- Perform Schedule Executability/Resource Review
- Exercise Rolling Wave planning IAW execution

It is noted that some scope is from prior year and may not be changed with BCR



MI&O Observation:

Review of 6-month forecast EVMS detail reflects significant schedule swings and volatility. A decrease is forecast in 5 WPs of **-\$15.8m**, while partially offset recovery is forecast in 5 WPs of **\$4.8m**.

TFP Observation:

Review of 6-month forecast EVMS detail reflects significant schedule swings and volatility with net recovery in the top 8 WPs of **+\$6.8m**, while the bottom 2 WPs will be challenged with contributing to loss of schedule progress **-\$1.8m**.



Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"

Date

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6-Month Forecast (EACs and CV Mitigation)

EVMS Indices	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Month
BCWS	72,392	60,358	65,060	121,453	-	-	319,263
BCWP (w Lockdown Fcst)	70,263	62,131	62,884	89,108	9,912	13,994	308,292
ACWP (w_ETC)	66,284	62,760	66,408	89,991	10,544	14,333	310,321
SV (Lockdown)	(2,129)	1,773	(2,176)	(32,344)	9,912	13,994	(10,970)
CV (Lockdown)	3,979	(629)	(3,524)	(883)	(633)	(339)	(2,028)

EV Gov/Perf Analysis Takeaways

Slide 27 - 32 - CV Analysis "Look Ahead"

- Big "puts and takes" in the OBS detail
- Focus on MI&O, Eng and SST and Prod Ops
- VARs Emphasis on Risk Mgmt (Risks and Opportunities)
- Ascertain outstanding CALs not forecast
- Time to act - demonstrate EV Env Factors

Observation:

- 6-Month ETC = average \$3.0m per workday
- Key focus months for impacts:
 - Jun-23 = \$4.0m
 - Jul-23 = **-\$0.6m**
 - Aug-23 = **-\$3.5m**
 - Sep-23 = **-\$0.9m**
 - Oct-23 = **-\$0.6m**

Recommendation:

- Verify Cost mitigation through VARs and Risk Registers (opportunities)
- Verify Procurement Award values

Baseline Working Days ==> 19 15 16 23 16 16 105

RespOrgGroup/OBS	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Month
2B - ESH&Q	856	199	251	37	34	(37)	1,340
2C - Project Integration	(44)	55	37	30	-	-	77
2F - SST Retrievals	1,030	1,381	1,466	198	582	115	4,773
2K - Engineering	615	(874)	(699)	(629)	(155)	(85)	(1,827)
2L - Production Operations	1,485	660	426	706	(30)	397	3,645
2M - Tank Farm Projects	(231)	526	(988)	819	(56)	138	207
2P - Mission Intgr & Optimization	115	(2,075)	(2,962)	(2,111)	(1,007)	(867)	(8,907)
2Q - Organizational Performance Imprvmt	53	(228)	(198)	145	-	-	(227)
2U - Maintenance	55	(278)	(827)	(86)	-	-	(1,137)
2V - Proj Mgmt Prgms/Contract Mgmt	45	4	(29)	9	-	-	28
Grand Total	3,979	(629)	(3,524)	(883)	(633)	(339)	(2,028)

Expand VAR Corrective Actions and Risk Registers to articulate Cost Mitigation and Recovery, where applicable

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"

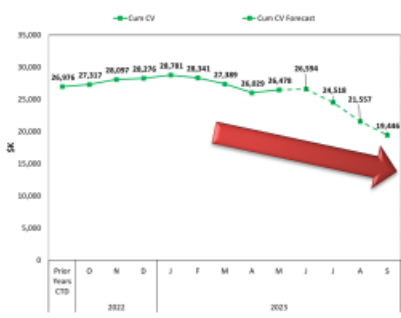


CV Analysis Mission Int & Opt. - WRPS-MOP-2023-2367

MI&O Observation:

Review of 6-month EVMS detail cost challenges. Top WP cost impacts provided in ascending order, for WAM, CAM and PCM review driven by risk/opportunity realization, potential for alignment concerns and accepted cost overruns

(TCPI of 0.84 and -\$8.9m CV) Jul through Nov



OBS: 2P - Mission Intgr & Optimization

WBS6 Title	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Mo Total
5.03.12.03.02.36 - IP22-23 - WTP Acquisitions - WTP LLE/Spares	6	(592)	(754)	(421)	(723)	(480)	(2,962)
5.01.04.04.01.01 - 5Y Farm Infrastructure - Project Management	(173)	(150)	(195)	(200)	-	-	(719)
5.01.05.01.31.03 - IP22-23-Utilities-WU/Sewer/ER/RFA/IT/Readiness	(221)	(181)	(145)	(44)	-	-	(591)
5.03.12.03.02.33 - IP22-23 - WTP Acquisitions - LAWMAS Phase II	(13)	(44)	(77)	22	(391)	(60)	(563)
5.03.12.03.06.01 - IP22-23 - WTP Acquisition - Project Support	(56)	(165)	(170)	(171)	-	-	(562)
5.02.01.04.01.21 - IP22-23 - Regulatory Documents	(45)	(121)	(112)	(88)	-	-	(366)
5.02.04.02.07.10 - IP22-23 - WMA C Performance Assessment	(65)	(104)	(101)	(71)	-	-	(341)
5.05.45.01.01.02 - LAWPS Sub-Project 2 - FY23 Project Support	(31)	(88)	(103)	(70)	-	-	(292)
5.01.01.13.31.05 - IP21 - TSCR Ion Exchange Column Procurement	(5)	(246)	(6)	(5)	-	-	(261)
5.03.12.03.05.01 - IP22-23-Alternatives Engineering and Development	(59)	(64)	(62)	(58)	-	-	(243)
5.02.01.04.03.15 - IP23 - Direct Push B-Farm Phase 1	(6)	(85)	(121)	(18)	(7)	(2)	(240)
Grand Total	115	(2,075)	(2,962)	(2,111)	(1,007)	(867)	(8,907)

Recommendation:

- 1) Replan budget IAW forecast
- 2) Focus on HDV/CI Material Management protocol
- 3) Evaluate cost mitigation opportunities
- 4) Analyze Risk informed cost mitigation
- 5) Ensure alignment of the ACWP w/ BCWP
- 6) Clearly articulate Causes and Impacts in VARs

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"



CV Analysis Engineering – WRPS-MOP-2023-2367

Eng. Observation:

Review of 6-month EVMS detail cost challenges. Top WP cost impacts provided in descending order, for WAM, CAM and PCM review driven by risk/opportunity realization, potential for alignment concerns and accepted cost underruns

(TCPI of 0.94 and -\$1.8m CV) Jul through Oct

OBS: 2K - Engineering

WBS6 Title	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Mo Total
5.03.01.07.10.03 - IP22-23 - Non-Destructive Examination (NDE)	(12)	(184)	(247)	(163)	-	-	(608)
5.01.01.13.48.02 - IP22-23 - P&CS Infrastructure Upgrades Material	-	-	-	(588)	-	-	(588)
5.01.05.04.20.01 - IP22-23 - Design Engineering Labor	(148)	(117)	(124)	(195)	-	-	(583)
5.03.06.01.04.07 - IP22-23 - ILAW Glass Testing for IDF-Subs	(110)	(212)	(136)	(92)	-	-	(551)
5.03.01.07.13.01 - IP22-23 Tank Refurbishment (Cold Spray)	(161)	(149)	(106)	(84)	-	-	(499)
5.03.01.07.13.02 - IP22-23 Tank Refurbishment (Bottom Sealant)	33	61	75	197	-	-	366
5.01.01.13.47.01 - IP22-23 - ICS Cyber Security Program - Labor	320	193	163	167	-	-	843
Grand Total	615	(874)	(699)	(629)	(155)	(85)	(1,827)



Recommendation:

- 1) Replan budget IAW forecast
- 2) Evaluate cost mitigation *opportunities*
- 3) Analyze Risk informed cost mitigation
- 4) Ensure alignment of the ACWP w/ BCWP

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"



CV Analysis SST Retrievals – WRPS-MOP-2023-2367

SST Observation:

Review of 6-month EVMS detail cost challenges. Top WP cost impacts provided in descending order, for WAM, CAM and PCM review driven by risk/opportunity realization, potential for alignment concerns and accepted cost underruns

(TCPI of 1.12 and +\$4.8m CV) Jun, Jul, Aug and Oct

OBS: 2F - SST Retrievals

WBS6 Title	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Mo Total
5.02.07.06.06.02 - IP22-23 - AX-101 Retrieval Operations	877	406	235	(104)	27	46	1,480
5.02.08.12.01.04 - IP22-23 - A-Farm WRS Procurements	492	966	(54)	(562)	212	(51)	1,003
5.02.08.01.05.35 - IP22-23 - Common Upgrades Support - Eng Support	224	171	184	237	-	-	817
5.02.08.01.05.36 - IP22-23 - Common Upgrades Suppt-CM/WP Development	121	93	100	102	-	-	416
5.02.06.02.02.05 - IP22-23 - A Farm Equipment Removal	(140)	168	265	(6)	-	-	287
5.02.08.01.05.38 - IP22-23 - Common Upgrades Support - A/E Support	83	30	43	122	-	-	278
5.02.08.01.05.37 - IP22-23 - Common Upgrades Support-Ancillary Svcs	77	(1)	18	130	-	-	224
Grand Total	1,030	1,381	1,466	198	582	115	4,773



Recommendation:

- 1) Replan budget IAW forecast
- 2) Evaluate cost mitigation *opportunities*
- 3) Analyze Risk informed cost mitigation
- 4) Ensure alignment of the ACWP w/ BCWP

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"

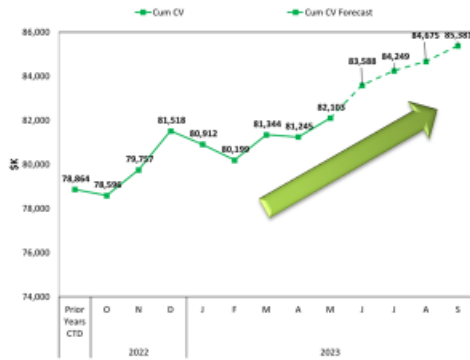


CV Analysis Prod Operations – WRPS-MOP-2023-2367

Prod Op Observation:

Review of 6-month EVMS detail cost savings opportunities. Top WP cost impacts provided in descending order, for WAM, CAM and PCM review driven by risk (opportunity) realization, potential for alignment concerns and accepted cost impacts

(TCPI of 1.06 and \$4.3m CV) Jun through Sep and Nov



OBS: 2L - Production Operations							
WBS/6 Title	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	6-Mo Total
5.01.02.06.52.06 - IP22-23 - ETF/LERF/TEDF LERF Campaigns	-	-	-	-	-	688	688
5.01.01.13.36.05 - IP22-23 - TOC Central Support Services - Proc	183	122	137	227	-	-	670
5.01.01.13.36.03 - IP22-23 - TOC Respiratory Support Services	191	147	134	187	-	-	659
5.01.01.12.06.05 - IP22-23 - ST Team Corrective Maintenance	137	104	115	155	-	-	512
5.01.01.11.10.04 - IP22-23 - AZ Team Preventive Maintenance	138	99	106	128	-	-	471
5.01.02.07.04.04 - IP22-23 - Production Ops AP-Farm PMs	133	103	112	120	-	-	468
5.01.01.11.10.05 - IP22-23 - AZ Team Corrective Maintenance	135	95	101	136	-	-	467
5.01.02.03.07.02 - IP22-23 - 242-A Evaporator Operations	132	166	85	90	-	-	445
5.01.02.03.07.03 - IP22-23 - 242-A Evaporator Maintenance	(381)	(156)	(90)	(163)	-	-	(789)
5.01.02.03.08.01 - IP22-23 - 242-A Boiler Annex Operations	-	-	-	(124)	(71)	(622)	(817)
Grand Total	1,485	660	426	706	(30)	397	3,645

Recommendation:

- 1) Articulate Impacts of LOE support in VARs
- 2) Evaluate cost mitigation and validate opportunities
- 3) Replan budget IAW forecast
- 4) Analyze Risk informed cost mitigation
- 5) Ensure alignment of the ACWP w/ BCWP

Note 4: Source data comes from Project Controls Report-Month-End Reporting-"LRE Analysis"



SEA-1 Aligned EVMS Recommendations

1. Request OBS confidence level for schedule & cost performance forecasts for 6-month look ahead via the following actions:

- a) Expand VAR Corrective Action on mitigation of S/C schedule & cost impacts
- b) Discrete scope – Focus schedule recovery w/Float (Driving Path Analysis)
- c) Implement additional External Schedule Drivers (Stakeholders - SVTs)
- d) Expand Risk Informed Analysis to future SV/CV issues – PMB Management
- e) Assure Data Quality supports schedule & cost Performance Analysis



SEA 1 - Business Operations

- ★ Maintain a compliant and effective, integrated Earned Value Management System from which cost and schedule performance can be evaluated.
- ★ Favorable and/or unfavorable cost and schedule performance shall be communicated to DOE to include, at a minimum, a variance analysis containing the issue, cause, impact, mitigation strategy, and/or corrective action, etc.
- ★ The contractor will also be evaluated on other objective and/or subjective elements related to cost and schedule performance to include, but are not limited to, critical path and float analysis, identification of cost and schedule savings, and schedule health metrics.
- ★ Additionally, the contractor will be evaluated on its efforts to support development of the integrated Hanford Life-Cycle Cleanup Baseline.



Purpose, Concept and Benefit of EVMS GB Analysis

- Data cross cuts provided to Sr. Executive Staff to generate meaningful dialogue and insight (**Top-Down**)
- **EV Data Cross cuts** are only **part of the story**
- The rest of the story **"WHY"** must be provided by the projects to support data
- **EVMS Maturity and Environmental Factors - Apr-22 DOE Office of Project Management**



Using Environmental Factors to Drive Project Success
Kevin Carney, Office of Project Controls (PM-30)

By now, with all of the communication (e.g., articles and presentations) to the Department of Energy (DOE) Project Management community, most people are aware of the joint study conducted by Arizona State University and the Office of Project Management (PM). The study categorizes successful earned value management systems (EVMS) into maturity attributes and environmental factors and connects the implementation of an effective EVMS to a project's environment.²

Even if a contractor is familiar with the study's approach to assessing an organization's integrated project management (IPM) using EVMS, one may wonder, "What does this mean to me?" The short answer is that proper use of this methodology will provide valuable insight into any IPM or EVMS issues that are discovered; this, in turn, will allow a quicker and more effective resolution, which will foster project success.

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Promoting Project Management Excellence

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IP2M METRR Software Tool
Matthew (Zac) West, Office of Project Controls (PM-30)

Nearly three years after the start of the Department of Energy (DOE) Office of Project Management (PM), sponsored *Improving the Maturity and Environment of Earned Value Management Systems (EVMS) – Development of an EVMS Rating Index* Joint Research Study led by Arizona State University (ASU) and representing 15+ government and industry organizations, the work is nearing completion. The research has highlighted which factors in an EVMS and what elements of an organizational culture supporting the EVMS have the greatest impact on project/program performance. For more information on the research please refer to the article titled *Using Environmental Factors to Drive Project Success* in this newsletter and prior articles in the March 2021 and April 2021 editions of the Project Management News.

It is important to understand two of the study's key findings:

1. A strong positive correlation exists between the environment (both internal and external factors in which the project functions) and the implementation maturity of the EVMS; and
2. Both environment and maturity have a strong positive correlation with a project's success.

DOE plans to add this tool to the Project Assessment and Reporting System (PARS) to make it available to contractors, review teams, and federal members for use within the Department. Project controls staff, both Federal and contractor, will have access to both this tool and the other performance and data assessment tools for analyzing a project in execution. Contractors will also be able to use IP2M METRR to identify and address gaps before they start the process of an EVMS review with DOE as well as for their own awareness on projects not subject to DOE EVMS certification. In addition to a gap report, the tool provides a score based on maturity and environment to help an organization see if their rating is in the range where past projects have proven to be successful. Research by ASU, and testing by DOE, has shown a clear correlation to specific levels of maturity and a successful environment with successful completion of a project.

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Questions and Comments



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