



U.S. Department of Energy

Contractor Project Performance (CPP) Upload Requirements for Project Assessment and Reporting System (PARS II)

Version 1.1 Draft
July 28, 2009

Submitted by:
Energy Enterprises Solutions
20440 Century Blvd. Suite 150
Germantown, MD 20874
Phone 301-916-0050 Fax 301-916-0066
www.eesllc.net



Title Page

Document Name: Contractor Project Performance (CPP) Upload
Requirements for PARS II, V1.1

Publication Date: July 28, 2009

Contract Number: DE-AT01-06IM00102

Project Number: 1ME07, CLIN 2

Prepared by: Steven Ducharme, Portfolio Management Consulting, LLC
Lenore Morrison, Portfolio Management Consulting, LLC
Judith Bernsen, Portfolio Management Consulting, LLC

Reviewed by: Larry Flanigan, Energy Enterprise Solutions, LLC
Kai Mong, Energy Enterprise Solutions, LLC
Ruth Ann Smith, Energy Enterprise Solutions, LLC

Approval: _____
John Makepeace, DOE OECM MA-50

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	Page Numbers	Summary Of Changes	Author
6/12/2009	All	All	This document supersedes the PARS II CPP Data Dictionary.	J. Bernsen S. Ducharme L. Morrison
7/28/2009	All	All	Updated references to OECM	J. Bernsen

Table of Contents

1	INTRODUCTION	6
1.1	Purpose.....	6
1.2	Background.....	6
1.3	Access Template Version	6
1.4	References.....	6
2	DATA REQUIREMENTS	7
2.1	ANSI/EIA-748 Earned Value (EV) Metrics.....	7
2.2	EV Time-Phased Incremental Cost and Quantity Data	7
2.3	Management Reserve Data	8
2.4	Schedule Data	8
2.5	Variance Analysis Data	9
2.6	Risk Data.....	9
3	REPORTING PERIOD.....	10
4	SUBMISSION	11
5	INITIAL SETUP.....	12
6	FILE FORMATS FOR THE MONTHLY SUBMISSION.....	13
6.1	Required Files/Tables	13
6.2	Submission Business Rules	13
6.3	ANSI-X12-839 EDI Files	14
6.4	Access File.....	15
6.4.1	EV Time-Phased Table.....	16
6.4.2	EV_MR_Log Table	17
6.4.3	Schedule_Activity Table.....	19
6.4.4	Schedule_Relationship Table	21

6.4.5	EV_VAR_Analysis_WBS Table	22
6.4.6	EV_VAR_Analysis_OBS Table	23
6.4.7	Risk_Log Table.....	24
6.4.8	EV_CPR_Header Table	25
6.4.9	EV_CPR_Format1 Table	27
6.4.10	EV_CPR_Format2 Table	29
7	PRIVACY	32
	APPENDIX A – ACRONYMS AND TERMS.....	33
	APPENDIX B – ANSI X12/ACCESS TABLE RELATIONSHIPS	39
	APPENDIX C – ACCESS TABLE FORMATS.....	40
	APPENDIX D – ERROR MESSAGES	41

1 INTRODUCTION

1.1 Purpose

This document defines the requirements for the monthly submission of contractor project performance data required by the Department of Energy (DOE). 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 contractors and their Information Technology (IT) staff to generate and submit the contractor's data.

1.2 Background

DOE is implementing a new project management system for tracking and oversight of the Department's major and special interest projects. The Project Assessment and Reporting System (PARS) II is used to produce project-wide performance metrics and project management reports. DOE contractors must submit performance data monthly for all projects in PARS II, unless the requirement has been waived by DOE. This reporting requirement begins after the project's Critical Decision (CD)-2 milestone is approved. PARS II uses a Commercial-Off-The-Shelf (COTS) product, Project Management Information Systems (PMIS)TM, from Dekker, LTD.

1.3 Access Template Version

This document describes the requirements for populating the following version of the PARS II Access template.

DPMIS090609 OECM Complete Project Template.mdb

The Access template can be downloaded from the PARS II Collaboration Portal
http://management.energy.gov/online_resources/1627.htm.

1.4 References

United States Department of Energy Order 413.3A, July 28, 2006

United States Department of Energy Manual 413.3-1, March 31, 2003

United States Department of Energy Guide 413.3-10, "Earned Value Management System", May 6, 2008

2 DATA REQUIREMENTS

The performance information that DOE contractors must report for each project is discussed in this section.

2.1 ANSI/EIA-748 Earned Value (EV) Metrics

Cost and schedule performance metrics by Work Breakdown Structure (WBS) and by Organizational Breakdown Structure (OBS) are reported for the complete WBS and OBS hierarchies. The data elements to be reported are listed below.

- Current Period BCWS, BCWP, ACWP, Cost Variance, and Schedule Variance
- Cumulative-to-date BCWS, BCWP, ACWP, Cost Variance, and Schedule Variance
- Cost Budget at Complete
- Cost Estimate at Complete
- Cost Estimate to Complete
- Reprogramming Adjustment – Cost Variance
- Reprogramming Adjustment – Budget

This information is similar to the information reported in the Contract Performance Reports (CPR) Formats 1 and 2 except that the CPR reports generally summarize the information while DOE is requiring that contractors report the data for the entire WBS and OBS hierarchy down to the lowest level.

Performance must be reported against the latest DOE approved Performance Measurement Baseline (PMB).

The format for the EV metrics is defined in section 6.3 (for the ANSI X12 files) and sections 6.4.8 – 6.4.10 (for the Access tables) of this document.

2.2 EV Time-Phased Incremental Cost and Quantity Data

Incremental cost and schedule performance data by WBS and by OBS are reported for the complete WBS and OBS hierarchies. The data are reported by reporting period. The data elements to be reported are listed below.

The following incremental cost data are reported by reporting period.

- BCWS – incremental BCWS is reported by period for the duration of the project
- BCWP – incremental BCWP is reported by period from the start of the project through the current status period
- ACWP – incremental ACWP is reported by period from the start of the project through the current status period

- ETC – incremental ETC is reported by period from the current status period through the end of the project

DOE is requiring that contractors report the data down to the lowest level of the WBS and OBS hierarchies.

BCWS must reflect the latest DOE approved PMB.

The format for the EV time-phased data is defined in section 6.4.1 of this document.

2.3 Management Reserve Data

The use of management reserves (MR) is reported by WBS and OBS. Each transaction (credit or debit) is reported and includes a description of the change. The transactions for the reporting period are included in the monthly performance submission.

The management reserve information is similar to a check register with a transaction date, credit or debit, and account balance.

The format for the management reserve data is defined in section 6.4.2 of this document.

2.4 Schedule Data

Schedule information related to the WBS and OBS is reported. The following current and baseline information must be reported for each activity.

- Type of activity (e.g., activity, summary, milestone, hammock)
- Early/late start
- Early/late finish
- Start and finish constraints
- Durations
- Critical Path
- Total and free float
- Percent complete

Additionally, baseline and current relationship information (predecessors and successors) is collected for the activities.

Baseline information must reflect the latest DOE approved PMB.

The format for the schedule data is defined in sections 6.4.3 and 6.4.4 of this document.

2.5 Variance Analysis Data

Variance analysis information is reported by WBS and OBS for variances that exceed plus or minus 10% (e.g., $< .9$ or > 1.1). The following quantitative and narrative information is provided.

- Current Period Cost and Schedule Variances, and Cost and Schedule Performance Indices
- Cumulative-to-date Cost and Schedule Variances, and Cost and Schedule Performance Indices
- Variance at Completion
- At least one and up to five Independent Estimate at Complete (IEAC) and a description of the method of calculation for each IEAC
- Narrative
- Optional document attachment

The format for the variance analysis data is defined in sections 6.4.5 and 6.4.6 of this document.

2.6 Risk Data

Risk information is reported by WBS and OBS. At this time DOE does not have standards relating to risks, such as standard categories for type of risks. Therefore, each contractor will report risk information, such as type of risk, according to its standards. However, the following information must be reported for each risk.

- Type of risk
- Probability and impact
- Quantification of the risk expressed as quantity and unit of measure
- Mitigation
- Status

The format for risk data is defined in section 6.4.7 of this document.

3 REPORTING PERIOD

Contractor performance data are measured and reported as of the end of the calendar month (e.g., January 31, February 28/29, March 31) or as of the contractor's accounting period cutoff date, provided it is consistent the terms of the contract. All financial data are cumulative from the beginning of the reporting period, unless otherwise notes. The fiscal year is October 1 to September 30. Only 12 status periods are allowed in a fiscal year.

Contractors must begin monthly reporting no later than approval of Critical Decision (CD)-2.

4 SUBMISSION

All data are provided electronically to DOE by the reporting date stated in the contract terms. The contractor submits the data via thick client or web-based interface directly to the PARS II server. The system will provide detailed error messages if the data fails to transmit and a PARS II Helpdesk will be available to provide technical support.

All data provided by the contractors are subject to a post-award Government-conducted inspection of tools and processes used to produce the data.

The following file naming convention is required.

“SITE_CONTRACTOR_PROJ_PERIOD.mdb or trn”

Example: ORP_BNI_WTP_200906.mdb

5 INITIAL SETUP

Prior to the contractor submitting project performance data, the OECM analyst must create the project in PARS II. The contractor will select the project from the PARS II menu when uploading the data.

Prior to submission of the first monthly performance data for the contract period, the contractor will submit summary data describing the contract. Alternatively, the data can be submitted with the initial monthly performance submission. The format for the contract data is defined in section 6.3 (ANSI X12 file) or 6.4.8 (Access table) of this document.

For new projects, the monthly performance submission will begin at the end of the first reporting period after the approval of CD-2. Prior to submission of the first monthly performance data for the contract period, and after submission of the contract data, the contractor will submit information on DOE approved baseline information. The following baseline information will be submitted.

- EV time-phased incremental cost and quantity data – BCWS only
- Management reserve data
- Schedule and relationship data – baseline only
- Risk data

Monthly reporting of performance information against the baseline will then start.

For ongoing projects, the monthly performance submission will begin when DOE schedules the contractor to begin electronic reporting. After submission of the contract data, the contractor will submit three reporting periods of the following information.

- ANSI 748 EV metrics
- EV time-phased incremental cost and quantity data
- Management reserve data
- Schedule and relationship data
- Variance analysis data
- Risk data

6 FILE FORMATS FOR THE MONTHLY SUBMISSION

The file formats for submitting the contractor project performance data are discussed in this section along with business rules for the submission and for the individual files/tables.

6.1 Required Files/Tables

The contractor submits the following files monthly.

- ANSI-X12-839 electronic data interchange (EDI) transfer file for
 - CPR Format 1
 - CPR Format 2
- Access DPMIS090609 OECM Complete Project Template file with the following tables
 - EV Time-phased table
 - Management Reserve Log table
 - Activity Schedule table
 - Activity Relationship table
 - Variance Analysis by WBS table
 - Variance Analysis by OBS table (if required)
 - Risk Log table

If the contractor *cannot* generate the ANSI-X12-839 transaction set with the data required by DOE, then the contractor populates three additional tables in the Access file and does not submit the ANSI-X12-389 EDI transfer file. The three additional Access tables are listed below and are referred to in this document as the Access CPR tables.

Access Table	Instead of
Contract Project CPR Header Information	ANSI-X12-389 Format 1
Cumulative/Incremental EV Data by WBS CPR Format 1	ANSI-X12-389 Format 1
Cumulative/Incremental EV Data by OBS CPR Format 2	ANSI-X12-389 Format 2

The diagram in Appendix B shows the relationship between the ANSI-X12-389 file and the Access tables. The diagram in Appendix C shows the relationship between the Access CPR tables and the other Access tables.

6.2 Submission Business Rules

Specific rules or parameters that the contractor should follow in generating their X12 and Access files are listed below.

- Data must be reported against the latest DOE approved baseline for the contract.
- Data must be reported to the lowest level of the WBS/OBS hierarchy where costs are recorded.
- Reporting is mandatory for WBS and OBS.
- The WBS and OBS information in the ANSI-X12 files/Access CPR tables is used to build the WBS hierarchy and the OBS hierarchy. The WBS and OBS numbers in the other Access tables reference the ones in the ANSI-X12 files/Access CPR tables. Therefore, to ensure data integrity between the files/tables, all WBS and OBS numbers and Activities that are listed in the following Access tables need to be listed in the ANSI-X12 files (or Access CPR tables).
 - EV Time-Phased table
 - Management Reserve Log table
 - Activity Schedule table
 - Activity Relationship table
 - Variance Analysis by WBS table
 - Variance Analysis by OBS table
 - Risk Log table
 - For example, if WBS# 123456 is in the Access EV time-phased table, reported down to the third level, then the X12 file must include WBS# 123456 and all its parents.
- There must be one level 1 WBS element and one level 1 OBS element in any file or table.
- There must be *only* one level 1 WBS element and one level 1 OBS element in any file or table.
- Validity of the data should be checked against the source system to make sure that number of records and dollar totals for the various areas (BCWS, BCWP, ACWP, etc.) in the ANSI-X12 files and Access tables are correct. Failure to perform these checks may result in error messages during the upload process.
 - For example, the total of the incremental values for BCWS should equal the cumulative value for BCWS.
- Time-phased data should not be reported prior to project start nor should it be reported beyond the project end date.
 - EV_Timephase.Period is between the project start date and project end date

6.3 ANSI-X12-839 EDI Files

If the contractor uses a Commercial-Off-The-Shelf (COTS) Earned Value Management System (EVMS), the contractor may be able to generate the ANSI-X12-839 transaction sets by selecting an option in the application. The CPR Format 1 and CPR Format 2 outputs provide the EVM data elements for current, cumulative to date, and at completion EVM metrics by WBS and OBS respectively.

The ANSI X12 data formats and definitions may be found in the following,

- Project Cost Reporting 839, Version/Release 3050 X12 EDI record layout

The contractor will need to inspect the X12 output to ensure that it meets the requirements for the information discussed in section 2.1 of this document. The X12 output of some COTS EVMS does not meet DOE reporting requirements. For example, the X12 output may not include all WBS and/or OBS elements or may not include the entire WBS/OBS hierarchy in the file.

If the contractor does not use a COTS EVMS or the COTS EVMS does not generate X12 output that meets DOE requirements, then the contractor must populate the Access CPR tables in the DPMIS090609 OECM Complete Project Template.

Business Rules

ANSI-X12-839 EDI File Business Rules	
6.3-1	EVM metrics are reported against the latest DOE approved PMB
6.3-2	The X12 files contain the entire WBS hierarchy to the lowest level that the contractor reports cost
6.3-3	There is one level 1 WBS element for the WBS hierarchy
6.3-4	The EVM metrics for the WBS hierarchy are reported in one X12 CPR Format 1 file, not multiple files
6.3-5	The X12 files contain the entire OBS hierarchy to the lowest level that the contractor reports cost
6.3-6	There is one level 1 OBS element for the OBS hierarchy
6.3-7	The EVM metrics for the OBS hierarchy are reported in one X12 CPR Format 2 file, not multiple files

6.4 Access File

The following Access tables define the data elements and data formats required for the Access file. The contractor may start with the Access template identified in section 1.3 of this document or may create its own Access file using the layouts and exact column headings described for each Access table.

Each of the Access tables contains five columns describing the column headings for the data elements: Field Name, Field Type, Length, Description, and Required (Req.). Required fields are indicated by an * in the Req. column.

Definition of Table Formats	
Field	Description
Field Name	This is the required "Column Heading" for the data elements that will be collected in each table. The table must contain the exact spelling for each column. The Field Name ensures that the data will be

Definition of Table Formats	
Field	Description
	posted to the proper data element in PARS II.
Field Type	Each column expects a certain data type. The standard data types used in these tables are as follows: VARCHAR - Alpha numeric, DATETIME - Date, INT - Integer, Numeric - Number, Boolean - Logical typically Yes/No, Object - Attachment and Text - Large are for Narrative Inputs.
Length	Number of characters or bytes allowed for the Field depending on the Field Type.
Description	Provides a Brief Description of the Field and its use.
Req.	An "*" in the column means that the data element is required. If the required data element is a numeric value then at a minimum a value of zero (0) must be entered.

6.4.1 EV Time-Phased Table

The EV Time-Phased Table contains the incremental cost and quantity (hours or units) EV data discussed in section 2.2 of this document.

The key data fields for this table are ProjectName, StatusDate, and either WBSNUM or OBSNUM. These fields are required data elements as identified by an asterisk (*) in the table below. This table only requires that WBS/OBS elements containing cost and/or quantities values need to be included in the table for submittal to PARS II. The table does not include the WBS/OBS structures because those are already provided in the ANSI 748A EDI X12 data (or the CPR Format 1 and CPR Format 2 Access tables for those contractors submitting these tables in lieu of X12 data).

EV Time-Phased Table				
EV Time-phased Incremental Data For Each Period By WBS and/or OBS				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
WBSNUM	VARCHAR	35	WBS Element or ID -Leave Blank if Only OBS Reporting	
OBSNUM	VARCHAR	50	OBS Element or ID -Leave Blank for WBS Only Reporting	
ActNam	VARCHAR	16	Activity Name -Leave Blank if Not reporting to Activity Level	
ResNam	VARCHAR	20	Resource Name -Leave blank if not reporting to Resource Level	
Period	DATETIME		End Date of Period Where Each Cost Is Timephased	*
WBSDesc	VARCHAR	255	WBS Description -Title Left Blank for OBS	

EV Time-Phased Table				
EV Time-phased Incremental Data For Each Period By WBS and/or OBS				
Field Name	Field Type	Length	Description	Req.
			Only	
OBSDesc	VARCHAR	255	OBS Description - Title Left Blank for WBS Only	
CINBCWWS	NUMERIC	16	Cost Incremental Planned Value/BCWS	*
CINBCWCP	NUMERIC	16	Cost Incremental Earned Value/BCWP - No Future Values from Time Now/Status Date	*
CINCAWCP	NUMERIC	16	Cost Incremental Actual Value/ACWP - No Future Values from Time Now/Status Date	*
CINCETC	NUMERIC	16	Cost Incremental ETC -Future from Status Date	*
QINBCWWS	NUMERIC	16	Quantity Incremental Planned Value/BCWS	
QINBCWCP	NUMERIC	16	Quantity Incremental Earned Value/BCWP - No Future Values from Time Now/Status Date	
QINCAWCP	NUMERIC	16	Quantity Incremental Actual Value/ACWP - No Future Values from Time Now/Status Date	
QINCETC	NUMERIC	16	Quantity Incremental ETC -Future from Status Date	

Business Rules

EV Time-Phased Table Business Rules	
6.4.1-1	There should be separate records for WBS and OBS data. That is, a record should contain a WBSNUM or an OBSNUM but not both.
6.4.1-2	The WBS or OBS reported in the EV Time-Phased data must match the WBS or OBS reported in the ANSI-X12 files or the Access CPR Format 1 (for WBS) or Format 2 (for OBS) tables and the Schedule_Activity table.
6.4.1-3	If an Activity Name is reported in the Activity Schedule table, then this Activity Name needs to be included in the appropriate time-phased record(s).
6.4.1-4	Time-phased data should not be reported prior to project start nor should it be reported beyond the project end date (EV_Timephase.Period > project start date and <project end date).
6.4.1-5	Quantity fields are optional unless requested by DOE.

6.4.2 EV_MR_Log Table

The EV_MR_Log Table contains the management reserve (MR) data discussed in section 2.3 of this document. The table shows the initial set up and allocation of Management Reserve and provides the ability to track MR similar to a fund or checking account.

The key data fields for this table are ProjectName, StatusDate and LogDate. The required transaction fields are the CBALANCE and either the CCREDIT or CDEBT, depending on the type of transaction. These fields are required data elements as identified an asterisk (*) in the table below.

EV_MR_Log Table Management Reserve Log				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
LogDate	DATETIME		Date when MR Change was made (or effective date)	*
WBSNUM	VARCHAR	35	WBS Element or ID -Leave Blank for OBS Reporting	
OBSNUM	VARCHAR	50	OBS Element or ID -Leave Blank for WBS Reporting	
ActNam	VARCHAR	16	Activity MR was applied to -Leave Blank if not reporting to Activity Level	
ResNam	VARCHAR	20	Resource MR was applied to - Leave blank if not reporting to resource level	
CCREDIT	NUMERIC	16	Amount of Credit to MR	*
CDEBIT	NUMERIC	16	Amount of Debit to MR	*
CBALANCE	NUMERIC	16	Balance of MR after change	*
Narrative	TEXT		Text Description of MR change	
Document	OBJECT		Document Attachment – optional	

Business Rules

EV_MR_Log Table Business Rules	
6.4.2-1	The WBS or OBS reported in the Management Reserve Log table needs to match the WBS or OBS reported in either the ANSI-X12 files or Access CPR Format 1/CPR Format 2 tables, whichever is used.
6.4.2-2	<p>If an Activity Name shown in the table then:</p> <ul style="list-style-type: none"> ○ It needs to be included in the EV Time-phased table and the Activity schedule table ○ It needs to be associated with the same WBS or OBS that it is associated with in the EV Time-phased table and the Activity Schedule table
6.4.2-3	Enter quantity as zero or a positive number

6.4.3 Schedule_Activity Table

The Schedule_Activity table contains the baseline and working schedule activity information discussed in section 2.4 of this document. It provides the ability to link the Integrated Master Schedule (IMS) with the WBS and OBS EVM elements.

The key data fields for this table are ProjectName, StatusDate, ActNam and ActType. These fields are required data elements as identified by an asterisk (*) in the table below.

Schedule_Activity Table				
Activity Schedule Data -- Schedule_Activity				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		Status Date	*
ActNam	VARCHAR	16	Activity Name or Code or ID	*
ActDesc	VARCHAR	255	Activity Description	
WBSNUM	VARCHAR	35	WBS Element -Description will be referred to from CPR or Timephased Formats	
OBSNUM	VARCHAR	50	OBS Element -Description will be referred to from CPR or Timephased Formats	
ActType	VARCHAR	1	Activity Type (A =Activity, S = Summary, M = Milestone, H = Hammock)	*
CUR_StrCon	VARCHAR	3	Current Start Constraint (SNE = Start No Earlier, SNL = Start No Later, SON = Start On, ACS = Actual Start)	
CUR_StrConDate	DATETIME		Current Start Constraint Date	
CUR_FinCon	VARCHAR	3	Current Finish Constraint (FNE = Finish No Earlier, FNL = Finish No Later, FON = Finish On, ACF = Actual Finish)	
CUR_FinConDate	DATETIME		Current Finish Constraint Date	
CUR_ESDate	DATETIME		Current Early Start Date	
CUR_EFDate	DATETIME		Current Early Finish Date	
CUR_LSDate	DATETIME		Current Late Start Date	
CUR_LFDate	DATETIME		Current Late Finish Date	
CUR_FreeFlt	INT	4	Current Free Float (In Days)	
CUR_TtIFlt	INT	4	Current Total Float (In Days)	
CUR_Crit	BOOLEAN	1	Current Critical Path	
CUR_OrgDur	INT	4	Current Original Duration (In Days)	
CUR_RemDur	INT	4	Current Remaining Duration (In Days)	

Schedule_Activity Table				
Activity Schedule Data -- Schedule_Activity				
Field Name	Field Type	Length	Description	Req.
CUR_PctCmp	NUMERIC	16	Current Percent Complete	
BAS_StrCon	VARCHAR	3	Baseline Start Constraint (SNE = Start No Earlier, SNL = Start No Later, SON = Start On, ACS = Actual Start)	
BAS_StrConDate	DATETIME		Baseline Start Constraint Date	
BAS_FinCon	VARCHAR	3	Baseline Finish Constraint (FNE = Finish No Earlier, FNL = Finish No Later, FON = Finish On, ACF = Actual Finish)	
BAS_FinConDate	DATETIME		Baseline Finish Constraint Date	
BAS_ESDate	DATETIME		Baseline EarlyStart Date	
BAS_EFDate	DATETIME		Baseline Early Finish Date	
BAS_LSDate	DATETIME		Baseline Late Start Date	
BAS_LFDate	DATETIME		Baseline Late Finish Date	
BAS_FreeFlt	INT	4	Baseline Free Float (In Days)	
BAS_TtlFlt	INT	4	Baseline Total Float (In Days)	
BAS_Crit	BOOLEAN	1	Baseline Critical Path	
BAS_OrgDur	INT	4	Baseline Original Duration (In Days)	
BAS_RemDur	INT	4	Baseline Remaining Duration (In Days)	
BAS_PctCmp	NUMERIC	16	Baseline Percent	

Business Rules

Schedule_Activity Table Business Rules	
6.4.3-1	There should be separate records for WBS and OBS data. That is, a record should contain a WBSNUM or an OBSNUM but not both.
6.4.3-2	The WBS or OBS reported in the Activity_Schedule table must match the WBS or OBS reported in either the ANSI-X12 files or the Access CPR Format 1 (for WBS) or Format 2 (for OBS) tables and the Schedule_Activity table.
6.4.3-3	If an Activity Name is reported in the EV_Time-Phased table, then this Activity Name needs to be included in the appropriate Activity_Schedule record(s) with the same WBS or OBS number.
6.4.3-4	Start dates cannot be later than the finish dates for the same activity.

6.4.4 Schedule_Relationship Table

The Schedule_Relationship table contains the baseline and current relationship information discussed in section 2.4 of this document. It provides the ability to identify any changes in the Integrated Master Schedule (IMS) that might impact the float between activities and in the critical path. This table provides a means to analyze changes from month to month in the baseline and working schedule.

All of the data fields in this table are key data fields. These fields are required data elements as identified by an asterisk (*) in the table below.

Schedule_Relationship Table Activity Relationship Data				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		Status Date	*
ActNam	VARCHAR	16	Predecessor Activity Name or Code	*
ActNamRel	VARCHAR	16	Successor Activity Name or Code	*
CUR_RelType	VARCHAR	2	Current Relationship Type: FS – Finish to Start, SS – Start to Start, FF – Finish to Finish, SF – Start to Finish, HS – Hammock Start, HF – Hammock Finish	*
CUR_Lag	INT	4	Current Lag (positive)/Lead (negative)	*
BAS_RelType	VARCHAR	2	Baseline Relationship Type: FS – Finish to Start, SS – Start to Start, FF – Finish to Finish, SF – Start to Finish, HS – Hammock Start, HF – Hammock Finish	*
BAS_Lag	INT	4	Baseline Lag (positive)/Lead (negative)	*

Business Rules

Schedule_Relationship Table Business Rules	
6.4.4-1	Every activity reported in the Activity Schedule table needs to be represented in this Activity Relationship table and conversely every Activity reported in this table needs to be in the Activity Schedule table.

6.4.5 EV_VAR_Analysis_WBS Table

The EV_VAR_Analysis_WBS table contains the cost and schedule variance by WBS information discussed in section 2.5 of this document. It includes incremental, cumulative, and at completion Cost and Schedule variances and performance indices. Additionally, it provides for up to five Independent Estimate at Completion values and formulas. A narrative can be entered and/or a document can be attached explain the cause, impact, and corrective action for each WBS variance that exceeds a threshold.

The key data fields for this table are ProjectName, StatusDate and WBSNUM. These fields are required data elements as identified by an asterisk (*) in the table below. The table will use the WBS hierarchy provided in the ANSI X12 CPR Format 1 file (or the Access CPR Format 1 table for those contractors submitting the CPR tables in lieu of ANSI X12 files).

EV_VAR_Analysis_WBS Table Variance Analysis Data By WBS				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
WBSNUM	VARCHAR	35	WBS Element or ID	*
CINCSV	NUMERIC	16	Incremental Schedule Variance	
CINCCV	NUMERIC	16	Incremental Cost Variance	
CINCSP	NUMERIC	16	Incremental Schedule Performance Index	
CINCCPI	NUMERIC	16	Incremental Cost Performance Index	
CCUMSV	NUMERIC	16	Cumulative Schedule Variance	
CCUMCV	NUMERIC	16	Cumulative Cost Variance	
CCUMSPI	NUMERIC	16	Cumulative Schedule Performance Index	
CCUMCPI	NUMERIC	16	Cumulative Cost Performance Index	
CVAC	NUMERIC	16	Variance At Complete	
CIEAC1	NUMERIC	16	Independent Estimate At Complete 1	
IEAC1Meth	VARCHAR	50	Method of Calculation for IEAC 1	
CIEAC2	NUMERIC	16	Independent Estimate At Complete 2	
IEAC2Meth	VARCHAR	50	Method of Calculation for IEAC 2	

EV_VAR_Analysis_WBS Table Variance Analysis Data By WBS				
Field Name	Field Type	Length	Description	Req.
CIEAC3	NUMERIC	16	Independent Estimate At Complete 3	
IEAC3Meth	VARCHAR	50	Method of Calculation for IEAC 3	
CIEAC4	NUMERIC	16	Independent Estimate At Complete 4	
IEAC4Meth	VARCHAR	50	Method of Calculation for IEAC 4	
CIEAC5	NUMERIC	16	Independent Estimate At Complete 5	
IEAC5Meth	VARCHAR	50	Method of Calculation for IEAC 5	
Narrative	TEXT		Text of Variance Analysis	
Document	OBJECT		Document Attachment - optional	

Business Rules

EV_VAR_Analysis_WBS Table Business Rules	
6.4.5-1	The WBS reported in the EV_VAR_Analysis_WBS table must match the WBS reported in either the ANSI-X12 files or the Access CPR Format 1 (for WBS) table.
6.4.5-2	Variance analysis information is reported for variances that exceed plus or minus 10% (e.g., < .9 or > 1.1).

6.4.6 EV_VAR_Analysis_OBS Table

The EV_VAR_Analysis_OBS table contains the cost and schedule variance by OBS information discussed in section 2.5 of this document. It includes incremental, cumulative, and at completion Cost and Schedule variances and performance indices. Additionally, it provides for up to five Independent Estimate at Completion values and formulas. A narrative can be entered and/or a document can be attached explain the cause, impact, and corrective action for each WBS variance that exceeds a threshold.

The key data fields for this table are ProjectName, StatusDate and OBSNUM. These fields are required data elements as identified by an asterisk (*) in the table below. The table will use the OBS hierarchy provided in the ANSI X12 CPR Format 2 file (or the Access CPR Format 2 table for those contractors submitting the CPR tables in lieu of ANSI X12 files).

EV_VAR_Analysis_OBS Table Variance Analysis Data By OBS				
Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
OBSNUM	VARCHAR	50	OBS Element or ID	*
CINCSV	NUMERIC	16	Incremental Schedule Variance	

EV_VAR_Analysis_OBS Table Variance Analysis Data By OBS				
Name	Field Type	Length	Description	Req.
CINCCV	NUMERIC	16	Incremental Cost Variance	
CINCSP	NUMERIC	16	Incremental Schedule Performance Index	
CINCCPI	NUMERIC	16	Incremental Cost Performance Index	
CCUMSV	NUMERIC	16	Cumulative Schedule Variance	
CCUMCV	NUMERIC	16	Cumulative Cost Variance	
CCUMSPI	NUMERIC	16	Cumulative Schedule Performance Index	
CCUMCPI	NUMERIC	16	Cumulative Cost Performance Index	
CVAC	NUMERIC	16	Variance At Complete	
CIEAC1	NUMERIC	16	Independent Estimate At Complete 1	
IEAC1Meth	VARCHAR	50	Method of Calculation for IEAC 1	
CIEAC2	NUMERIC	16	Independent Estimate At Complete 2	
IEAC2Meth	VARCHAR	50	Method of Calculation for IEAC 2	
CIEAC3	NUMERIC	16	Independent Estimate At Complete 3	
IEAC3Meth	VARCHAR	50	Method of Calculation for IEAC 3	
CIEAC4	NUMERIC	16	Independent Estimate At Complete 4	
IEAC4Meth	VARCHAR	50	Method of Calculation for IEAC 4	
CIEAC5	NUMERIC	16	Independent Estimate At Complete 5	
IEAC5Meth	VARCHAR	50	Method of Calculation for IEAC 5	
Narrative	TEXT		Text of Variance Analysis	
Document	OBJECT		Document Attachment - optional	

Business Rules

EV_VAR_Analysis_OBS Table Business Rules	
6.4.6-1	The OBS reported in the EV_VAR_Analysis_OBS table must match the OBS reported in either the ANSI-X12 files or the Access CPR Format 2 (for OBS) table.
6.4.6-2	Variance analysis information is reported for variances that exceed plus or minus 10% (e.g., < .9 or > 1.1).

6.4.7 Risk_Log Table

The Risk_Log table contains the risk information discussed in section 2.6 of this document.

The key data fields for this table are ProjectName, StatusDate, RiskCode, RiskType, Title, and Closed. These fields are required data elements as identified by an asterisk (*) in the table below.

Risk_Log Table Risk Log Data				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
WBSNUM	VARCHAR	35	WBS Element or ID -Leave Blank for OBS Reporting	
OBSNUM	VARCHAR	50	OBS Description -Leave Blank for WBS Reporting	
RiskCode	VARCHAR	50	Identifier Code For Risk Item	*
RiskType	VARCHAR	20	Type of Risk (External, Administrative, Schedule, Cost, Technical)	*
Title	VARCHAR	255	Title of Risk Item	*
Mitigation	TEXT		Risk Mitigation Plan	
Probability	NUMERIC	16	Risk Probability	
Consequence	TEXT		Risk Impact/Consequence	
Quantity	NUMERIC	16	Quantification of Risk	
UnitofMeasure	VARCHAR	50	Unit of Measure for Quantity (Dollars, Days, Hours, Etc)	
Closed	BOOLEAN	1	Indicates Whether Risk Item is Open (No) or Closed (Yes)	*
Status	TEXT		Risk Status	
Narrative	TEXT		Text Description of Risk	
Document	OBJECT		Document Attachment - optional	

Business Rules

Risk_Log Table Business Rules	
6.4.7-1	The WBS or OBS reported in the Risk_Log table must match the WBS or OBS reported in either the ANSI-X12 files or the Access CPR Format 1/CPR Format 2 tables.

6.4.8 EV_CPR_Header Table

The EV_CPR_Header table, EV_CPR_Format1 table, and EV_CPR_Format2 table are used when the contractor cannot generate the ANSI X12 files.

The EV_CPR_Header table provides the contract information required for the CPR Format 1 and Format 2 header information discussed in section 6.1 of this document. Although PARS II does not require all the data elements, it recommended that each element be provided in order to

produce a complete set of EVM header data.

The key data fields for this table are ProjectName and StatusDate. These fields are required data elements as identified by an asterisk (*) in the table below.

EV_CPR_Header Table				
Contract and Project CPR Header Information				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
ProjDsc	VARCHAR	255	Project Description	
ConNum	VARCHAR	50	Contract Number	
ConTyp	VARCHAR	4	Contract Types: CPAF – Cost Plus Award Fee, CPFF – Cost Plus Fixed Fee, CPIF – Cost Plus Incentive Fee, CPP – Cost Plus Percentage, CPE – Cost Plus Expenses, FPE – Fixed Price Escalation, FPI – Fixed Price Incentive, FFP – Firm Fixed Price, T&M – Time and Materials	
ProgType	VARCHAR	50	Program Type (RDT&E, Production, RDT&E and Production, Advanced Design, Demonstration Validation, Full Scale Development, etc)	
Security	VARCHAR	50	Security Classification (Competition Sensitive, Unclassified, Confidential, Secret, Top Secret)	
QCON	INT	4	Quantity Contracted (For Production Contracts)	
ShrNum	INT	4	Share Number	
ShrQut	INT	4	Share Quotient	
TrgtPct	NUMERIC	16	Target Fee/Percent	
Factor	INT	4	Factor for costs (100, 1000, 1000000, etc) - Applies to all tables	
CNEGCST	NUMERIC	16	Negotiated Cost	
CAUWCST	NUMERIC	16	Authorized Unpriced Work	
CTGTPRC	NUMERIC	16	Target Price	
CESTPRC	NUMERIC	16	Estimated Price	

EV_CPR_Header Table Contract and Project CPR Header Information				
Field Name	Field Type	Length	Description	Req.
CCONCEIL	NUMERIC	16	Contract Ceiling	
CESTCEIL	NUMERIC	16	Estimated Contract Ceiling	
CTGTCST	NUMERIC	16	Original Target Cost	
CNEGCHG	NUMERIC	16	Negotiated Contract Changes	
CCONBGT	NUMERIC	16	Contract Budget Base	
CTOTBGT	NUMERIC	16	Total Allocated Budget	
CESTEACBEST	NUMERIC	16	EAC Best Case Estimate	
CESTEACWRST	NUMERIC	16	EAC Worst Case Estimate	
CESTEACLIKE	NUMERIC	16	EAC Most Likely Estimate	
ConStrDate	DATETIME		Contract Start Date	
EstCmpDate	DATETIME		Estimated Completion Date	
ConDefDate	DATETIME		Contract Definitization Date	
LstDelDate	DATETIME		Last Item Delivery Date	
ConCmpDate	DATETIME		Contract Completion Date	
MR	NUMERIC	16	Original Management Reserve	
MRLRE	NUMERIC	16	Current Management Reserve	
UB	NUMERIC	16	Original Undistributed Budget	
UBLRE	NUMERIC	16	Current Undistributed Budget	

Business Rules

EV_CPR_Header Table Business Rules	
6.4.8-1	Estimated Completion Date and Contract Completion Date should not be earlier than the Contract Start Date. Conversely, Contract Start Date should not be later than either the Estimated Contract Completion Date or Contract Completion Date.
6.4.8-2	Contractors should populate as much information in this table as possible. Though not all fields are marked as required, a majority of them are used in the CPR reports and missing information may impact the integrity of the reports.

6.4.9 EV_CPR_Format1 Table

The EV_CPR_Format1 table contains the current, cumulative to date, and at completion EVM metrics by WBS discussed in section 2.1. As discussed in section 6.1, it is used when the contractor cannot generate an ANSI X12 file that meets the PARS II requirements.

The key data fields for this table are ProjectName, StatusDate, WBSNUM and WBSLevel. These fields are required data elements as identified by an asterisk (*) in the table below.

EV CPR Format1 Table				
Cumulative and Incremental Data By WBS				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
WBSNUM	VARCHAR	35	WBS Element or ID	*
WBSDesc	VARCHAR	255	WBS Description	
WBSParent	VARCHAR	35	Parent WBS Element - Leave Blank for top level WBS (there should be only one top level WBS)	
WBSLevel	INT	4	Level in WBS Structure	*
CINBCWS	NUMERIC	16	Cost Incremental Planned Value/BCWS (current period)	*
CINBCWP	NUMERIC	16	Cost Incremental Earned Value/BCWP (current period)	*
CINACWP	NUMERIC	16	Cost Incremental Actual Value/ACWP (current period)	*
CCUMBCWS	NUMERIC	16	Cost Cumulative Planned Value/BCWS (to date)	*
CCUMBCWP	NUMERIC	16	Cost Cumulative Earned Value/BCWP (to date)	*
CCUMACWP	NUMERIC	16	Cost Cumulative Actual Value/ACWP (to date)	*
CBAC	NUMERIC	16	Cost Budget At Complete	*
CEAC	NUMERIC	16	Cost Estimate At Complete	*
CETC	NUMERIC	16	Cost Estimate To Complete	*
CRPGVAR	NUMERIC	16	Cost Reprogramming Adjustment To Variance	
CRPGBCWS	NUMERIC	16	Cost Reprogramming Adjustment To Budget	
QINBCWS	NUMERIC	16	Quantity Incremental Planned Value/BCWS (current period)	
QINBCWP	NUMERIC	16	Quantity Incremental Earned Value/BCWP (current period)	
QINACWP	NUMERIC	16	Quantity Incremental Actual Value/ACWP (current period)	
QCUMBCWS	NUMERIC	16	Quantity Cumulative Planned Value/BCWS (to date)	
QCUMBCWP	NUMERIC	16	Quantity Cumulative Earned Value/BCWP (to date)	
QCUMACWP	NUMERIC	16	Quantity Cumulative Actual Value/ACWP (to	

EV_CPR_Format1 Table Cumulative and Incremental Data By WBS				
Field Name	Field Type	Length	Description	Req.
			date)	
QBAC	NUMERIC	16	Quantity Budget At Complete	
QEAC	NUMERIC	16	Quantity Estimate At Complete	
QETC	NUMERIC	16	Quantity Estimate To Complete	
QRPVVAR	NUMERIC	16	Quantity Reprogramming Adjustment To Variance	
QRPVBCWS	NUMERIC	16	Quantity Reprogramming Adjustment To Budget	

Business Rules

EV_CPR_Format1 Table Business Rules	
6.4.9-1	EVM metrics are reported against the latest DOE approved PMB
6.4.9-2	The EV_CPR_Format1 table contains the entire WBS hierarchy to the lowest level that the contractor reports cost
6.4.9-3	There is one level 1 WBS element for the WBS hierarchy
6.4.9-4	The WBS reported in the EV_CPR_Format1 table must match the WBS reported in the EV_Time-Phased table.
6.4.9.5	The totals for the BCWS, BCWP and ACWP incremental fields are not greater than the BCWS, BCWP and ACWP cumulative fields for the same WBS number
6.4.9-6	Quantity fields are optional unless required by DOE.

6.4.10 EV_CPR_Format2 Table

The EV_CPR_Format2 table contains the current, cumulative to date, and at completion EVM metrics by OBS discussed in section 2.1. As discussed in section 6.1, it is used when the contractor cannot generate an ANSI X12 file that meets the PARS II requirements.

The key data fields for this table are ProjectName, StatusDate, WBSNUM and OBSLevel. These fields are required data elements as identified by an asterisk (*) in the table below.

EV_CPR_Format2 Table Cumulative and Incremental Data By OBS				
Field Name	Field Type	Length	Description	Req.
ProjectName	VARCHAR	50	Project Identification Code	*
StatusDate	DATETIME		End Date of Current Reporting Period	*
OBSNUM	VARCHAR	50	OBS Element or ID	*
OBSDesc	VARCHAR	255	OBS Description	

EV_CPR_Format2 Table Cumulative and Incremental Data By OBS				
Field Name	Field Type	Length	Description	Req.
OBSParent	VARCHAR	50	Parent OBS Element - Leave Blank for top level OBS (there should be only one top level OBS)	
OBSLevel	INT	4	Level in OBS Structure	*
CINCBCWS	NUMERIC	16	Cost Incremental Planned Value/BCWS (current period)	*
CINCBCWP	NUMERIC	16	Cost Incremental Earned Value/BCWP (current period)	*
CINCACWP	NUMERIC	16	Cost Incremental Actual Value/ACWP (current period)	*
CCUMBCWS	NUMERIC	16	Cost Cumulative Planned Value/BCWS (to date)	*
CCUMBCWP	NUMERIC	16	Cost Cumulative Earned Value/BCWP (to date)	*
CCUMACWP	NUMERIC	16	Cost Cumulative Actual Value/ACWP (to date)	*
CBAC	NUMERIC	16	Cost Budget At Complete	*
CEAC	NUMERIC	16	Cost Estimate At Complete	*
CETC	NUMERIC	16	Cost Estimate To Complete	*
CRPGVAR	NUMERIC	16	Cost Reprogramming Adjustment To Variance	
CRPGBCWS	NUMERIC	16	Cost Reprogramming Adjustment To Budget	
QINCBCWS	NUMERIC	16	Quantity Incremental Planned Value/BCWS (current period)	
QINCBCWP	NUMERIC	16	Quantity Incremental Earned Value/BCWP (current period)	
QINCACWP	NUMERIC	16	Quantity Incremental Actual Value/ACWP (current period)	
QCUMBCWS	NUMERIC	16	Quantity Cumulative Planned Value/BCWS (to date)	
QCUMBCWP	NUMERIC	16	Quantity Cumulative Earned Value/BCWP (to date)	
QCUMACWP	NUMERIC	16	Quantity Cumulative Actual Value/ACWP (to date)	
QBAC	NUMERIC	16	Quantity Budget At Complete	
QEAC	NUMERIC	16	Quantity Estimate At Complete	
QETC	NUMERIC	16	Quantity Estimate To Complete	
QRPVAR	NUMERIC	16	Quantity Reprogramming Adjustment To	

EV_CPR_Format2 Table Cumulative and Incremental Data By OBS				
Field Name	Field Type	Length	Description	Req.
			Variance	
QRPGBBCWS	NUMERIC	16	Quantity Reprogramming Adjustment To Budget	

Business Rules

EV_CPR_Format1 Table Business Rules	
6.4.10-1	EVM metrics are reported against the latest DOE approved PMB
6.4.10-2	The EV_CPR_Format2 table contains the entire OBS hierarchy to the lowest level that the contractor reports cost
6.4.10-3	There is one level 1 OBS element for the OBS hierarchy
6.4.10-4	The OBS reported in the EV_CPR_Format2 table must match the OBS reported in the EV_Time-Phased table.
6.4.10.5	The totals for the BCWS, BCWP and ACWP incremental fields are not greater than the BCWS, BCWP and ACWP cumulative fields for the same OBS number
6.4.10-6	Quantity fields are optional unless required by DOE.

7 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 handled as sensitive private communications and are not provided to other parties other than official DOE or OMB requestors. Data are maintained on physically firewalled and electronically password protected servers. System access is limited to appropriate personnel involved in project oversight or earned value processing. Every reasonable effort will be taken to ensure continuous privacy of all submitted data.

APPENDIX A – 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 direct 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.

ART - Automated Reporting Tool

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 product breakdown structure (PBS), organizational breakdown structure (OBS), resource breakdown structure (RBS), and work breakdown structure (WBS).

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 ($\% \text{ Complete} \times \text{Planned Cost for each activity}$).

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.

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.

CP - 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.

Management Reserve - 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

OECCM - Office of Engineering and Construction Management

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 II – Project Assessment and Reporting System (second 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

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 - the difference between budget at completion and estimate at completion.

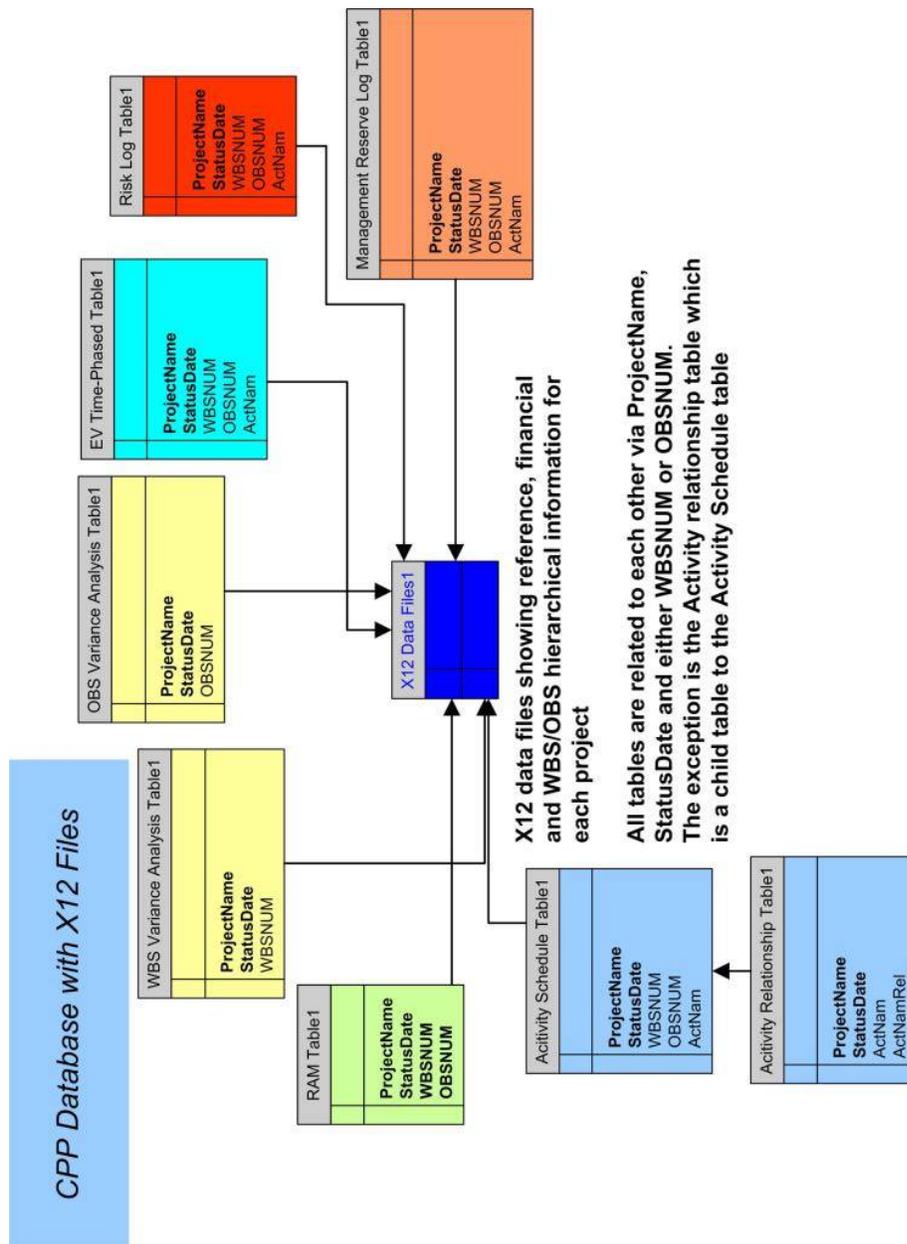
WBS - Work Breakdown Structure

Work Breakdown Structure (WBS) - A deliverable-oriented hierarchical decomposition of the work to be executed by the project team to accomplish the project objectives and create the required deliverables. It organizes and defines the total scope of the project. Each descending level represents an increasingly detailed definition of the project work. The WBS is decomposed into *work packages*.

WP – Work Package

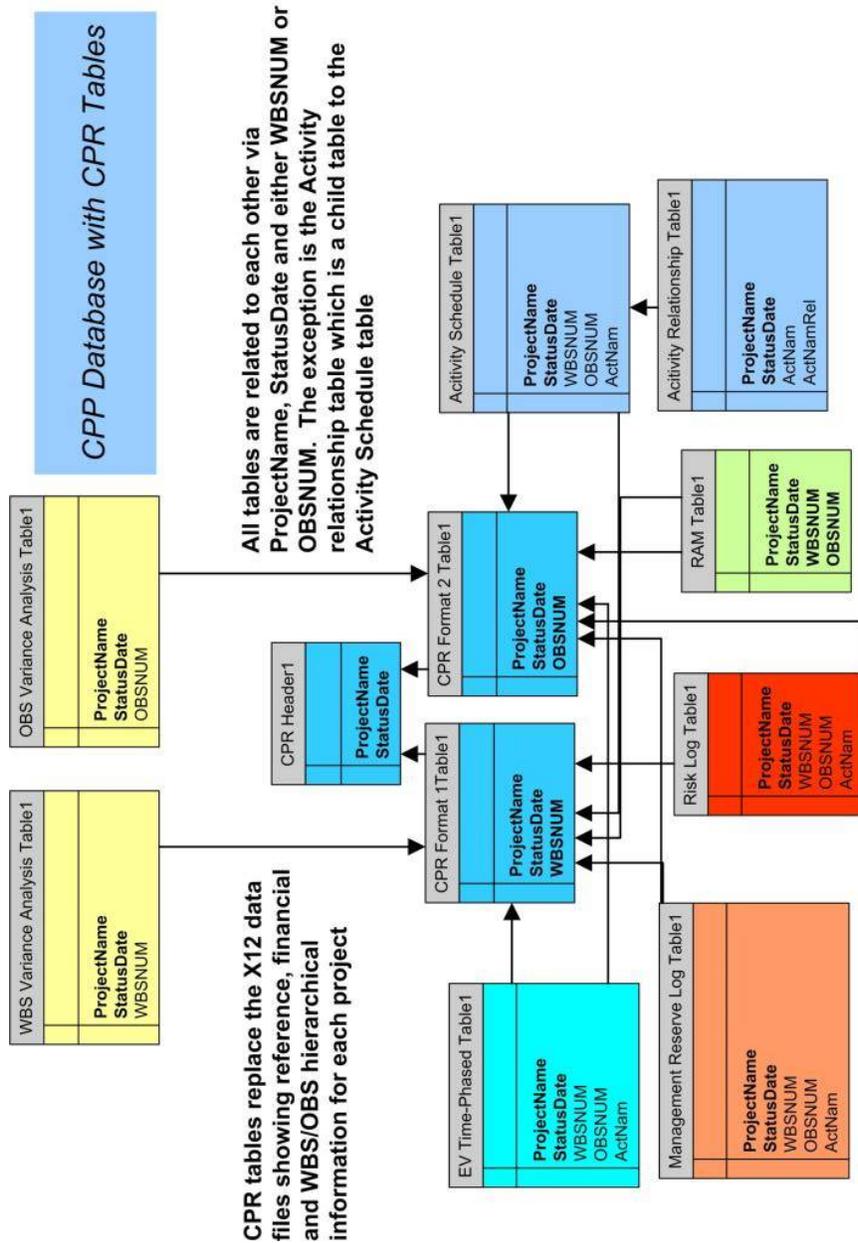
APPENDIX B – ANSI X12/ACCESS TABLE RELATIONSHIPS

The diagram below shows the relationship between the ANSI-X12-389 file and the Access tables.



APPENDIX C – ACCESS TABLE FORMATS

The diagram below shows the relationship between the Access CPR tables and the other Access tables.



APPENDIX D – ERROR MESSAGES

TBD