

U.S. Department of Energy

Comprehensive Contractor Project
Performance (CPP) Upload
Requirements with Data Item
Description (DID) for Project
Assessment and Reporting System
(PARS)

Version 4 April 2024

Change Control Page

The change control page is used to record information about the changes (i.e., additions, modifications, deletions) that have been made to this document.

Revision Date	Section & Title	Summary Of Changes	Author
03/29/2024	All	Complete Update to CPP Upload Requirements to incorporate java script object notation (JSON) DID format DID and update IPMR and CFSR DIDs. Retire MDB and CSV formats.	Matthew Z West Mel Frank
10/25/2018	2.3 and 4.3	Clarified 2.3 regarding submission of IPMR and CFSR Formats when required. Added IPMR DID and CFSR DID to appendix 4.3 for completeness.	M. Frank
9/27/2017	2.1 and 2.3	Clarified that data is to be reported to the control account level at a minimum, and tailored where appropriate down to lower levels (e.g., lowest level element of cost); and that data is to be reported via either the required Access file (current extraction tool), or CSV flat file templates.	M. Frank
8/12/2011	9.1	In Appendix Section 9-1:	S. Burns
		Removed definition for the term: PARS II Development Collaboration Portal.	
6/25/2011	3.3	Updated verbiage related to template file download Added standard footer	S. Burns J. Bernsen
5/6/2011	3.2.5	Updated verbiage about CDEBIT field should not be negative. Updated bullet and field description in table	S. Ducharme
6/17/2010	3.2.9	Modified verbiage for Risk_Log table, per CR# 229	D. Stoner
4/9/2010	3.2.7	Removed the EV_VAR_Analysis_OBS Table per CR # 188	V. DiCamillo
3/30/2010	3.2.4	Update Notes to state explicitly that the EV Timephased table needs to contain every reporting period for the project every time it is submitted	J. Bernsen
3/29/2010	ALL	Final review – minor changes (dates, table of contents, etc.)	J. Bernsen
3/26/2010	All	Updated from review from Dekker	D. Stoner

Revision Date	Section & Title	Summary Of Changes	Author
3/26/2010	All	Removed all references to the X12 File (CR-56)	D. Stoner
3/12/2010	3.2.9	Fixed formatting of header	J. Bernsen
3/10/2010	All	Incorporate comments from Larry Flanigan	D. Stoner
3/4/2010	All	Incorporate the Technical Data Requirements into the document (CR-40)	D. Stoner
11/16/2009	6.2	Business Rules Section: Added two new business rules: 1. Cost and schedule performance metrics by Work Breakdown Structure (WBS) and by Organizational Breakdown Structure (OBS) must be reported to at least the Control Account Level. However, DOE prefers that cost and schedule performance metrics by Work Breakdown Structure (WBS) and by Organizational Breakdown Structure (OBS) is reported for the complete WBS and OBS hierarchies. 2. Dollars in EVdata must be fully burdened.	N. Ayers
11/12/2009	1.3	Added new section titled "Overview of Process for Uploading Projects"	N. Ayers
11/10/2009	6.4.8	Four new data elements were added to the EV_CPR Header Table, to accommodate the Dekker COTS product: 1. Added the data element "Contractor" (Text 40), which is the name of the contractor. 2. Added data element "Constreet" (Text 40), which is the street address of the contractor. 3. Added the data element "StatusDatePrior" (Date), which is the end date of past reporting period.	N. Ayers

Revision Date	Section & Title	Summary Of Changes	Author
		4. Added the data element "Fee" (Number 15,2), which represents Profit/Fee.	
11/10/2009	6.4.3	Changed data element "Actnam" in the "Schedule_Activity Table:	N. Ayers
		Increased the field size of data element " Actnam" from 16 to 50 characters	
11/10/2009	6.4.4	Changed two data elements in the Schedule_Relationship Table:	N. Ayers
		1. Increased the field size of data element "Actnam" from 16 to 50 characters.	
		2. Increased the field size of data element "ActnamRel" from 16 to 50 characters.	
11/10/2009	6.4.1	Changed data element in the EV_Timephased Table:	N. Ayers
		Increased length of data element "ActNam" from 16 characters to 50 characters.	
11/10/2009	6.4.2	Changed data element in the EV_MR_Log Table:	N. Ayers
		1. Increased length of data element "ActNam" from 16 characters to 50 characters.	
11/10/2009	6.4.2	EV_MR_Log Table:	N. Ayers
		Placed a comment beside two data elements "CCREDIT" and "CDEBIT"	
		Both CCREDIT and CDEBIT are marked as required. Only one of required entry should be allowed per record.	
11/10/2009	9.1	In Appendix Section 9-1:	N. Ayers
		Added definition for the term: PARS II Development Collaboration Portal.	
		2. Added definition for the term: Project Data Template.	

Revision Date	Section & Title	Summary Of Changes	Author
11/6/2009	7	Added new Section 7.0 titled: "Issues to be Resolved"	N. Ayers
7/28/2009	All	Updated references to OECM	J. Bernsen
6/12/2009	All	This document supersedes the PARS II CPP Data Dictionary.	J. Bernsen S. Ducharme L. Morrison

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1 INTRODUCTION

1.1 Purpose

This document defines the monthly submission of project performance data and reports required by the Department of Energy (DOE) Order 413.3 as of the publication date. It provides the necessary information regarding the business rules for generating the data in the required formats. It is intended to be used by DOE federal team members, contractors, their project management teams and information technology (IT) staff, to generate and submit data and reports. This document assists federal managers in their understanding of requirements associated with DOE Order 413.3B. This document includes formats for data submission. The CPP upload requirements java script object notation (JSON) data item description (DID) addresses data uploads and the integrated program management reports (IPMR) and contract funds status report (CFSR) DID address reports.

1.2 Background

The project assessment and reporting system (PARS) is used to upload, analyze, and store project records and performance data and to produce project management reports and performance metrics. DOE contractors submit performance data and reports on a monthly basis for all projects in PARS, unless the requirement has been waived by DOE. The reporting requirement for the contractor begins after approval of the project's critical decision (CD)-2 milestone or earlier when a design management plan is required or a CD-3x (long lead procurements and limited site preparation work) occur and uploads are requested by the integrated project team (IPT) or directed by the program. Prior to CD-2, federal reporting starts at the CD-0 (mission need) milestone on the project, establishing a PARS record for the project and monthly narratives on status.

1.3 Privacy

All contract and project data submitted to DOE are official data and are subject to verification through audit. All data submitted by contractors are owned by the government and are generally reported to official DOE, OMB, GAO, and Congressional stakeholders. Data may be shared with benchmarking groups such as Construction Industry Institute in which case project and contract specific identifications are removed. Data are maintained on FedRAMP government cloud computing – high (GCCH) servers. System access is limited to appropriate personnel involved in project oversight and earned value data processing. Every reasonable effort is taken to ensure continuous privacy of all submitted data.

1.4 References

- DOE Order 413.3B, November 29, 2010 (Change 7, Jun 21 2023)
- PM-CONNECT EVM home page

- DOE EVMS training material
- PARS Helpdesk

2 REQUIREMENTS

2.1 Required Project Performance Data

In accord with DOE O 413.3B, contractors must begin submitting monthly project performance data following CD-2 for projects having a total project cost estimate greater than the set threshold in the order, currently \$50M. Programs have the option to require reporting for projects with total project cost less than \$50M. Sub-projects, which when added together are greater than \$50M, should report all parts of the total project to PARS as separate submissions.

The required project performance data includes but is not limited to the items listed below.

- 1. EIA-748¹ Earned Value (EV) Data
- 2. EV Time-Phased Incremental Cost and Quantity Data
- 3. Management Reserve Data
- 4. Integrated Master Schedule Data (both baseline and status)
- 5. Variance Analysis Data and Narrative

Data are reported by work breakdown structure (WBS) to the work package level by element of cost (EOC) and by the organizational breakdown structure (OBS). Actual cost of work performed (ACWP) can be reported at the control account level but is best reported at the work package level to support analysis. DOE, working with the Energy Facility Contractors Group (EFCOG) and project management cost and schedule tool vendors have established an improved and tested Java Script Object Notation (JSON) format that supersedes the earlier prescribed Comma Separate Value (CSV) format. The CSV format replaced the Microsoft Database Format (MDB) which was phased out in 2023. DOE is working to migrate all contractors to JSON by the end of calendar year 2024. Reporting to the work package by EOC level allows DOE contractors to perform more comprehensive EVMS self-surveillance, enables remote surveillance as warranted, and supports more complete analysis of projects at all levels of leadership (IPT, FPD, program and headquarters).

Contractor performance data must be reported against the latest DOE approved performance measurement baseline (PMB). Federal data is added each month by the FPD to provide the ability to analyze the project to the approved performance baseline.

Unless DOE has granted an exemption, all requested data must be submitted.

¹ Owned by SAE International, formerly named the Society of Automotive Engineers. EIA-748 (current version) may also be referred to as SAE EIA 748 or SAE 748. https://www.sae.org/standards/content/eia748d/

2.2 Reporting Period

Contractor performance data are measured and reported as of the contractor's accounting period close. The fiscal year is October 1 to September 30. Only 12 status periods are allowed in a fiscal year. Contractor's accounting period calendar should not be changed after reporting is started. If a change must be done, contact PARS support prior to implementing the new calendar to coordinate adding all the new calendar dates for future period into PARS and reprocessing all of the data in PARS to avoid a conflict between historical and future period data.

2.3 Submission of Data

All data must be submitted electronically to the DOE PARS. Data must be submitted using the JSON Data Set format² before start of calendar year 2025 unless granted a temporary waiver by DOE PM. The DOE CSV format is being phased out between June 2024 and December 2024.

Data is due into the PARS no later than the last workday of every month, or as otherwise stipulated by DOE. To enable contractors to make corrections in their native cost and schedule systems before they formally close the period in their cost and schedule systems, contractors are encouraged to report project performance data in PARS within 14 days of the close of the accounting period.

Completed IPMR Format 1-5 Reports v 2012 (DD Forms 2734/1 through 2734/5), and IPMR Format 6 (the IMS, both baseline and forecast, in native format; .xer for P6) from the contractors system are uploaded into the PARS document management system (DMS). Until the location is specified, IPMR Format 6 will be on request. As required by contract, a Contract Funds Status Report (CFSR) Report (DD Form 1586) is to be uploaded monthly to the DMS. IPMR Format 7 for DOE is the JSON format upload and is required monthly. DOE also has Format 8, which is the native file from the cost processor and it is required on request to support native system to government report validation checks on a periodic basis and for reviews.

2.4 General Information

2.4.1 Data Generation

- CPP uploads are required in the new JSON format. The specification for this format is provided in section 3.1.
- The older CSV format will be supported until January 2025 unless temporary waivers are approved by PM on a project specific basis. No maintenance is being done by the PARS team to update the CSV file format. For CPP uploads that continue to be in the CSV format,

² The DOE Office of Project Management (PM), working with EFCOG and tool vendors, have established a JSON format to improve upload quality and reliability. The table structure in JSON is a contemporary format which will reduce the likelihood of data errors, currently experienced by the CSV format, causing rework for contractors and DOE alike. The data collection requirements are similar between CSV and JSON.

- comply with the upload requirements in section 3.4.
- CPP uploads are for a specific project, not at the contract level. Contract level data is also recorded in PARS for EVMS Certification and reviews. There is a tie between contract and project in PARS.
- All data must be traceable to the primary source systems identified in the EVM System Description (SD).
- All data must be integrated, e.g., scope, schedule, and cost, for the project and for the CPP status date.
- Submission of project information is from CD-0 to project closeout. Federal reporting requirements in PARS start at CD-0 using the project record to include the DMS and contractor reporting requirements start no later than CD-2.
- For post CD-2 or CD-3x (when required) projects, CPP uploads must be reported against the latest DOE approved baseline inclusive of the PMB or CD-3x approved estimate.
- A project Performance Baseline is identified at CD-2 approval or approval of a baseline change proposal (BCP). Data uploads and reporting for measurement against the baseline begin immediately following approval, with up to 90 days to resolve errors in the reporting.
- When there is a CD-3x, a separate PARS ID as a sub-project will be set up to support reporting for the CD-3x. The same will be done when a design management plan is required on the project, generally on major system projects.
- Data uploads must be generated monthly and uploaded into the PARS, e.g., JSON CPP module or the DMS.
- All values (e.g., hours for labor, dollars for subcontract or ODC, and quantity for material) are to be in whole figures (i.e., not thousands or millions) using consistent units.
- All dollar values should be fully burdened, unless otherwise coordinated with DOE. IMS dollar values may be limited to direct dollars.
- All contract and project data submitted to DOE are official data subject to verification through audit.

2.4.2 Data Protection

- PARS does not manipulate uploaded data. Normalizing does occur in the DOE provided extraction tools for those still on CSV. An example would be if the contractor defined the element of cost for labor as "LB" in their system, DOE normalizes this to "Labor". Contractors using their own method to produce the data must adhere to DOE rules for normalizing.
- PARS data is maintained in a National Institute of Standards and Technology FIPS 199 Standards for Security Categorization of Federal Information and Information Systems
 designed as moderate designed to safeguard controlled unclassified information (CUI)
 which includes unclassified controlled nuclear information (UCNI). The system is GCCH
 Azure environment.

2.4.3 Data Sets in JSON Format

The DID for JSON is located at https://json.pars.doe.gov/. The DS00 contains overarching

expectations for each of the 22 data sets that follow. The design and structure of the JSON format is explained in this DS00 header table. Once a year, an update towards the end of the year will address new fields and updated schema that may require adjustment to software tools supporting project management. Once a quarter, a backwards compatible or administrative update may be issued. At time of publication, the JSON DID is version 5.0.2. The next structural change will be version 6 in late November. There are two quarterly updates since version 5.0.0 came out in 2023. The update to the DIDs is managed through a configuration control board chaired by PM-30.

2.4.4 Data Sets in CSV Format

This section will be obsolete at the end of December 2024 or when the final CSV upload is complete, whichever is sooner. The following is the complete list of CSV flat files. The ones required are noted as required. DOE is no longer updating this file structure as it is at end of life:

- FF01 WBS required
- FF02 OBS required
- FF03 cost required
- FF04 schedule required
- FF05 schedule logic required
- FF06 schedule resource required
- FF07 IPMR header required
- FF08 IPMR_F1 required
- FF09 IPMR F2 required
- FF10 IPMR F3 reserved for future use and may be requested for EVMS reviews
- FF11 CC log reserved for future use and may be requested for EVMS reviews
- FF12 CC log detail reserved for future use and may be requested for EVMS reviews
- FF13 WAD Avaliable
- FF14 CAM VAR reserved for future use and may be requested for EVMS reviews
- FF15 VAR CA log reserved for future use and may be requested for EVMS reviews
- FF16 subKor perf reserved for future use and may be requested for EVMS reviews
- FF17 IPMR F4 reserved for future use and may be requested for EVMS reviews
- FF18 IPMR F5 reserved for future use and may be requested for EVMS reviews
- FF19 risk log reserved for future use and may be requested for EVMS reviews
- FF20 rates reserved for future use and may be requested for EVMS reviews
- FF21 forward pricing reserved for future use and may be requested for EVMS reviews
- FF22 WBS dictionary reserved for future use and may be requested for EVMS reviews
- FF23 HDV-CI reserved for future use and may be requested for EVMS reviews

Flat file notes:

- A set of FFs consists of all FFs described herein, unless otherwise coordinated with DOE.
- A set of FFs include, at a minimum, FF01, FF02, FF03, FF04, FF05, FF06, FF07, FF08, and FF09.
- FFs should be provided in the format as described in section 3.1.
- FFs must have a header same as the name and format in the column described herein.

- FFs should consist of data in each field, unless otherwise specified.
- A set of FFs must be for and have the same PARSID and CPP status date.
- The CPP_status_date should be the same as IPMR F1_4_b_RPT_period_end and align with the contractor report period ending date, the contractor accounting period close date, and no more than a day earlier than the associated FC IMS schedule recalc date.

2.4.5 IPMR

The IPMR contains data for measuring cost and schedule performance on Department of Energy (DOE) capital asset projects. It is structured around eight formats that contain the content and relationships required for the electronic submissions. IPMR formats should be completed for each individual project, not necessarily at the overall contract level which may encompass numerous projects, operations and other work activity. Data reported in the IPMR shall reflect all negotiated project work and include the total scope of authorized unpriced work efforts as of the period specified in the IPMR.

When EVM requirements of DOE O 413.3 are applicable, formats 1-7 are required and format 8 is to be provided on request.

The IPMR's primary value to the Government is its utility in reflecting current project status and projecting future project performance. It will be used by the DOE federal staff, including program managers, engineers, cost estimators, and financial management personnel, as a basis for communicating project performance status with the contractor. DOE will also use the IPMR data for the following purposes:

- Integrate cost and schedule performance data with objective technical measures of performance.
- Identify the magnitude and impact of realized and potential performance problem areas that may cause significant cost and schedule variances.
- Provide valid, timely, and accurate project status information to Government leadership.

The IPMR data must be consistent with the contractor's actual project status.

The IPMR is used to obtain cost and schedule performance information on capital asset projects under contracts requiring compliance with the EIA-748 (current version in effect at time of project award). The IPMR data elements must reflect the output of the contractor's EIA-748 compliant system, where applicable. The reports in PARS are also run to compare and contrast with the reports coming from the contractor's native system.

This DID may use the terms "contract" and "project" interchangeably. Some projects are measured at the contract level and others at the project level. This DID is applicable to both types and the terminology should be interpreted accordingly.

The following is a list of the IPMRs:

- F1 schedule and cost performance by WBS
- F2 schedule and cost performance by OBS
- F3 changes to the PMB
- F4 staffing forecasts
- F5 narratives including required data analysis and variances
- F6 IMSs from contractors native tool (.xer from P6)
- F7 schedule and cost performance data that is time-phased by WBS and EOC (this is the PARS Data Submission)
- F8 Native cost tool data

IPMR Notes:

- The IPMR Formats 1-5 and 7 shall be required monthly by the last working day of the month.
- A set of IPMRs consist of all IPMRs described herein, unless otherwise noted or coordinated with DOE.
- A set of IPMRs should include at a minimum F1, F2, F3, F4, F5, and F7.
- F6 are the baseline and status IMS from P6 (.xer format). F6 required for reviews and once a space on PARS is set up, it will be required monthly. Right now it is required upon request from the FPD, Program or DOE Headquarters. F7 includes both baseline and status schedule data and is required monthly.
- F7 is the JSON or CSV upload.
- IPMRs should be provided in the format as described herein, as per the contract.
- IPMRs should have a header same as the name and in the column described herein.
- IPMRs should consist of data in each field, unless otherwise specified.
- A set of IPMRs must be for and have the same PARSID and CPP status date.
- The CPP_status_date should be the same as IPMR F1_4_b_RPT_period_end and align with the contractor report period ending date, the contractor accounting period close date, and no more than a day earlier than the associated FC IMS schedule recalc date.
- BCWP Reporting Period. Budgeted Cost for Work Performed (BCWP) shall be reported from project start through the current reporting month.
- ACWP Reporting Period. Actual Cost of Work Performed (ACWP) shall be reported from project start through the current reporting month.
- IPMR must have appropriate security requirements markings and this can affect IPMR delivery requirements. PARS DMS is able to support reports up through controlled unclassified information. This includes DOE's CUI and UCNI. If other agencies mark with For Official Use Only (FOUO) or Sensitive But Unclassified (SBU), select CUI in the DMS meta data to provide appropriate security. If classified, DOE PM will work with the project team on appropriate options to delivery on SIPR or NESAN.
- Subcontractor Requirement. While The Government may require separate submission(s) of subcontractor IPMRs, contractor is expected to comply with the requirements of this DID to include subcontractors, and flow down appropriate requirements of this DID to subcontractors.

DOE provides training snippets to help users understanding of the requirement and use.

- EVMS snippet 2.1 IPMR
- EVMS snippet 2.2 FPD quick check
- EVMS snippet 2.3 IPMR

DOE reserves the right to request additional submittal requirements applied to formats 1-7. The following may apply:

- Hours. The Government may require the contractor to provide Formats 1-4 by hours as additional, separate submissions. DOE may define the basis for Format 5 variance analysis (hours or dollars).
- Native Variance Analysis Format. Format 5 shall be submitted consistent with the PARS CPP Upload Requirements Document. PARS may be able to receive this electronically as part of the data upload, but until proven with your site, Format 5 will be uploaded monthly in PARS DMS for the project.
- Native Schedule Format. Format 6 shall also be submitted in the contractor's native IMS schedule electronic file format. PARS is working to set up a repository for these by project. Until complete, this is upon request.
- BCWS Reporting Period. Budgeted Cost for Work Scheduled (BCWS) shall be reported from project start award through project completion.
- EVM Tailoring/Clarification. Contact DOE PM-30 for guidance and tailoring clarifications.

2.4.6 CFSR

The Contract Funds Status Report (CFSR) is designed to supply funding data about individual projects to federal project directors and contracting officers for: (a) updating and forecasting contract funds requirements for the identified project, (b) planning and decision making on funding changes to contracts for the identified project, (c) developing funds requirements and budget estimates in support of the identified project, (d) determining funds in excess of contract needs for the identified project and available for de-obligation, and (e) obtaining rough estimates of termination costs.

Not all contracts require a CFSR report. The current STRIPES H clause recommended to contracting officers does include it.

With full implementation of all JSON data sets (DS01 to DD22) the information for DOE to have the CFSR data is included and no additional reporting is required. If uploading less than all 22 data sets and CFSR is required on your contract, this report must be uploaded to the PARS DMS.

The technical specifications is in section 3.3 below

2.4.7 Contractor EVM or Project Control System Description(SD)

Contractor will provide a copy of the SD to DOE, placing a copy in PARS DMS. As updates are made, an updated version of the SD will be uploaded to the DMS. The SD will be placed in the contractor section of the DMS and if there are project specific items, in the project folder of DMS. In addition to the SD, the following supporting document shall be provided in the project file:

- Flat file-to-source-crosswalk spreadsheet: Excel file with crosswalks of FF fields to the source fields for those using CSV upload. For JSON, the mapping is standardized and understood such that a DS-to-source-crosswalk spreadsheet is not required, except on request if there is an anomaly identified.
- Significant changes: Word file identifying notable data changes from prior submit, e.g., data structure, tools, multiple uploads, etc.

2.4.8 CPP Upload File

- The CPP uploads need to meet requirements described herein to minimize risks uploading to
- PARS.
 - Each DS, FF, IPMR, CFSR, and SD must be named as described herein.
 - The zip file names are identified as part of the upload instructions in section 3 below.
 - Upload zip file to PARS via CPP web-based interface that will identify basic quality issues that reject the upload of flag major or minor data quality issues.
 - Upload file to PARS DMS for your specific contract or project.
 - The PARS Helpdesk is available to provide technical support and PM-30 data analytics team is available to work on data quality concerns for reviews or monthly uploads.

2.4.9 Data Integrity and Quality Checks

Each upload of data is checked for data integrity and quality checks before being placed into analytical tools in PARS. There are approximately 40 to 50 checks that will stop data from coming into PARS and they represent data errors which would completely prohibit the upload from being analyzed. The PARS system will provide a report that explains what failed and on which data element it occurred. If there is a failure, the contractor is required to review, correct, and upload again. These checks are also at https://wiki.pars.doe.gov. It is recommend that a contractor upload more than a day before the deadline to provide time to review errors and also review data in PARS before publishing for the government to analyze.

2.4.10 EVMS Metrics

The DS are critical to generating the EVMS audit metric results. Metric definitions are stored in

<u>Appendix A</u> of the <u>ECRSOP</u> and are moving to <u>https://wiki.pars.doe.gov</u>. Automated tests in PARS report on these metrics or support manual and automated/manual operations.

- EVMS metrics may not address the metric intent completely; thus, all generated EVMS metric results need further review by user. Flags are a discussion point, not a failure.
- Y determines the data set based on the count or sum of the stated primary field, and may not be applicable to all metrics.
- X is a subset of Y. Generate Y then X then threshold comparison values, i.e., work metric specification section 14 from "top-to-bottom."
- If the metric threshold is a percentage, X is the numerator and Y is the denominator.

Each EVMS metric is based on one of the following methods:

- automated = software tool generated
- automated/manual verification = automated requiring manual verification
- automated/manual = manually generated with software tool generated Y data set/listing
- manual = manually generated

3 TECHNICAL DATA SPECIFICATION

3.1 JSON Format

All specifications are located at https://json.pars.doe.gov.

At this site there are the following:

- For the full guidelines in detail: DOE CPP Upload Requirements including DID (PDF Format)
- Technical guide for developers: DOE CPP Upload Format (JSON Schema)
- Tool to check your JSON files: JSON Validator
- Latest updates and changes: Update Notes and Change Log

In addition, there is reference material for the following:

- View JSON files: View a PARS JSON File in Excel
- How are versions organized: JSON Schema Versioning Reference
- How indirect costs should be structured: Indirect Cost Scenarios Reference
- Additional checks performed on uploads: PARS Data Integrity and Quality Checks

There are memorandums related to the updated and process to move from legacy formats to JSON.

- September 2022 Memo from Paul Bosco
- November 2023 Memo from Zac West

3.2 CSV File Submission

Development work to improve the CSV system stopped in 2022 to support moving to JSON

format. While there were mark ups after Feb 10, 2022 for the CSV file format, they were all draft. This was provided as part of the ECRSOP (append F.1.A) but also instituted as part of PARS standard for designing the extractor to generate CSV format files. The final approved flat files in CSV format are in the attached PDF.



3.3 IPMR DID

The formats for the 2012 and 2005 IPMR were established by the Department of Defense (DoD). They were updated in 2018 by DOE to include more DOE specific language. The latest version is included here – March 29, 2024 in Appendix A.

3.4 CFSR DID

DOE has a specific CFSR DID that follows the format established for DoD. Details for CFSR is in Appendix B. The link for the DoD / DOE form is at DD Form 1586, "Contract Funds Status Report" (whs.mil)

APPENDIX SECTION

Appendix A – IPMR DID

Integrated Program Management Report (IPMR)

Applicable Forms: Forms are available to be used to submit required formats as follows:

IPMR Format	Form	Format No.
	Number	
Work Breakdown Structure	2734/1	1
Organizational Categories	2734/2	2
Baseline	2734/3	3
Staffing	2734/4	4
Explanations and Problem Analysis	2734/5	5
Integrated Master Schedule – Native format	N/A	6
from P6		
Cost and Schedule EVM System Performance	N/A	7
and Compliance Data (JSON Format)		
Cost Tool Data – Native format for tool	N/A	8

1.0 USE/RELATIONSHIP:

The IPMR contains data for measuring cost and schedule performance on Department of Energy (DOE) capital asset projects. It is structured around eight formats that contain the content and relationships required for the electronic submissions. IPMR formats should be completed for each individual project, not necessarily at the overall contract level which may encompass numerous projects, operations and other work activity. Reference Contract Performance Report (CPR) / Integrated Program Management Report (IPMR): Purpose & Uses, CPR/IPMR: FPD Quick Check, and IPMR Data Item Description (snippets 2.1, 2.2, and 2.3 located at https://www.energy.gov/projectmanagement/evms-training-snippets) for more information. Format 1 defines cost and schedule performance data by product- oriented Work Breakdown Structure (WBS). [Sample DD FORM 2734/1 attached and at http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd2734-1.pdf]

Format 2 defines cost and schedule performance data by the contractor's organizational structure (e.g., Functional or Integrated Product Team (IPT)). [Sample DD FORM 2734/2 attached and at http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd2734-2.pdf]

Format 3 defines changes to the Performance Measurement Baseline (PMB). [Sample DD FORM 2734/3 attached and at

http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd2734-3.pdf]

Format 4 defines staffing forecasts. [Sample DD FORM 2734/4 attached and at http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd2734-4.pdf]

Format 5 is a narrative report used to provide the required analysis of data contained in Formats 1-4 and 6. [Sample DD FORM 2734/5 attached and at http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd2734-5.pdf]

Format 6 defines and contains the contractor's Integrated Master Schedule (IMS) for the project in Primavera P6 native format – specifically the XER format.

Format 7 defines the time-phased historical & forecast cost and schedule EVM system performance and compliance data submission.

Format 8 defines and contains the contractor's native cost tool files for the project.

2.0 The IPMR's primary value to the Government

The primary value is its utility in reflecting current project status and projecting future project performance. It will be used by the DOE federal staff, including program managers, engineers, cost estimators, and financial management personnel, as a basis for communicating project performance status with the contractor.

DOE will also use the IPMR data for the following purposes:

- Integrate cost and schedule performance data with objective technical measures of performance.
- Identify the magnitude and impact of realized and potential performance problem areas that may cause significant cost and schedule variances.
- Provide valid, timely, and accurate project status information to Government leadership.

The IPMR data must be consistent with the contractor's actual project status.

The IPMR is used to obtain cost and schedule performance information on capital asset projects under contracts requiring compliance with EIA-748, Earned Value Management Systems (EVMS) (current version in effect at time of project award). The IPMR data elements must reflect the output of the contractor's EIA-748 compliant system, where applicable.

This DID may use the terms "contract" and "project" interchangeably. Some projects are

measured at the contract level and others at the project level. This DID is applicable to both types and the terminology should be interpreted accordingly.

3.0 COMMON IPMR REQUIREMENTS:

3.1 Electronic Submittal Formats. Formats 1-8.

The following requirements apply to the electronic submission of data. The content in Formats 1-8 shall be submitted electronically to the PARS DMS. Data are reported to the work package level by element of cost.

<u>Formats 1-8</u> are generated from a variety of software driven business tools to produce information required by the government. The name and version of the software driven business tool in use by the contractor, inclusive of patches and fixes, shall be identified to the government.

IMS Guidelines. Format 6 and Format 8 shall be submitted in contractor's native format.

<u>Time-phased Cost and Schedule EVM System Data Guideline.</u> Format 7 shall be submitted using the currently required PARS format for upload. This is JSON. The most current version of this format is located at https://json.pars.doe.gov.

- 3.2 <u>Additional Submittal Formats</u>. The following additional submittal requirements apply to formats 1-8.
- 3.2.1 <u>Hours</u>. The Government may require the contractor to provide Formats 1-4 by hours as additional, separate submissions. DOE may define the basis for Format 5 variance analysis (hours or dollars).
- 3.2.2 <u>Reporting Level</u>. Data are reported to the work package level by element of cost. ACWP may be reported at the control account level, but should be at the work package level is possible to better support analysis and reporting.
- 3.2.3. <u>Native Variance Analysis Format</u>. Format 5 shall be submitted along with JSON / CSV data uploads into the DMS. If providing electronically in JSON format, this does not need to be uploaded to DMS.
- 3.2.4. <u>Native Schedule Format</u>. Format 6 shall also be submitted in the contractor's native IMS schedule electronic file format, based on Primavera P6. It will be provided as an XER rather than xml format.
- 3.2.5 <u>Native Cost Data Format</u>. Format 8 shall be provided on request to DOE in the contractors native cost tool electronic file format.

- 3.3.1. <u>BCWS Reporting Period</u>. Budgeted Cost for Work Scheduled (BCWS) shall be reported from project start award through project completion.
- 3.3.2. <u>BCWP Reporting Period</u>. Budgeted Cost for Work Performed (BCWP) shall be reported from project start through the current reporting month.
- 3.3.3. <u>ACWP Reporting Period</u>. Actual Cost of Work Performed (ACWP) shall be reported from project start through the current reporting month.
- 3.4. <u>Security Requirements</u>. Security requirements may affect IPMR marking and/or delivery requirements.
- 3.5. <u>Subcontractor Requirement</u>. While The Government may require separate submission(s) of subcontractor IPMRs, contractor is expected to comply with the requirements of this DID to include subcontractors, and flow down appropriate requirements of this DID to subcontractors.
- 3.6. <u>Reporting Frequency</u>. The IPMR Formats 1-7 shall be required at least monthly. IPMR Format 6 is temporarily on demand while PARS is set up to receive monthly uploads. IPRM Format 8 is on request.
- 3.7. <u>Submission Requirements</u>. Formats 1-7 shall be submitted into PARS no later than the last workday of every month. All the Formats shall reflect the same reporting period. Format 8 is on request.
- 3.8. <u>Scope of Reporting</u>. Data reported in the IPMR shall reflect all negotiated project work and include the total scope of authorized unpriced work efforts as of the period specified in the IPMR.
- 3.9. Applicability. Formats 1-8 are required whenever DOE O 413.3 is applicable.
- 3.10 EVM Tailoring/Clarification. Contact DOE PM-30 or the PARS Administrator for guidance and tailoring clarifications.
- 4.0. IPMR FORMAT CONTENT REQUIREMENTS.

The IPMR content shall be consistent with the contractor's EIA-748 documented system, where applicable, and shall contain the following:

- 4.1. <u>Common Heading Information</u>. Preparation instructions for the common heading information apply only to Formats 1-4 and 7. The common heading information relates to Blocks 1-4 on the Formats. The instructions also apply to Format 5, but the information may be provided in contractor format.
- 4.1.1. <u>Contractor</u>. Enter in Block 1.a the contractor's name and division (if applicable). Enter in Block 1.b the facility location and mailing address of the reporting contractor.

- 4.1.2. Contract. Enter the contract information in Block 2 as applicable.
 - 1) Enter the contract name in Block 2.a;
 - 2) Enter the contract number and the applicable Contract Line Item Number(s) (CLIN(s) in Block 2.b;
 - 3) Enter the contract type in Block 2.c;
 - 4) Enter the contract share ratio, if applicable, in Block 2.d.
- 4.1.3. <u>Program</u>. Enter in the project information in Block 3.
 - 1) Enter in Block 3.a the project name, number, acronym, type, model, series, or other designation of the prime item(s) purchased under the contract, as well as the project's unique PARS number;
 - 2) Enter the project phase (e.g., development, production) in Block 3.b.;
 - 3) Use "Yes" or "No" to indicate whether the contractor's EVMS has been approved or disapproved by the Cognizant Federal Agency (CFA) [DOE EVM Certification Memo} and the date of the approval/disapproval in Block 3.c. [Note: The contractor may have several approving CFAs that may apply to different levels of the contractor's organization.]
 - A "Yes" indicates system approval and "No" indicates no system approval.
 - All "No" answers must be discussed in Format 5 and categorized by either "Withdrawn," "Suspended", "Not Assessed," or "Not Applicable."
 - This block shall be completed as it relates to the particular contract/site.
 - The date shall be the date of the Advance Agreement, if applicable, or the date of the letter of acceptance from the CFA.
 - Enter "N/A" if neither an Advance Agreement nor agency acceptance letter is applicable to the contract/site.
- 4.1.4. <u>Report Period</u>. Enter the beginning date in Block 4.a and the ending date in Block 4.b of the time period covered by the report.
- 4.1.5. Security. All electronic file deliverables shall include the appropriate security designations.

- 4.1.6. <u>Dollars In</u>. If reported dollar amounts are not in whole dollars, enter the units used (e.g. \$K, \$M, \$B) at the top of each page. This applies only to human readable submissions.
- 4.2. <u>Format 1 Work Breakdown Structure</u>. The submission of Format 1 data shall utilize a product-oriented WBS at the level established by tailoring the DOE Work Breakdown Structure (WBS) Handbook/Guide as applicable.

4.2.1. Contract Data.

- 4.2.1.1. <u>Quantity</u>. Enter in Block 5.a the number of principal hardware delivery items to be procured on this project. Non-hardware type contracts (e.g., software or services) shall place a "0" in this block.
- 4.2.1.2. <u>Negotiated Cost</u>. Enter in Block 5.b the dollar value (excluding fee or profit) on which contractual agreement was reached as of the reflected reporting period.
- 4.2.1.2.1. For an incentive contract, enter the definitized contract target cost.
- 4.2.1.2.2. For a cost plus fixed fee or award fee contract, enter the estimated negotiated cost. The estimated cost shall consist only of estimated amounts for changes in the contract scope of work, not for cost overrun above the original estimated cost.
- 4.2.1.2.3. Amounts for changes shall not be included until they have been definitized in the contract.
- 4.2.1.3. <u>Estimated Cost of Authorized, Unpriced Work (AUW)</u>. Authorized, Unpriced Work is approved work scope that has not been definitized. The total dollar value (excluding fee or profit) of AUW shall be entered in Block 5.c.
- 4.2.1.3.1. AUW value shall represent the Procuring Contracting Officer's (PCO) best estimate of the authorized scope for inclusion in the baseline.
- 4.2.1.3.2. AUW can never be a negative value. For effort de-scoped and not yet reflected in the Contract Budget Base (CBB), report the estimated value in Format 5 (see 3.6.11.3).
- 4.2.1.4. <u>Target Profit/Fee</u>. Enter in Block 5.d the applicable fee that applies to the negotiated cost of the project.
- 4.2.1.5. <u>Target Price</u>. Enter in Block 5.e the target price (negotiated contract cost plus profit/fee) applicable to the definitized contract effort.
- 4.2.1.6. <u>Estimated Price</u>. Based on the contractor's most likely estimate of cost at completion for all authorized work, including the appropriate profit/fee, incentive, and cost sharing provisions, enter in Block 5.f the estimated final contract price (total estimated cost to the Government). This number shall be based on the contractor's most likely management EAC in Block 6.c.1 and

normally will change when the EAC is updated and/or when the contract is revised. This number shall reconcile with the estimated price in the Contract Funds Status Report (CFSR), as applicable.

- 4.2.1.7. <u>Contract Ceiling</u>. Enter in Block 5.g the contract ceiling price applicable to the definitized effort. This is only applicable to contracts with the ceiling clause.
- 4.2.1.8. <u>Estimated Contract Ceiling</u>. Enter in Block 5.h the estimated ceiling price applicable to all authorized contractual efforts including both definitized and undefinitized efforts. This is only applicable to contracts with the ceiling clause.
- 4.2.1.9. Over Target Baseline (OTB)/Over Target Schedule (OTS). Enter in Block 5.i the date the last OTB or OTS was implemented, if applicable.
- 4.2.2. <u>Estimated Cost at Completion</u>. These blocks shall present the contractor's range of estimated costs (EACs) of the authorized contractual scope. The required range of estimates is intended to allow contractor management flexibility to express multiple, justifiable final cost outcome positions. Contractors shall provide the most accurate EACs possible that include:
 - Contract-level assessments of factors that may affect the cost, schedule, and/or technical outcome of the contractual effort;
 - Consideration of known and anticipated risk areas;
 - Planned risk reductions;
 - Cost containment measures.

EACs shall be reported without limitation of the contract ceiling value.

- 4.2.2.1. <u>Management Estimate at Completion Best Case</u>. Enter in Block 6.a.1 the contractor's best case EAC. The best case EAC reflects the lowest potential cost to the Government. This estimate shall be based on the outcome of the most favorable set of circumstances. If this estimate is different from the most likely management EAC (Block 6.c.1), the assumptions, conditions, and methodology underlying the estimate shall be explained in Format 5. This estimate is for informational purposes only; it is not an official company estimate.
- 4.2.2.2. <u>Management Estimate at Completion Worst Case</u>. Enter in Block 6.b.1 the contractor's worst case EAC. The worst case EAC reflects the highest expected cost to the Government. This estimate shall be based on the outcome of the least favorable set of circumstances. If this estimate is different from the most likely EAC (Block 6.c.1), the assumptions, conditions, and methodology underlying the estimate shall be explained in Format 5. This estimate is for informational purposes only; it is not an official company estimate.
- 4.2.2.3. Management Estimate at Completion Most Likely. Enter in Block 6.c.1 the contractor's

- most likely EAC. This EAC is the contractor's official contract EAC and takes precedence over the estimates presented in Column (15) of Formats 1 and 2, and Blocks 6.a.1 and 6.b.1. The most likely EAC is the value that the contractor's management believes is the most possible outcome based on a knowledgeable estimation of all authorized work, known factored risks, and probable future conditions.
- 4.2.2.3.1. This value may not agree with the total of Column (15) (Block 8.e). Any difference shall be explained in Format 5 in terms of risk and opportunities and senior management knowledge of current or future contract conditions.
- 4.2.2.3.2. The most likely EAC need not agree with EACs contained in the contractor's internal data, but must be reconcilable to them. This EAC shall also be reconcilable to the contractor's latest statement of funds required as reported in the CFSR or its equivalent.
- 4.2.2.4. <u>Contract Budget Base (CBB)</u>. Enter in Block 6.c.2 the total of negotiated cost (Block 5.b) and estimated cost of authorized, unpriced work (Block 5.c).
- 4.2.2.5. <u>Estimated Cost at Completion Variance</u>. Enter in Block 6.c.3 the CBB (Block 6.c.2) minus the most likely management EAC (Block 6.c.1). This difference, if any, shall be explained in Format 5.
- 4.2.3. <u>Authorized Contractor Representative</u>. Enter in Block 7.a the name of the authorized person (program manager or designee) approving the report. Enter that person's title in Block 7.b. The authorized IPMR signature approval shall be provided in Block 7.c. Enter the date of approval in Block 7.d.
- 4.2.4. Performance Data.
- 4.2.4.1. <u>Column (1) Work Breakdown Structure Element</u>. Enter in Column (1) of Block 8.a the description of the Work Breakdown Structure (WBS) elements against which cost information is being reported.
- 4.2.4.2. <u>Cost of Money (COM)</u>. Enter in Columns (2) through (16) of Block 8.b the Facilities Capital COM allocated to the contract. Identify in Format 5 whether the value(s) entered for COM are add or non-add to the WBS elements. Add would mean the costs are not included in Block 8.a. Non-add would mean that costs have been included in Block 8.a. The Government may specify if the WBSs shall exclude COM.
- 4.2.4.3. General and Administrative (G&A). Enter in Columns (2) through (16) of Block 8.c the appropriate G&A costs. Identify in Format 5 whether the value(s) entered for G&A are add or non-add to the WBS elements. Add would mean the costs are not included in Block 8.a. Non-add would mean that costs have been included in Block 8.a. The Government may specify if the WBSs shall exclude G&A.
- 4.2.4.4. Undistributed Budget (UB). Enter the amount of budget applicable to contract effort that

has not yet been distributed to WBS elements at or below the reporting level. Budgets that have been distributed to WBS elements at or below the specified reporting level shall be included in the total budgets shown for the WBS elements in Block 8.a and shall not be shown as UB. UB characteristics:

- UB is used to accommodate temporary situations where time constraints prevent adequate budget planning or where contract effort can only be defined in very general terms.
- UB shall not be used as a substitute for adequate contract planning. Budgets shall be allocated within the PMB to responsible organizations at the earliest possible time, preferably within the next reporting period.
- UB can never be negative. If a contractual de-scope change occurs and the effort has not been removed from time-phased PMB, the amount shall be discussed in Format 5. Discuss when the de-scope will be removed from the PMB and placed into UB.

Enter in Column (15) of Block 8.d the EAC for the scope of work represented by the UB in Column (14) of Block 8.d. Enter in Column (16) of Block 8.d any variance. The content of UB and changes in the period shall be described in Format 5.

- 4.2.4.5. <u>Subtotal (PMB)</u>. In Columns (2) through (16) of Blocks 8.a through 8.d, enter the sum of the costs and budgets for direct, indirect, COM, and G&A. This subtotal represents the dollars in the allocated budget (less management reserve (MR)), which is the PMB against which performance is measured.
- 4.2.4.6. Management Reserve (MR). A company may establish a management reserve to be used in accordance with company policy. Management reserve is held for growth within the currently authorized work scope, rate changes, and other program unknowns. Reserve is held for current and future needs and is not be used to offset accumulated overruns or alter the true cost position of the contract. If MR includes the contractor and subcontractor amounts together, the breakout shall be discussed in Format 5.

Enter in Column (14) of Block 8.f, the total amount of budget identified as MR as of the end of the current reporting period. The value shown as MR in Formats 1, 2, and 3 shall agree. Amounts from MR applied to WBS elements during the reporting period shall be listed in Block 6.b of Format 3 and explained in Format 5.

- 4.2.4.7. <u>Total</u>. Enter the sum of all direct, indirect, COM, G&A, UB and MR costs (as applicable) in Columns (2) through (14) of Block 8.g. The Total lines of Format 1 (Block 8.g) and Format 2 (Block 5.g) shall agree. The total of Column (14), Block 8.g, shall equal the Total Allocated Budget (TAB) shown in Block 5.f on Format 3.
- 4.2.5. Reconciliation to CBB.

- 4.2.5.1. Formal Reprogramming. In exceptional cases, the contractor may establish a PMB with budgets that exceed the CBB. This is called an OTB. Acceptance of the OTB values in excess of the CBB will be predicated on Government approval. This process is called formal reprogramming. The contractor and the Government shall agree on how the results of formal reprogramming shall be reported in the IPMR before it is initiated. Blocks 9.a and 9.b are used to reconcile the increased budget values to the CBB. Any pertinent details on the reporting of the formal reprogramming shall be included in Format 5.
- 4.2.5.2. <u>Variance Adjustment</u>. If the contractor uses a portion of the additional budget to adjust or eliminate variances applicable to completed work, the total adjustments made to the cost and schedule variances shall be shown in Columns (10) and (11) of Block 9.a.
 - The total schedule variance adjustment entered in Column (10) of Block 9.a shall be the sum of the individual schedule variance adjustments shown in Column (12b) of Block 8.g.
 - The total cost variance adjustment entered in Column (11) of Block 9.a shall be the sum of the individual cost variance adjustments shown in Column (12a) of Block 8.g.

Values identified in Block 9.a represent cumulative adjustment for all past reprogramming adjustments, including the most recent reprogramming.

- 4.2.5.3. <u>Total Contract Variance</u>. In Columns (10) and (11) of Block 9.b, enter the sum of the cost and schedule variances shown on the Total line (Block 8.g) and on the Variance Adjustment line (Block 9.a). In Column (14) enter the CBB from Block 6.c.2. In Column (15) enter the most likely management EAC from Block 6.c.1. In Column (16) of Block 9.b enter the difference between Columns (14) and (15) of Block 9.b.
- 4.2.6. Performance Data Columns (2) through (16).
- 4.2.6.1. <u>Column (2) and Column (7) Budgeted Cost Work Scheduled</u>. For the report period noted, enter the BCWS in these columns.
- 4.2.6.2. <u>Column (3) and Column (8) Budgeted Cost Work Performed</u>. For the report period noted, enter the BCWP in these columns.
- 4.2.6.3. <u>Column (4) and Column (9) Actual Cost Work Performed</u>. For the report period noted, enter the ACWP in these columns without regard to ceiling. In all cases, costs and budgets shall be reported on a comparable basis.
- 4.2.6.4. <u>Column (5) and Column (10) Variance Schedule</u>. For the report period, these columns shall reflect the differences between BCWS and BCWP.
 - For the current period column, Column (5) (Schedule Variance) is derived by subtracting Column (2) (BCWS) from Column (3) (BCWP).

• For the cumulative to date column, Column (10) (Schedule Variance) is derived by subtracting Column (7) (BCWS) from Column (8) (BCWP).

A positive number in Column (5) and Column (10) indicates a favorable variance. A negative number indicates an unfavorable variance.

- 4.2.6.5. <u>Column (6) and Column (11) Variance Cost</u>. For the report period, these columns shall reflect the difference between BCWP and ACWP.
 - For the current period column, Column (6) (Cost Variance) is derived by subtracting Column (4) (ACWP) from Column (3) (BCWP).
 - For the cumulative to date column, Column (11) (Cost Variance) is derived by subtracting Column (9) (ACWP) from Column (8) (BCWP).

A positive value indicates a favorable variance. A negative value indicates an unfavorable variance.

- 4.2.6.6. Column (12a) and Column (12b) Reprogramming Adjustments Cost Variance and Schedule Variance. Formal reprogramming (OTB) can result in budget allocations in excess of the CBB and, in some instances, adjustments to previously reported variances. If previously reported variances are being adjusted, the adjustment applicable to each reporting line item affected shall be entered in Column (12a) for cost variances and Column (12b) for schedule variances. The total of Column (12a) and Column (12b) shall equal the amount shown on the Variance Adjustment line (Block 9.a) in Column (10) and Column (11).
- 4.2.6.7. Column (13) Reprogramming Adjustments Budget. Enter the total amounts added to the budget, for each reporting line item, as the result of formal reprogramming (OTB). The amounts shall consist of the sum of the budgets used to adjust cost variances (Column (12)) plus the additional budget added to the WBS element for remaining work. Enter the amount of budget added to MR in the space provided on the MR line (Block 8.f of Column (13)). The total of Column (13) shall equal the budget amount by which the TAB exceeds the CBB as shown in Block 5.g of Format 3. An explanation of the reprogramming shall be provided in Format 5.
- 4.2.6.7.1. <u>Formal Reprogramming Reporting</u>. Columns (12) and (13) are intended for use only in situations involving formal reprogramming (OTB). Internal replanning actions within the CBB do not require entries in these columns.
- 4.2.6.7.2. <u>Formal Reprogramming Timeliness</u>. Formal reprogramming (OTB) may require more than one month to implement and may necessitate a temporary reporting hiatus. In those cases, before the initiation of formal reprogramming, the contractor and the Government shall agree on the date, the duration, and the scope of the hiatus along with any specific interim reporting requirements. At a minimum, ACWP shall be reported in Format 1 during the hiatus.

- 4.2.6.8. <u>Column (14) At Completion Budgeted</u>. Enter the budgeted cost at completion for the items listed in Column (1). The budget at completion (BAC) entry shall consist of the sum of the original budgets plus or minus budget changes resulting from contract changes, internal replanning, and application of MR. The total (Block 8.g) shall equal the TAB shown in Block 5.f on Format 3.
- 4.2.6.9. <u>Column (15) At Completion Estimated</u>. Enter the latest revised estimate of cost at completion including any estimated overrun/underrun for all authorized work. If the subtotal (Block 8.e) does not agree with the management most likely EAC (Block 6.c.1), the difference shall be explained in Format 5.
- 4.2.6.10. <u>Column (16) At Completion Variance</u>. Enter the difference between the EAC Column (15) and the BAC Column (14) by subtracting the EAC column from the BAC column. This variance at completion (VAC, when negative, reflects an unfavorable position.
- 4.3. Format 2 Organizational Categories.
- 4.3.1. Performance Data.
- 4.3.1.1. <u>Column (1) Organizational Category</u>. This format shall be used to collect organizational cost information at the total contract level for organizational elements rather than for individual WBS elements.
- 4.3.1.1.1. <u>Categories</u>. In Block 5.a, list the organizational categories that reflect the contractor's internal management structure. This column shall also identify each major subcontractor as defined in the contract.
- 4.3.1.1.2. <u>Subcontractors</u>. This column shall identify each major subcontractor and each major vendor separately as an add or non-add item. [Note: The separation of subcontractor efforts is for reporting purposes and not intended to impact how contracts are managed.] The individual subcontractor line shall reconcile with the cost to the prime (including subcontractor fee, MR, UB, G&A, COM, etc.) or shall track directly with the subcontractor submittal consistent with the company/contract documented process for subcontract integration. The process for subcontract integration shall be explained in Format 5.
- 4.3.1.1.3. <u>Material</u>. The column shall also identify material separately as an add or non-add item.
- 4.3.1.1.4. <u>Level of Detail Structure</u>. The contractor shall report the organizational cost information according to its own internal management structure.
- 4.3.1.2. <u>Cost of Money (COM)</u>. Enter in Columns (2) through (16) of Block 5.b the Facilities Capital COM applicable to the contract consistent with Format 1 Block 8.b.
- 4.3.1.3. <u>General and Administrative (G&A)</u>. Enter in Columns (2) through (16) of Block 5.c the appropriate G&A costs consistent with Format 1 Block 8.c.

- 4.3.1.4. <u>Undistributed Budget (UB)</u>. Enter in Column (14) of Block 5.d the budget applicable to contract effort that cannot be planned in sufficient detail consistent with Format 1 Block 8.d.
- 4.3.1.5. <u>Subtotal (PMB)</u>. In Columns (2) through (16) of Blocks 8.a through 8.d, enter the sum of the costs and budgets for direct, indirect, cost of money, and G&A. This subtotal represents the dollars in the allocated budget (less MR), which is the PMB against which performance is measured.
- 4.3.1.6. <u>Management Reserve (MR)</u>. In Column (14) of Block 5.f enter the amount of budget identified as MR consistent with Format 1 Block 8.f.
- 4.3.2. <u>Columns (2) Through (16)</u>. The instructions applicable to these columns are the same as the instructions for corresponding columns on Format 1.
- 4.4. Format 3 Baseline.
- 4.4.1. Contract Data.
- 4.4.1.1. <u>Original Negotiated Cost</u>. Enter in Block 5.a the dollar value (excluding fee/profit) negotiated in the original contract. For a cost plus fixed fee, incentive, or award fee contract, enter the estimated cost negotiated. For an incentive contract, enter the definitized contract target cost.
- 4.4.1.2. <u>Negotiated Contract Changes</u>. Enter in Block 5.b the total cost (excluding fee/profit) of all definitized contract changes that have occurred since definitization of the original contract.
- 4.4.1.3. <u>Current Negotiated Cost</u>. Enter in Block 5.c the sum of Blocks 5.a and 5.b. The amount shown shall equal the amount in Negotiated Cost (Block 5.b) on Format 1.
- 4.4.1.4. <u>Estimated Cost of Authorized, Unpriced Work (AUW)</u>. Enter in Block 5.d the AUW amount consistent with Format 1 Block 5.c (see 3.2.1.3). The content of the total AUW components shall be described in Format 5.
- 4.4.1.5. Contract Budget Base (CBB). Enter in Block 5.e the sum of Blocks 5.c and 5.d.
- 4.4.1.6. <u>Total Allocated Budget (TAB)</u>. Enter in Block 5.f the sum of all budgets allocated to the performance of the contractual effort. The amount shown shall include all MR and UB. This amount shall be the same as that shown on the Total line in Column (14) on Format 1 (Block 8.g) and Format 2 (Block 5.g).
- 4.4.1.7. <u>Difference</u>. Enter in Block 5.g the difference between Blocks 5.e and 5.f. In most cases, the amounts shown in Blocks 5.e and 5.f will be identical. If the amount shown in Block 5.f exceeds that shown in Block 5.e, it usually is an indication of a formal reprogramming (OTB). The difference shall be explained in Format 5 for the reporting period the negative value appears

and subsequently for any changes in the difference between CBB and the TAB.

- 4.4.1.8. <u>Contract Start Date</u>. Enter in Block 5.h the date the contractor was authorized to start work on the contract, regardless of the date of contract definitization.
- 4.4.1.9. <u>Contract Definitization Date</u>. Enter in Block 5.i the date the contract was originally definitized. Leave this field blank if the contract is not definitized.
- 4.4.1.10. <u>Planned Completion Date</u>. Enter in Block 5.j the completion date for which the budgets allocated in the PMB have been planned. This date represents the planned completion of all efforts on the contract. The cost associated with this date's scheduled efforts is the TAB (Block 5.f of Format 3). The planned completion date shall equal the baseline completion date in Format 6. The difference, if any, between the planned completion date and the contract completion date shall be addressed in Format 5.
- 4.4.1.10.1. The contractor may re-phase the PMB schedule to new dates that exceed the contractual milestones, a condition known as an OTS, with Government approval. These new schedule dates are for performance measurement purposes only and do not represent an agreement to modify the contract terms and conditions.
- 4.4.1.10.2. The Government and the contractor shall agree on the new PMB schedule prior to reporting it in the IPMR. The contractor shall provide pertinent information in Format 5 on any schedule milestones that are inconsistent with contractual milestones, beginning the month the OTS is implemented and each month thereafter.
- 4.4.1.11. <u>Contract Completion Date</u>. Enter in Block 5.k the contract scheduled completion date in accordance with the latest contract modification. The cost associated with the schedule from which this date is taken is the CBB (Block 5.e of Format 3).
- 4.4.1.12. <u>Estimated Completion Date</u>. Enter in Block 5.1 the contractor's latest estimated completion date. This date represents the estimated completion of all effort on the contract, consistent with the Format 6 forecast completion date. This date shall be consistent with the underlying assumptions behind Block 6.c.1 of Format 1.
- 4.4.2. Performance Data (Block 6).
- 4.4.2.1. <u>Block 6.a Performance Measurement Baseline (Beginning of Period)</u>. Enter in Block 6.a the time-phased PMB (including G&A and COM) value as it existed at the beginning of the current reporting period. Normally the entries on this line (e.g., for Columns (4) through (9)) are taken directly from the PMB (End of Period) line on the previous report.

For example, the number in Column (4) on the PMB (End of Period) line from the last report becomes the number in Column (3) on the PMB (Beginning of Period) line on this report. The number in Column (5) (End of Period) last report becomes Column (4) Beginning of Period) on this report, etc. [Note: this applies where each of the two columns covers the same length of

time].

Where the previously reported PMB (End of Period) does not equal the reporting period (Beginning of Period), the difference and the justification shall be described in Format 5.

- 4.4.2.2. <u>Block 6.b Baseline Changes Authorized During Report Period</u>. In Block 6.b, list all significant baseline changes that have occurred during the reporting period in their respective timeframes in columns (2)-(16).
 - This list shall include the contract changes and AUW authorized during the reporting period, transactions involving MR and UB, and any significant re-phasing of budgets.
 - All significant authorized baseline changes shall be listed individually, whether priced or unpriced; all other changes shall be summarized and titled "Other."
 - Block 6.b, when added to Block 6.a, equals Block 6.c.
 - The term "significant" may be defined in the Project Execution Plan (PEP) or as directed by the Contracting Officer or determined by the contractor if undefined.
 - The reasons for the significant changes shall be discussed in Format 5.
- 4.4.2.3. <u>Block 6.c Performance Measurement Baseline (End of Period)</u>. Enter in Block 6.c the time-phased PMB as it exists at the end of the reporting period.
- 4.4.2.4. <u>Management Reserve</u>. Enter in Block 7 the total amount of MR remaining as of the end of the reporting period. This value shall be the same as the amount shown as MR in Format 1 Block 8.f Column (14).
- 4.4.2.5. <u>Total</u>. Enter in Column (16) of Block 8 the sum of Column (16) of Block 6.c (PMB (End of Period)) and Column (16) of Block 7 (MR). This amount shall be the same as that shown on the Total line (Block 8.g) in Column (14) on Format 1.
- 4.4.3. Column (2) BCWS Cumulative To Date. On the PMB (Beginning of Period) line (Block 6.a), enter the cumulative BCWS as of the first day of the reporting period. This shall be the same number reported as the BCWS on the Total line (Column (7) of Block 8.g) of Format 1 of the previous IPMR. On the PMB (End of Period) line (Block 6.c), enter the cumulative BCWS as of the last day of the reporting period. This shall be the same number reported as BCWS on the Total line (Column (7) of Block 8.g) of Format 1 for this IPMR.
- 4.4.4. <u>Column (3) BCWS for Report Period</u>. On the PMB (Beginning of Period) line (Block 6.a), enter the BCWS planned for the reporting period. This shall be the number in Column (4) on the PMB (End of Period) line (Block 6.c) on the previous IPMR.
- 4.4.5. Columns (4) Through (14). Enter the names of each month for the contract period of

- performance in the headings of each of the Columns (4) through (9). Enter the names of the appropriate periods, as defined in the PEP or as directed by the CO or determined by the contractor, if undefined, in the headings of each of the Columns (10) through (14) of Block 6.
- 4.4.5.1. In the PMB (Beginning of Period) line (Block 6.a), enter the BCWS as reported in Format 3 of the previous IPMR as PMB (End of Period) (Block 6.c).
- 4.4.5.2. In the PMB (Baseline Changes Authorized During Reporting Period) line (Block 6.b) enter the time-phased changes.
- 4.4.5.3. In the PMB (End of Period) line (Block 6.c) of this report, enter the BCWS by month for the next six months and for periodic increments (monthly, quarterly, or annually) thereafter for the remainder of the contract. [Note: For the purposes of illustration, Format 3 displays Columns (2) through (14) for reporting BCWS.]
- 4.4.6. <u>Column (15) Undistributed Budget</u>. On the PMB (Beginning of Period) line (Block 6.a), enter the number from Column (15) on the PMB (End of Period) line (Block 6.c) from the previous IPMR. On the PMB (End of Period) line, enter the UB shown in Column (14) of Block 8.d on Format 1 of this report.
- 4.4.7. <u>Column (16) Total Budget</u>. On the PMB (Beginning of Period) line (Block 6.a) enter the number from Column (16) on the PMB (End of Period) line (Block 6.c) from the previous IPMR. In the section where baseline changes that occurred during the period are listed (Column (1) of Block 6.b), enter the amount of each of the changes listed.
- 4.4.7.1. On the Total Baseline Changes Authorized During Report Period line (Block 6.b), enter the sum of the amounts in the preceding columns.
- 4.4.7.2. On the PMB (End of Period) line (Block 6.c), enter the sum of the amounts in the preceding columns on this line.
- 4.4.7.3. On the Management Reserve line (Block 7), enter the amount of MR available at the end of the period.
- 4.4.7.4. On the Total line (Block 8) enter the sum of the amounts in this column on the PMB (End of Period) line and the MR line. [Note: This shall equal the amount in Block 5.f on this format and the amount of the Total line in Column (14), Block 8.g, of Format 1.]
- 4.5. Format 4 Staffing.
- 4.5.1. <u>Performance Data</u>. For those organizational categories shown in Column (1) of Block 5, equivalent months shall be indicated for the current reporting period (Column (2)), cumulative through the current period (Column (3)), forecast to completion (Columns (4) through (14)), and at completion (Column(15)).

- Direct equivalent months shall be shown for each organizational category for the contract. An equivalent month is defined as the effort equal to that of one person for one month.
- Values shall be reported in whole numbers. [Note: Partial months shall be rounded; 0.5 and above shall be rounded to 1; below 0.5 rounded to 0.]
- The Government and the contractor may negotiate staffing to be reported in hours, equivalent month, or total headcount. The unit of measure shall be specified in the XML submission.
- 4.5.1.1. <u>Column (1) Organizational Category</u>. In Block 5, list the organizational categories that reflect the contractor's internal management structure. Format 4 categories may differ from those reported in Format 2 with the concurrence of the Government.
- 4.5.1.2. <u>Column (2) Actual Current Period</u>. Enter the actual units incurred during the current reporting period.
- 4.5.1.3. <u>Column (3) Actual End of Current Period (Cumulative)</u>. Enter the incurred actual units to date (cumulative) as of the end of the reporting period.
- 4.5.1.4. Columns (4) Through (14) Forecast (Non-Cumulative). Enter the names of each month for the contract period of performance in the headings of each of the Columns (4) through (9), and the names of the appropriate periods in the headings of each of the Columns (10) through (14) of Block 5. Enter a staffing forecast by month for the next six months and for the predetermined periodic increments thereafter for the remainder of the contract, as defined in the PEP or as directed by the CO or determined by the contractor, if undefined.
 - The staffing forecast shall be updated as part of the formal EAC process followed by the contractor.
 - The staffing forecast shall reflect the same staffing estimate used as the basis for the EAC in Column (15) on both Format 1 and Format 2. [Note: The actual number of columns will vary from contract to contract.]
- 4.5.1.5. Column (15) Forecast at Completion. Enter the estimate of units necessary for the total project in Column (15) by organizational category. This estimate shall be consistent with the EAC shown in Column (15) of Block 8.e of Format 1. The PEP or as directed by the CO will define thresholds for any staffing forecast changes that need to be addressed in Format 5 or determined by the contractor.
- 4.5.2. <u>Total Direct</u>. In Block 6, Columns (2) through (15), enter the sum of all direct units for the organizational categories shown in Column (1).
- 4.6. Format 5 Explanations and Problem Analyses.

- 4.6.1. General. Format 5, Explanations and Problem Analyses, is a narrative report prepared to amplify and explain data provided in the other IPMR formats. Format 5 shall address these elements in the following order:
 - 1) Project Summary
 - 2) Formal Reprogramming Analysis
 - 3) EAC Analysis
 - 4) UB Analysis
 - 5) MR Analysis
 - 6) IMS Discussion
 - 7) Format 3 Discussion
 - 8) Format 4 Discussion
 - 9) Cost and Schedule Variance Analysis
 - 10) Supplemental Discussions.

Any other topic(s) relevant to project cost, schedule, or technical performance may be addressed in this format. To gain time efficiencies and meet submission dates, contractors may elect to attach subcontractor(s) Format 5 reporting and cross reference the analysis in the Format 5 submitted to the Government.

- 4.6.2. <u>Project Summary (Total Project)</u>. Provide a summary analysis addressing significant problems impacting performance. Indicate corrective actions required, including Government actions where applicable. Highlight significant changes since the previous report. Discuss other significant issues that could impact cost, schedule, or technical objectives. This section is brief and normally limited to one page.
- 4.6.3. <u>Formal Reprogramming (OTB/OTS)</u>. An OTB or OTS is indicated when:
 - 1) The amount in Block 5.g on Format 3 is a negative value.
 - 2) The baseline schedule (Format 6) is planned beyond the project end and Format 3 Block 5.1 is greater in time than Block 5.k.

If formal reprogramming has been implemented, discuss the following:

4.6.3.1. <u>Authorization</u>. Procuring activity authorization for the baseline change that resulted in a

negative value or change.

- 4.6.3.2. <u>Reason</u>. Discuss reasons for the change.
- 4.6.3.3. <u>IPMR Reporting</u>. Discuss how the change affected the IPMR reporting (e.g., amount allocated to/from MR if adjustments were made to cost and/or schedule variances).
- 4.6.3.4. <u>New Parameters</u>. Indicate the new TAB value and/or the extension of the IMS period of performance beyond the contractual period of performance as reported in the current reporting period.
- 4.6.4. Estimate at Completion Analysis. If the best case or worst case management EACs differ from the most likely EAC (Column (1) of Block 6 of Format 1), provide a brief explanation of the difference. When the most likely management EAC differs from the total entered in Column (15) of Format 1, explain the difference. Explain the assumptions, conditions, methodology, and risk/opportunity incorporation, MR and UB assumptions in all three EACs (i.e., most likely, best, and worst case EAC). Discussion shall include an assessment of the IMS status and the impact of schedule to the most likely EAC. Include any differences between the most likely management EAC and CBB.
- 4.6.5. <u>Undistributed Budget Analysis</u>. Identify the components of the UB as of the current reporting period. Discuss changes, if any, from the previous IPMR.
- 4.6.6. <u>Management Reserve Analysis</u>. Identify the sources and uses of MR changes during the reporting period. Identify the WBS elements to which MR was applied and the reasons for its application.
- 4.6.7. <u>Integrated Master Schedule (IMS) Discussion and Analysis</u>. Discuss the IMS, including current month changes, by area below:
- 4.6.7.1. <u>Critical/Driving Paths.</u> Provide an analysis of primary, secondary, and tertiary critical and driving paths. The analysis shall include discussion of the trends of total float and mitigations that have been applied in the current period.
- 4.6.7.2. <u>Baseline Schedule Variance</u>. Discussion of variance to baseline schedule at the total project level in days.
- 4.6.7.3. <u>Schedule Margin</u>. Discussion of schedule margin(s), if applicable, and any changes in the duration of schedule margins for the reporting period (changes to duration include baseline or forecast).
- 4.6.7.4. <u>Task Activity Codes and Data Dictionary</u>. Discuss any changes to Task Activity Codes and Data Dictionary.
- 4.6.7.5. Health Analysis. Describe the results of any internal schedule health analysis, if

applicable.

- 4.6.8. Format 3 Discussion, Baseline Changes.
- 4.6.8.1. <u>Shifts in Time Phasing</u>. Explain reasons for significant shifts in time phasing of the PMB shown on Format 3.
- 4.6.8.2. Changes in Total Budget. Explain the significant changes in total budget.
- 4.6.8.3. Content Changes. Explain the content, if any, in AUW.
- 4.6.9. <u>Format 4 Discussion, Staffing Level Changes</u>. Explain the variance between actual and projected staffing for the prior month. Explain significant shifts in time phasing in the current and future periods.
- 4.6.10. Cost and Schedule Analysis.
- 4.6.10.1. <u>General</u>. Explain variances that exceed specified thresholds which are reportable. Explanations of variances shall clearly identify the nature of the problem, significant reasons for cost or schedule variances (i.e., root cause), effects on immediate tasks, impacts on the total project, and the corrective actions taken or planned.
- 4.6.10.1.1. <u>Corrective Actions</u>. Include explanations of the progress status of the corrective actions if not completed during the reporting period and/or cannot be accomplished as planned.
- 4.6.10.1.2. Cost Variances. Identify separately amounts attributable to the following:
 - Base labor rate changes from amounts applicable to hours worked,
 - Material price changes from amounts applicable to material usage,
 - Overhead rate changes from amounts applicable to overhead base changes or overhead allocation changes.
- 4.6.10.1.3. <u>Schedule Variances</u>. Include the change in total float of the critical task(s) for the associated WBS elements and the impact to the project driving and/or critical path(s), if any.
- 4.6.10.2. <u>Variance Analysis Selection and Reporting Overview</u>.

The purpose of this section is to implement a process of selecting candidates for variance reporting. This is accomplished first by the contractor establishing a pool of potential variances and then using a defined approach to limit the actual number of reportable variances to 15. The Government or the contractor shall select the 15 reportable variances based on the criteria specified below.

4.6.10.2.1. <u>Setting Variance Analysis Thresholds</u>. The Government may specify the reporting

variance thresholds; they may be defined in the PEP or the FPD. Without Government specified thresholds, the contractor shall apply thresholds consistent with the company-documented EIA-748 compliant process, as applicable. Thresholds shall be based on both cost and schedule, including at completion. Variance analysis thresholds shall be reviewed periodically and adjusted as necessary to ensure they continue to provide appropriate insight and visibility to the Government. Thresholds shall not be changed without Government approval.

- 4.6.10.2.2. <u>Variance Analysis Reporting Level</u>. The reporting level for variance analyses is defined by the PEP or directed by the CO. Each month the variances for the reporting level are compared to the thresholds, and WBS elements at the reporting level that exceed the threshold are selected as candidates for the pool of reportable variances that are reportable. The pool consists of those elements that have exceeded the threshold for cost, schedule, or at completion variances, if any.
- 4.6.10.2.3. <u>Determining the Pool of Reportable Variances</u>. WBS elements are candidates for selection for variance analysis reporting if they are at the reporting level and they exceed the variance analysis threshold. If this pool of reportable variances yields fewer than 15 variances, only these variance analyses shall be required. If this pool yields more than 15 variances, the process described in section 4.6.10.2.4.2 applies.
- 4.6.10.2.4. Reportable Variance Analysis. The reporting variance categories are:
 - Current and cumulative for cost;
 - Current and cumulative for schedule;
 - At completion variances.

The categories are used to determine the pool of WBS elements in section 3.6.10.2.3 above. The Government may decide on an alternate method of the selection of 15 variance report categories or reported WBS elements.

- 4.6.10.2.4.1. <u>Reporting Variances With Government Selection</u>. The Government may select the reportable variances based on information such as project risk. This Government notification may be informally provided to the contractor by the CO. Notification will be provided no later than 10 working days prior to the report delivery date. The total WBS variances reported will be limited to a maximum of 15, except where noted in 4.6.10.2.4.3 and 4.6.10.2.4.4.
- 4.6.10.2.4.2. Reporting Variances Without Government Selection. If the Government does not select the 15 reportable WBS variances, then the contractor's pool of reportable variances will be used for reportable variance selection. If fewer than 15 WBS elements exceed the threshold, then the number that actually exceeds is reportable. If more than 15 have been identified, see sections 4.6.10.2.4.2.1 and 4.6.10.2.4.2.2 for filtering to the 15 that are reportable.
- 4.6.10.2.4.2.1. Top Three Variances by Category. Where 15 or more reportable variances exist

- from the variance pool, the contractor shall select the top three variances in each category, based on dollar value of reportable WBSs, that exceeds the established threshold for current schedule (3) and cost (3); cumulative schedule (3) and cost (3); and at completion (3), as applicable.
- 4.6.10.2.4.2.2. <u>Multiple Categories</u>. If a reportable WBS has variances that exceed two or more categories simultaneously, then the WBS variances count against each individual category. A total of 15 WBSs are required, where applicable, according to the threshold. The WBS that exceeds multiple categories only counts as one WBS variance. The purpose of the categories is to make sure the different elements are addressed. Once the top three variances in each category is met, then the contractor shall determine the additional variances to reach the 15 WBS variances required, where applicable.
- 4.6.10.2.4.3. <u>Contractor Additional Analysis</u>. The contractor is not prohibited from providing more analysis than required to cover an emerging trend. This additional variance information is intended to be temporary per the emerging trend aspect.
- 4.6.10.2.4.4. <u>Government Additional Analysis</u>. The Government is not prohibited from requesting more analysis than required by the 15 WBS elements to cover an emerging or significant trend. This additional variance information is intended to be temporary.
- 4.6.10.2.4.5. <u>Modification for Additional Analysis</u>. Since the additional analysis covered in sections 4.6.10.2.4.3 and 4.6.10.2.4.4 is intended to be temporary, a formal modification to the reporting requirement is not required. Notification is recommended via e-mail.
- 4.6.10.2.4.6. <u>Reduction of Variances</u>. The Government may reduce the amount of variance reporting, at any time, if it is deemed no longer meaningful. This shall be done via a change to the PEP or as directed by the CO.
- 4.6.11. <u>Supplemental Discussions</u>. The contractor, at a minimum (when applicable), shall disclose the following:
- 4.6.11.1. <u>Baseline Review Dates</u>. Include the dates of all completed baseline reviews and proposed dates for baseline reviews to be conducted in the next six months.
- 4.6.11.2. <u>Schedule Risk Assessment (SRA)</u>. Include the results of the SRA if one has been performed within the reporting month. The SRA report is in contractor format and includes assumptions; probability of result to the specified target; analysis of results; actions taken as a result of the analysis; and results, if any, of the steps taken. Discuss changes to the schedule and most likely EAC based on the results of the SRA.
- 4.6.11.3. <u>Contractual De-scopes</u>. Discuss the contractual de-scopes, where applicable.
- 4.6.11.4. <u>G&A and COM</u>. Include here whether Format 1 COM (Block 8.b) and G&A (Block 8.c) entries are add or non-add. Add would mean the costs are not included in Block 8.a. Non-add would mean that costs have been included in Block 8.a.

- 4.7. Format 6 Integrated Master Schedule (IMS).
- 4.7.1. IMS Requirements.
- 4.7.1.1. <u>Content Required</u>. The IMS shall include, at a minimum, discrete tasks/activities, consistent with all authorized work, and relationships necessary for successful project completion. Subcontractor discrete work shall be incorporated as tasks within the prime IMS at a level necessary for a realistic critical path. The IMS is a single integrated network that also contains significant external interfaces, Government furnished equipment/information/property and relationship dependencies for the entire contractual effort.
- 4.7.1.1.1. <u>Production Contract IMS</u>. Production contracts utilizing a Manufacturing Requirements Planning (MRP) or an Enterprise Requirements Planning (ERP) system may include a representation of the discrete effort contained in the MRP/ERP in the contract IMS. The MRP/ERP information in the IMS shall be at a sufficient level of detail to ensure that the contract IMS status reflects the status of manufacturing progress in MRP/ERP system. Vertical traceability shall be maintained between the IMS and MRP/ERP system.
- 4.7.1.1.2. <u>Subcontractor Flowdown</u>. If required by the Contracting Officer's Representative (COR), the contractor may be required to submit subcontractor IMS reports.
- 4.7.1.2. <u>IMS Status</u>. The IMS shall be statused according to the contractor's accounting month and aligned with Format 1 reporting month, as applicable.
- 4.7.1.3. <u>IMS Content Elements</u>. The IMS shall contain the project milestones, accomplishments, criteria, discrete tasks/activities, work packages and planning packages, as applicable, from project award to project completion.
 - The IMS shall be an integrated, logically driven network-based schedule that is vertically and horizontally traceable.
 - The IMS shall have traceability to the Integrated Master Plan (IMP) (if applicable),
 Organizational Breakdown Structure (OBS), Control Accounts, WBS and Statement of Work.
 - The WBS in the IMS shall be consistent with the Format 1 structure if applicable.
 - The IMS shall contain contractual milestones and descriptions and shall display summary, intermediate, and detailed schedules.
 - The IMS shall include fields and data that enable access to the information by product and organizational lines.

- The IMS shall contain all calendars that define working and nonworking time periods or other information that may impact the schedule.
- 4.7.1.3.1. <u>Contract/Project Milestones</u>. Key project events which represent progress and completion of the contract/project.
- 4.7.1.3.2. <u>Summary Master Schedule</u>. A top-level schedule of key tasks/activities and milestones at the summary level which can be sorted by either the WBS or IMP structure (if applicable). It shall be a vertically integrated roll up of the intermediate and detailed levels within the IMS.
- 4.7.1.3.3. <u>Intermediate Schedules</u>. Mid-level project schedules that include key tasks/activities, milestones, and all associated accomplishments as shown in the summary master schedule. The WBS elements and the IMP events (as applicable) are traceable to display work effort at the intermediate level of summarization. There may be several intermediate schedules that depict varying levels of detail. They shall be vertically integrated roll ups of the detailed level schedules.
- 3.7.1.3.4. <u>Detailed Schedules</u>. The lowest level of project tasks/activities that form the network. The detailed schedules shall contain horizontal and vertical integration, as a minimum, at the work package and planning package level. The detailed schedules shall include all discrete tasks/activities, work packages and planning packages necessary to create a networked schedule capable of identifying a valid critical path.
- 4.7.1.3.4.1. <u>Control Account/Work Package Identification</u>. Every discrete task/activity, work package, and planning package shall be clearly identified and directly related to a control account. Work packages and planning packages shall be individually represented and summarized to and reconciled with the total budget for that control account.
- 4.7.1.3.4.2. <u>Level of Effort (LOE) Identification</u>. If LOE control accounts, work packages, or planning packages are included in the IMS, they shall be clearly identified as such. LOE shall not impact discrete tasks/activities.
- 4.7.1.3.4.3. <u>Scope Planning</u>. Planning packages and work packages shall be planned to their logical technical scope conclusion. Shorter-term work packages (ideally equal in length to the statusing interval) are preferred because they provide more accurate and reliable measures of work accomplished.
- 4.7.1.3.5. <u>IMS Detailed Elements</u>. The IMS, at a minimum, shall include the following:
- 4.7.1.3.5.1. <u>Task/Activity</u>. An element of work with duration.
- 4.7.1.3.5.2. <u>Milestone</u>. A specific definable accomplishment in the contract network, recognizable at a particular point in time. Milestones have zero duration and do not consume resources.

- 4.7.1.3.5.3 Milestones Level Per JSON DID for DS04.
- 4.7.1.3.5.4. <u>Duration</u>. The length of time estimated or realized to accomplish a task/activity.
- 4.7.1.3.5.5. <u>Schedule Percent Complete</u>. Schedule percent complete is a time-based status calculated by the schedule tool without regard to task scope accomplishment. Schedule percent complete shall not be used to status BCWP.
- 4.7.1.3.5.6. <u>Task/Activity and Milestone Descriptions</u>. These are descriptive titles that are concise, complete, and clearly identify the work effort being accomplished. The task/activity title shall reflect the scope, its output (i.e., deliverable) and its place within the IMS architecture so that the content can be understood without the subproject task structure, if applicable. Abbreviations may be used to shorten the descriptive titles. The title for a task shall be unique in respect to other titles in the same IMS.
- 4.7.1.3.5.7. <u>Relationships/Dependencies</u>. Identify how predecessor and successor tasks/activities and milestones are logically linked. All non-constrained discrete tasks/activities/milestones, except the start and end of the project or interim delivery, shall have at least one predecessor and successor.
- 4.7.1.3.5.8. <u>Total Float/Slack</u>. The amount of time a task/activity or milestone forecast finish date can slip before delaying project completion or constraint date.
- 4.7.1.3.5.9. <u>Driving Path</u>. The longest sequence of discrete tasks/activities from time-now to a selected interim project milestone. Discrete tasks/activities on the driving path have the least amount of total float/slack to the interim project milestone.

If a task on a driving path slips, the interim project milestone will slip. Driving path may not be part of the project critical path. The Government may specify which driving path is currently reportable. Without Government direction, the contractor reports the driving path to the next major event, at a minimum.

- 4.7.1.3.5.10. <u>Critical Path</u>. A sequence of discrete tasks/activities in the network that has the longest total duration through the contract or project. Discrete tasks/activities along the critical path have the least amount of float/slack. Activities that contain "0" or negative total float are not by default the critical path. The critical path calculation is based on relationships, lead/lag times, durations, constraints, and status. Excessive constraints and incomplete, incorrect, or overly constrained logic shall be avoided because they can skew the critical path.
- 4.7.1.3.5.11. <u>Current Schedule</u>. The IMS shall reflect status and forecast discrete activities. Forecast start and forecast finish dates, shall not be earlier than the status date.
- 4.7.1.3.5.12. <u>Baseline Schedule</u>. The IMS shall have baseline dates for all tasks within the PMB and those dates shall be consistent with the start and finish of the cost baseline. The baseline is

typically set equal to the current schedule early dates at the time of the baseline establishment when change control is initiated.

- 4.7.1.3.5.13. <u>Baseline Schedule Changes</u>. Changes to the baseline schedule shall be made in accordance with the contractor's EVM process when applicable. In the event that the IMS is implemented without an EVM requirement, the change shall be made in accordance with the contractor's schedule change management process. Any movement of contractual milestones in the baseline schedule shall be derived only from either authorized contract or project changes or an approved over target schedule.
- 4.7.1.3.5.14. <u>Schedule Progress</u>. The IMS shall reflect actual progress and maintain accurate start and finish dates for all tasks/activities and milestones. The requirements for reflecting schedule progress are as follows:
 - 1) Actual start and actual finish dates shall be recorded in the IMS. The Actual start and actual finish dates shall not be later than the status date.
 - 2) The progress line is the date on which the schedule is statused, also known as "time-now," "data date," or "status date." All tasks/activities shall be progressed to the status date of the IMS.
 - 3) Forecast start and forecast finish dates shall not be earlier than the status date.
- 4.7.1.3.5.15. <u>Free Float/Slack</u>. The amount of time a task/activity or milestone can slip before it delays any of its successor tasks/ activities or milestones.
- 4.7.1.3.5.16. External Dependencies. As agreed to by the Government and contractor, the IMS shall identify significant external dependencies that involve a relationship or interface with external organizations, including Government-furnished items (e.g., decisions, facilities, equipment, information, data) as defined in the project. The required or expected delivery dates shall also be identified in the IMS. External dependencies shall be logically linked in the schedule to the appropriate IMS tasks.
- 4.7.1.3.6. Schedule Risk Assessment (SRA). A schedule risk assessment predicts the probability of project completion by contractual dates. The SRA is used by the contractor to perform a probability analysis of key project completion dates. Three-point estimates (most likely, minimum, and maximum remaining durations) shall be developed for remaining durations of all tasks/activities consistent with the authorized work (three-point estimates consist of minimum remaining duration, most likely remaining duration, and maximum remaining duration). [Note: A three-point estimate is minimum.] Activities/Tasks in the following list require individual estimates:
 - 1) Task/Activities identified as the primary, secondary, and tertiary driving paths (as specified by Government direction).

2) High-risk tasks/activities in the contractor's risk management plan.

The remaining tasks' three-point estimates may be individually or globally applied. The criteria for estimated minimum and maximum remaining durations shall be applied consistently across the entire schedule and documented in the contractor's schedule notes and management plan.

- 4.7.1.3.6.1. <u>Most Likely Durations</u>. Disclose and discuss the most likely schedule durations in Format 5.
- 4.7.1.3.6.2. <u>Best/Worst Durations</u>. Disclose and discuss the assumptions used to calculate best/worst case durations in Format 5.
- 4.7.1.3.6.3. <u>SRA Results</u>. The contractor SRA shall explain changes to the critical path, margin erosion where applicable, and mitigation plans. Reported results will be part of the Format 5 (See 3.6.11.2.). The SRA results shall be incorporated into the contractor's risk management process.
- 4.7.1.3.6.4. <u>SRA Reporting Frequency</u>. The SRA results shall be submitted in Format 5 as required by the COR and as specified below:
- 4.7.1.3.6.4.1. <u>Baseline Review</u>. An SRA is required prior to implementation of the initial EVM baseline.
- 4.7.1.3.6.4.2. OTB/OTS. An SRA is required before processing an OTB or OTS.
- 4.7.1.3.6.4.3. <u>Single Point Adjustment</u>. An SRA is required before implementing a significant cost and schedule reset, also referred to as a single point adjustment.
- 4.7.1.3.6.5. <u>Milestone Target</u>. The Government will determine the milestone target(s) for the SRA based on project events.
- 4.7.1.3.7. Required Fields and Traceability Requirements.
- 4.7.1.3.7.1. <u>General</u>. The use of the term "field" is not intended to restrict the contractor. Most tools employ a mixture of user defined fields, notes fields, or flag fields. A required field referenced in this section can be satisfied by any means that allows for filtering and sorting of its information to obtain the results required. Also every task does not need to identify or be represented in every field, but only as applicable for the item required; e.g. planning packages are identified only for the tasks that represent planning packages.
- 4.7.1.3.7.2. <u>Required traceability</u>. The Statement of Work and OBS must be traceable for all discrete work in the IMS. Traceability may be met with a field in the IMS or via other means as long as discrete work reconciles.
- 4.7.1.3.7.3. <u>Required IMS Fields</u>. The following fields shall be identified as applicable and described in the Data Dictionary (see 3.7.3). The purpose is for Government understanding or

usability of the IMS as an effective tool.

- 1) <u>Control Account/Work Package</u>. Identify effort associated with the work package or control account. This may be an individual field or via unique task identifier.
- 2) <u>Subcontractor</u>. Identify the tasks that are unique to the scope of a major supplier, if any. Subcontractors with an EVM flowdown shall be identified separately, if applicable.
- 3) <u>Justification of Lead, Lag, Constraint</u>. Provide a field that contains a summary justification of lead, Lag, or constraint. This requirement may be met with a code defined in the definition table or by individual notes on each applicable task.
- 4) <u>Earned Value Technique (EVT)</u>. Identify the EV BCWP technique if the schedule is used to directly status the EVM tool. As a minimum, if either Level of Effort (LOE) or Planning Packages (PP) are in the schedule, they must be identified within a field.
- 5) <u>Risk Mitigation Tasks</u>. Items that came from the risk register and include authorized risk mitigation activities shall be identified, as applicable.
- 6) <u>Critical Path and Driving Paths</u>. The Critical Path and Driving Path shall be identified. These identifiers are either automatically created by the scheduling software or custom fields that indicate/flag each task on a driving or critical path.
- 4.7.1.3.8. <u>Reserved Fields</u>. The Government may reserve fields and/or require the contractor to use certain fields for specific information. The requirement for any reserved fields will be specified by the CO.
- 4.7.1.3.9. <u>Retention of Historical Performance</u>. Historical performance on completed tasks/activities shall be maintained electronically for analytical use. Historical performance shall be maintained at the time of key project events (e.g., Integrated Baseline Review, Critical Design Review) for all tasks/activities. Data to be retained includes logic, actual and baseline durations, actual and baseline start and finish dates, and the three-point estimates that were used before the task/activity started.
- 4.7.1.4. Monthly Analysis. Format 6 monthly analysis requirements are defined in 4.6.7.
- 4.7.2. Optional Contents of the IMS. If part of the IMS, the following elements must be consistent with the definitions below:
- 4.7.2.1. Schedule Visibility Task (SVT). SVTs are tasks/activities or milestones in the IMS that increase management visibility and functionality of the schedule for non-PMB related items. SVTs shall not be used to represent any scope within the PMB. Resources cannot be assigned to SVTs, nor shall they be used to assess earned value performance. Any SVT shall be identified with the title "SVT."

- 4.7.2.2. <u>Lead/Lag</u>. An interval of time that must occur between a predecessor and successor task/activity or milestone. Documenting the purpose of each lead/lag within the IMS (i.e. in a user defined field) to facilitate the ease of IMS status and analysis is required. Since negative time is not demonstrable, leads are discouraged. Lead/lag shall not be used to manipulate float/slack or to artificially constrain the tasks/activities. If a coding field is used for justification of leads/lags, the terms shall be defined in the data dictionary (see 3.7.3).
- 4.7.2.3. <u>Constraints</u>. Constraints are limits applied to network start and finish dates (e.g., "Finish No Later Than," "Finish On or Before"). Constraints shall be minimized if they affect "late" dates or both "late and early" dates. The constraints that require justification include:
 - 1) All constraints that affect "late" dates or both "late and early" dates as defined by the schedule tool.
 - 2) All constraints that affect "early" dates beyond 20 working days from the current status period.

Constraints requiring justification shall be justified in an associated notes field provided within the scheduling software application. If a coding field is used for justification of constraints the definitions shall be defined in the data dictionary (see 3.7.3).

4.7.2.4. <u>Schedule Margin</u>. Schedule margin is an optional management method for accommodating schedule contingencies. It is a designated buffer within the schedule and does not have resources assigned to it. Schedule margin will have a baseline and be under the control of the contractor's program manager.

Schedule Margin, if any, shall be placed as the last task/activity/gap at the logical end of CD-1, CD-2, or CD-4 as appropriate for the current authorization period end. The schedule margin should not drive (be a predecessor to) discrete activities. Schedule margin, if any, in the IMS shall be clearly labeled "SCHEDULE MARGIN. Discuss in Format 5 the status of schedule margin, including reasons and impacts for changes, if any.

- 4.7.3. <u>Task/Activity Codes and Data Dictionary</u>. This is a list of all contractor defined fields, definitions, and code Structures in the IMS. This list shall define all of the required fields in section 3.7.1.3.7.3. The list shall be provided to the procuring activity upon initial submission of the IMS and any subsequent change to the dictionary.
- 4.8.1 Format 7 is JSON format
- 4.9.1 Format 8 is the cost tools native format. It is asked for on request and formatting will be discussed between PM and contractor when a request is made to support different software and versions.

FORMAT 1 – WORK BREAKDOWN STRUCTURE

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FORMAT 3 - BASELINE

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FORMAT 4 - STAFFING

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FORMAT 5 - EXPLANATIONS AND PROBLEM ANALYSES

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Appendix B – CFSR

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Use/relationship:

The Contract Funds Status Report (CFSR) [Sample Form DD 1586 attached and at http://www.esd.whs.mil/Portals/54/Documents/DD/forms/dd/dd1586.pdf], is designed to supply funding data about individual projects to Federal Project Directors and Contracting Officers for: (a) updating and forecasting contract funds requirements for the identified project, (b) planning and decision making on funding changes to contracts for the identified project, (c) developing funds requirements and budget estimates in support of the identified project, (d) determining funds in excess of contract needs for the identified project and available for de-obligation, and (e) obtaining rough estimates of termination costs.

This Data Item Description (DID) contains the format and content preparation instructions for the data product generated by the specific and discrete task requirements as delineated in the contract. A CFSR should be completed for each individual project, not necessarily at the overall contract level which may encompass numerous projects, operations and other work activity.

The CFSR is used in conjunction with the Integrated Program Management Report (IPMR). Reference Contract Funds Status Report (CFSR) Overview & Reconciliation with IPMR/CPR (snippet 2.4 located at https://www.energy.gov/projectmanagement/evms-training-snippets) for more information. The

CPR/IPMR formats are further described in snippets 2.1, 2.2, and 2.3.

<u>Contractual Application</u>. The CFSR is applicable to contracts for capital asset projects greater than \$50M where EVMS is required. A CFSR should be prepared for each individual project with a unique PARS number. In blocks 9 through 14, the values entered should be for the specified project and not at the overarching contract level.

Level of Reporting. If a contract is funded with a single appropriation, a single line entry at the total contract level should be considered for CFSR reporting. Reporting by line item or WBS element will be limited to only those items or elements needed to support funds management requirements. A reduced level of reporting may be implemented on contracts (a) with projects less than \$100M; (b) that are for time and material; or (c) for which only limited funding requirements information is needed.

<u>Multiple Appropriations</u>. Where two or more appropriation sources are used for funding a single contract, contractors will segregate funds data by appropriation accounting reference. The contracting officer will supply the appropriation numbers applicable to individual line items or WBS elements. If a single line item or WBS element is funded by more than one appropriation, methods for segregating and reporting such information will be negotiated and specified in the contract.

<u>Frequency and Submission</u>. The CFSR will be a contractual requirement and reported as part of the PARS Upload. Unless otherwise provided in the contract, the CFSR will be prepared as of the end of each calendar quarter or contractor accounting period nearest the end of each quarter. The required number of copies of the CFSR will be forwarded within 25 calendar days after the "as of" date of the report, or as otherwise specified in the contract. In the event of exceptional circumstances which call for increased frequency in reporting, such frequency will not be more often than monthly and will be negotiated and specified in the contract.

Explanations of Terms.

<u>Open Commitments</u>. For this report, a commitment represents the estimated obligation of the contractor (excluding accrued expenditures) to vendors or subcontractors (based on the assumption that the contract will continue to completion).

Accrued Expenditures. For this report, include recorded or incurred costs as defined within the Allowable Cost, Fee and Payments Clause (FAR 52.216-7) for cost type contracts or the Progress Payments Clause (FAR 52.232-16) for fixed price type contracts, plus the estimated fee or profit earned. Such costs include:

Actual payments for services or items purchased directly for the contract.

Costs incurred, but not necessarily paid, for storeroom issues, direct labor, direct travel, direct other in-house costs and allocated indirect costs.

Progress payments made to subcontractors.

Pension costs provided they are paid at least quarterly.

<u>Termination Costs</u>. Although this report is prepared on the basis that the contract will continue to completion, it is necessary to report estimated termination cost by government fiscal year and generally by more frequent intervals on incrementally funded contracts. The frequency will be dependent on the funding need dates (i.e., quarterly) and should be compatible with the contract funding clauses, Limitation of Funds clause (cost type contracts) or Limitation of Obligation clause (fixed price type contracts). Termination costs include such items as loss of useful life of special tooling, special machinery and equipment; rental cost of unexpired leases; and settlement expenses. The definition of termination costs is included in FAR 31.205-42.

The CFSR data upload requirements may be "tailored" as defined in the PARS Upload Requirements.

Requirements:

<u>Format.</u> Contractor formats should be substituted whenever they contain all the required data elements at the specific reporting levels in a form suitable for management.

Content. The CFSR shall contain the following information:

<u>Item 1 - Contract Number.</u> Enter the assigned contract number and the latest modification number on which contractual agreement has been reached

<u>Item 2 - Contract Type.</u> Enter the type of contract as identified in FAR Part 16 (e.g., Cost Plus Fixed Fee (CPFF), Fixed Price Incentive (FPI), etc.).

Item 3 – Contract Funding For. Enter the applicable type as follows:

Multi-Year Procurement (MYP)
Incrementally Funded Contract (INC)
Contract for a Single Year (SYC)

<u>For FY.</u> For contracts which are financed with funds appropriated in more than one fiscal year, a report is required for each fiscal year's funds where the separate year's funds in the contract are associated with specific quantities of hardware or services to be furnished. The fiscal year (s) being reported will be shown in this block and that year's share of the total target prices (initial and adjusted) will be shown in Items 9 and 10.

Item 4 - Appropriation. Enter the appropriation name in this block.

<u>Item 5 - Previous Report Date</u>. Enter the cut-off date of the previous report. (Year, Month, Day)

Item 6 - Current Report Date. Enter the cut-off date applicable to this report. (Year, Month, Day)

<u>Item 7 - Contractor.</u> Enter the name, division (if applicable), and mailing address of the reporting contractor.

Item 8 - Program. Identify the project by name and PARS number.

Item 9 - Initial Contract Price. Enter the dollar amounts for the initial negotiated contract target

price (or estimated price for non-incentivized contracts) and contract ceiling price when appropriate. For contracts which are financed with funds appropriated in more than one fiscal year, only the share of the total initial target and ceiling associated with the fiscal year shown in Item 3 will be entered.

<u>Item 10 - Adjusted Contract Price</u>. Enter the dollar amounts for the adjusted contract target price (initial negotiated contract plus supplemental agreements) and adjusted contract ceiling price or estimated ceiling price where appropriate. For contracts which are financed with funds appropriated in more than one fiscal year, only the share of the total adjusted target and ceiling associated with the fiscal year shown in Item 3 will be entered.

Item 11 - Funding Information.

<u>Column a. - Line Item/Work Breakdown Structure (WBS) Element</u>. Enter the line item or WBS elements specified for CFSR coverage in the contract.

<u>Column b. - Appropriation Identification</u>. Enter the appropriation number for the contract or, if applicable, each line item or WBS element) will be shown in Items 9 and 10.

<u>Column c. - Funding Authorized To Date</u>. Enter dollar amounts of contract funding authorized under the contract from the beginning of the fiscal year(s) shown in Item 3 through the report date shown in Item 6.

<u>Column d. - Accrued Expenditures Plus Open Commitments Total</u>. For contract work authorized, enter the total of (a) the cumulative accrued expenditures incurred through the end of the reporting period, and (b) the open commitments on the "as of" date of the report. Enter the total applicable to funds for the fiscal year(s) covered by this report as shown in Item 3.

Separation of Open Commitments and Accrued Expenditures. On selected contracts, the separation of open commitments and accrued expenditures by line item or WBS element may be a negotiated requirement in the contract. Utilization of this provision should be held to the minimum essential to support information needs of DOE. In the event this separation of data is not available in the contractor's accounting system or cannot be derived without significant effort, provision should be made to permit use of estimates. The procedures used by the contractor in developing estimates shall be explained in the Remarks section of the report.

<u>Notice of Termination</u>. When a Notice of Termination has been issued, potential termination liability costs will be entered in this column. They will be identified to the extent possible with the source of liability (prime or subcontract).

<u>Column e. - Contract Work Authorized - Definitized</u>. For the fiscal year(s) shown in Item 3, enter the estimated price for the authorized work on which contractual agreement has been reached, including profit/fee, incentive and cost sharing associated with projected over/underruns. Amounts for contract changes will not be included in this item unless they have been priced and incorporated in the contract through a supplemental agreement.

Column f. - Contract Work Authorized - Not Definitized. Enter the contractor's estimate

of the funds requirements for performing required work (e.g., additional agreements or changes) for which firm contract prices have not yet been agreed to in writing by the parties to the contract. Report values only for items for which written orders have been received. For incentive type contracts, show total cost to the Government (recognizing contractor participation). Enter in the Remarks section a brief but complete explanation of the reason for the change in funds.

<u>Column g. - Subtotal.</u> Enter the total estimated price for all work authorized on the contract (Column e. plus Column f.).

<u>Column h. - Forecast - Not Yet Authorized</u>. Enter an estimate of funds requirements, including the estimated amount for fee/profit, for changes proposed by the Government or contractor, but not yet directed by the contracting officer. In the Remarks section state each change document number and estimated value of each change.

<u>Column i. - Forecast - All Other Work</u>. Enter an estimate of funds requirements for additional work anticipated to be performed (not included in a firm proposal) which the contractor, based on his knowledge and experience, expects to submit to the Government within a reasonable period of time.

<u>Column j. - Subtotal</u>. Enter an estimate of total requirements for forecast funding (the sum of Column h. plus Column i.). Specific guidelines on what the contractor may include in the funding forecast section may be made a part of the contract.

<u>Column k. - Total Requirements</u>. Enter an estimate of total funds requirements for contract work authorized and forecast (the sum of Column g. plus Column j.).

<u>Column I. - Funds Carryover</u>. For incrementally funded contracts only, report the amount by which the prior federal fiscal year funding was in excess of the prior year's requirement. If there is no carryover, report zero. Specific instructions for the use of this item may be made a part of the contract.

<u>Column m. - Net Funds Required</u>. Enter an estimate of net funds required, subtracting funds carryover in Column 1. from total requirements in Column k.

<u>Column Totals</u>. Totals should be provided for Columns c. through m. for all line items or WBS elements reported.

Item 12 - Contract Work Authorized (With Fee/Profit) - Actual Or Projected. Data entries will be as follows: In the first column, actuals cumulative to date; in all other columns except the last, projected cumulative amounts from the start of the contract to the end of the period indicated in the column heading; in the last column, the projected cumulative amounts from the start to the end of the contract or fiscal year being reported. When the contractor has developed a range of estimates at completion, the most likely

estimate shall be used to develop the projected cumulative data in this item.

Column Headings. Columns 2 through 9 will be headed to indicate periods covering the

life of the contract or fiscal year being reported and may be headed to show months, quarters, half years and/or fiscal years as prescribed by the contracting officer.

<u>Data Composition</u>. Projected data should include all planned obligations, anticipated accruals, anticipated over/under targets (total cost to the Government recognizing contractor participation), G&A, and fee/profit. For award fee contracts, the fee actually awarded will be included in Column 1, Actual to Date. The contractor shall describe in the Remarks section the amount, by period, and rationale for any award fee projections included in Columns 2 through 10.

<u>Item 12.a. - Open Commitments</u>. In the first column enter commitments open as of the date of the report. In subsequent columns enter the commitments projected to be open as of the end of each period indicated by the column headings. The amount entered will be the projected cumulative commitments less the planned cumulative expenditures as of the end of time period indicated. At the end of the contract, the amount will be zero.

<u>Item 12.b. - Accrued Expenditures</u>. In the first column enter actuals to date. In subsequent columns enter the projected cumulative accrued expenditures as of the end of each period indicated by the column headings.

<u>Item 12.c. - Total (12.a. and 12.b.)</u>. In the columns provided, enter the total contract work authorized - actuals to date (Column 1) or projected (Columns 2 through 10). This total is the sum of open commitments and accrued expenditures projected through the periods indicated by the column headings. Significant changes in the amount or timephasing of this item shall be explained in the Remarks section.

Item 13 - Forecast Of Billings To The Government. In the first column enter the cumulative amount received from the Government plus any unpaid billings to the Government through the current report date, including amounts applicable to progress or advance payments. In succeeding columns enter the amount expected to be billed to the Government during each period reported (assuming the contract will continue to completion). Amounts will not be cumulative.

<u>Item 14 - Estimated Termination Costs</u>. In the columns provided, enter the estimated costs that would be necessary to liquidate all government obligations if the contract were to be terminated in that period. These entries are the amounts required in addition to the amounts shown in Item 12. Applicable fee/profit should be included. These entries may consist of "rough order of magnitude" estimates and will not be construed as providing formal notification having contractual significance. This estimate will be used to assist the Government in budgeting for the potential incurrence of such cost. On contracts with Limitation of Funds/Obligation clauses, where termination costs are included as part of the funding information in Block 11, enter the amounts required for termination reserve on this line.

Remarks Section.

General. This section shall contain any additional information or remarks which support or explain data submitted in this report. At a minimum, the contractor shall present the following information: (a) explanations of funds changes; (b) procedures used to develop estimates of open commitments and accrued expenditures; (c) the amount and rationale for any award fee projections

included in Item 12; (d) explanations of significant changes in the amount or timephasing of actual or projected total contract work authorized; and (e) any other information deemed significant or noteworthy. The contractor also shall provide a projected contract completion date that supports the funding projections in Item 12.

<u>Changes</u>. The Remarks section shall contain information regarding changes, as indicated below. A change in a line item shall be reported when the dollar amount reported in Item 11, Column k. of this submission differs from that reported in the preceding submission. The movement of dollar amounts from one column to another (Item 11, Columns e. through j.), indicating a change in the firmness of funds requirements, need not be reported in this section. Change reporting shall include the following: the location of the changed entry (page, line, and column); the dollar amount of the change; and a narrative explanation of the cause of each change.

Appendix C - Acronyms and Terms

Accrued costs - earmarked for the project and for which payment is due, but has not been made.

Actual Cost (AC) – incurred costs charged to the project budget for which payment has been made or accrued for payment. See Earned Value Analysis.

Actual Cost of Work Performed (ACWP)(Spent Costs) – total costs incurred (direct and indirect) in accomplishing work during a given time period. See also *earned value analysis*.

Actual dates - actual dates are entered as the project progresses. These are the dates that activities really started and finished as opposed to planned or projected dates.

Actual direct costs - those costs specifically identified with a contract or project. See also <u>direct</u> costs.

Actual Finish Date (AF) - the point in time that work actually ended on an activity. (Note: in some application areas, the activity is considered "finished" when work is "substantially complete.")

Actual Start Date (AS) - the point in time that work actually started on an activity.

ACWP - Actual Cost of Work Performed

Actual Cost of Work Performed (ACWP) - total costs incurred (direct and indirect) in accomplishing work during a given time period. See also *earned value*.

Actual Finish Date (AF) - the point in time that work actually ended on an activity. (Note: in some application areas, the activity is considered "finished" when work is "substantially complete.")

Actual Start Date (AS) - the point in time that work actually started on an activity.

Baseline - The approved time phased plan (for a project, a work breakdown structure component, a work package, or a schedule activity), plus or minus approved project scope, cost, schedule, and technical changes. Generally refers to the current baseline, but may refer to the original or some other baseline. Usually used with a modifier (e.g., cost baseline, schedule baseline, performance measurement baseline, technical baseline.) Source: PMBOK Guide, Third Edition; Section V: Glossary.

Baseline cost - the amount of money an activity was intended to cost when the schedule was baselined.

Baseline schedule - the baseline schedule is a fixed project schedule. It is the standard by which project performance is measured. The current schedule is copied into the baseline schedule which remains frozen until it is reset. Resetting the baseline is done when the scope of the project has been changed significantly, for example after a negotiated change. At that point, the original or current baseline becomes invalid and should not be compared with the current schedule.

BCWP - Budgeted Cost of Work Performed

BCWS - Budgeted Cost of Work Scheduled

Breakdown Structure - A hierarchical structure by which project elements are broken down, or decomposed. See also <u>product breakdown structure (PBS)</u>, <u>organizational breakdown structure (OBS)</u>, <u>resource breakdown structure</u> (RBS), and <u>work breakdown structure (WBS)</u>.

Budget - quantification of resources needed to achieve a task by a set time, within which the task owners are required to work. Note: a budget consists of a financial and/or quantitative statement, prepared and approved prior to a defined period, for the purpose of attaining a given objective for that period. (The planned cost for an activity or project.)

Budget at completion (BAC) - the sum total of the time-phased budgets. The estimated total cost of the project when done.

Budget cost - the cost anticipated at the start of a project.

Budgeted Cost of Work Performed (BCWP) – the sum of the budget for work completed plus apportioned work in progress to be completed during a relevant time period. BCWP can also be calculated by taking the percentage of work completed times the baseline cost of the activity (% Complete x Planned Cost for each activity).

Budgeted Cost of Work Scheduled (BCWS) – the sum of the budgets for work scheduled to be accomplished during a relevant time period. See also *earned value analysis*. The planned cost of work that should have been achieved according to the project baseline dates. Elapsed costs / baseline cost to date.

Capital cost - the carrying cost in a balance sheet of acquiring an asset and bringing it to the condition where it is capable of performing its intended function over a future series of periods.

CSV – Comma Separate Values. This is table structure where fields are separated by commas used to store and move data.

Contingency Reserve - a separately planned quantity used to allow for future situations which may be planned for only in part (sometimes called "known unknowns"). For example, rework is certain, the amount of rework is not. Contingency reserves may involve cost, schedule, or both. Contingency reserves are intended to reduce the impact of missing cost or schedule objectives. Contingency reserves are normally included in the project's cost and schedule baselines.

Contract - a contract is a mutually binding agreement which obligates the seller to provide the specified product and obligates the buyer to pay for it

Contractor - a person, company, or firm who holds a contract for carrying out the works and/or the supply of goods or services in connection with the project

Contract target cost - the negotiated costs for the original defined contract and all contractual changes that have been agreed and approved, but excluding the estimated cost of any authorized, unpriced changes. The contract target cost equals the value of the budget at completion plus management or contingency reserve.

CA- Control Account

Cost account manager - a member of a functional organization responsible for cost account performance, and for the management of resources to accomplish such tasks.

Cost Estimating - estimating the cost of the resources needed to complete project activities.

Cost Performance Index (CPI) - the ratio of budgeted costs to actual costs (BCWP/ACWP). CPI is often used to predict the magnitude of a possible cost overrun using the following formula: original cost estimate/CPI = projected cost at completion. See also *earned value*. The cost efficiency ratio of earned value to actual costs. CPI is often used to predict the magnitude of a possible cost overrun. See also *earned value*.

Cost Variance (CV) - (1) Any difference between the estimated cost of an activity and the actual cost of that activity. (2) In *earned value*, BCWP less ACWP.

COTS – Commercial Off The Shelf

CPP - Contractor Project Performance

Current Finish Date - the current estimate of the point in time when an activity will be completed.

Current Start Date - the current estimate of the point in time when an activity will begin.

CV - Cost Variance

Direct costs - are specifically attributable to an activity or group of activities without apportionment. (Direct costs are best contrasted with indirect costs that cannot be identified to a specific project.)

EAC - Estimate At Completion

Earned Value (EV) – A measure of the value of completed work. Earned value uses original estimates and progress-to-date to show whether the actual costs incurred are on budget and whether the tasks are ahead or behind the baseline schedule.

Earned value analysis - analysis of project progress where the actual money, hours (or other measure) budgeted and spent is compared to the value of the work achieved.

Earned value cost control - the quantification of the overall progress of a project in financial terms so as to provide a realistic yardstick against which to compare the actual cost to date.

Estimate at completion (EAC) - a value expressed in either money and/or hours, to represent the projected final costs of work when completed. The EAC is calculated as ETC + ACWP.

Estimate to complete (ETC) - the value expressed in either money or hours developed to represent the cost of the work required to complete a task.

ETC - Estimate (or Estimated) To Complete (or Completion)

Exception report - focused report drawing attention to instances where planned and actual results are expected to be, or are already, significantly different. Note: an exception report is usually triggered when actual values are expected to cross a predetermined threshold that is set with reference to the project plan. The actual values may be trending better or worse than plan.

JSON – Java Script Object Notation. This is a lightweight table format for data storage and movement.

Management Reserve (MR) - a separately planned quantity used to allow for future situations which are impossible to predict (sometimes called "unknown unknowns"). Management reserves may involve cost or schedule. Management reserves are intended to reduce the risk of missing cost or schedule objectives. Use of management reserve requires a change to the project's cost baseline.

OA – Oversight and Assessment

OBS - Organization(al) Breakdown Structure

Organizational Breakdown Structure (OBS) - Hierarchical way in which the organization may be divided into management levels and groups, for planning and control purposes and to relate *work packages* to organizational units.

Other direct costs (ODC) - a group of accounting elements which can be isolated to specific tasks, other than labor and material. Included in ODC are such items as travel, computer time, and services.

PARS - Project Assessment and Reporting System

Percent Complete (PC) - an estimate, expressed as a percent, of the amount of work which has been completed on an activity or group of activities. May be aggregated to sections of a project or the whole project.

Performance measurement techniques - performance measurement techniques are the methods used to estimate earned value. Different methods are appropriate to different work packages, either due to the nature of the work or to the planned duration of the work package.

Performance Reporting - collecting and disseminating information about project performance to help ensure project progress.

PMIS - Project Management Information Systems

PMD – **Project Measurement Domain** – PMI rename the PMIS to a project management domain in the PMBOK ver 7. This is a place / tool to measure and manage projects.

Risk analysis - systematic use of available information to determine how often specified events may occur and the magnitude of their likely consequences. (A technique designed to quantify the impact of uncertainty)

Risk Log - formal record of identified risks (a body of information listing all the risks identified for the project, explaining the nature of each risk and recording information relevant to its assessment and management).

Risk Management - Systematic application of policies, procedures, methods and practices to the tasks of identifying, analyzing, evaluating, treating and monitoring risk. (The process whereby decisions are made to accept known or assessed risks and /or the implementation of actions to reduce the consequences or probability of occurrence.)

Schedule - the timetable for a project. It shows how project tasks and milestones are planned out over a period of time.

Schedule variance (cost) - the difference between the budgeted cost of work performed and the

budgeted cost of work scheduled at any point in time.

Schedule performance index (SPI) – ratio of work accomplished versus work planned (BCWP/BCWS), for a specified time period. The SPI is an efficiency rating for work accomplishment, comparing work accomplished to what should have been accomplished. See *earned value*.

Schedule Variance (SV) - (1) Any difference between the scheduled completion of an activity and the actual completion of that activity. (2) In *earned value*, BCWP less BCWS.

Statement of Work (SOW) - a narrative description of products or services to be supplied under contract.

Subcontract - a contractual document which legally transfers the responsibility and effort of providing goods, services, data, or other hardware, from one firm to another.

Subcontractor - an organization that supplies goods or services to a supplier.

SV - Schedule Variance

Target Completion Date - a date which Contractors strive towards for completion of the activity.

Target Date - date imposed on an activity or project by the user. There are two types of target dates; target start dates, and target finish dates.

Time analysis - the process of calculating the early and late dates for each activity on a project, based on the duration of the activities and the logical relations between them.

Variance - a discrepancy between the actual and planned performance on a project, either in terms of schedule or cost.

Variance at completion (VAC) - the difference between budget at completion and estimate at completion.

WBS - Work Breakdown Structure

Work Breakdown Structure (WBS) - A product-oriented WBS deconstructs a program's end product into smaller specific deliverables and elements that are traceable to the statement of work and suitable for management control. It provides a consistent framework for developing the IMP and IMS, assigning responsibility and identifying resources, estimating costs, and determining where risks may occur. It provides the outline to develop a schedule and cost plan that can easily track technical accomplishments by defined products and deliverables in terms of resources spent in relation to the plan and completion of activities, enabling quick identification of cost and schedule variances.