

## Guidelines for Baseline Change Requests

- What** These guidelines serve as reference information for use in developing a resource loaded project schedule.
- Why** Using these guidelines during the process of schedule development can improve the ease of use with EVMS.

### 1 Glossary of Terms and Acronyms

BCR – Baseline Change Request  
BL - Baseline  
CA – Control Account  
CAM – Control Account Manager  
CD - Critical Decision  
CTC - Chargeable Task Code  
DOE – U.S. Department of Energy  
DTI – Desk Top Instruction  
EV – Earned Value  
EVMS - Earned Value Management System  
FPD – Federal Project Director  
MR – Management Reserve  
MS - Milestone  
PCS – Project Controls Specialist  
PM – Project Manager  
PMB – Performance Measurement Baseline  
PMT – Performance Measurement Technique  
TPC – Total Project Cost  
UB – Undistributed Budget  
WAD – Work Authorization Document  
WBS – Work Breakdown Structure  
WP – Work Package

Control Account (CA) - A key management control point located at the natural intersection point of the WBS and the OBS, where functional responsibility for work is assigned. It represents the point at which budgets (resource plans) and actual costs are accumulated and compared to earned value for management control purposes.

Control Account Manager (CAM) – The member of the project team responsible for the performance defined in a Control Account and for managing the resources authorized to accomplish the tasks.

Work Breakdown Structure (WBS) - A product-oriented grouping of project elements that organizes and defines the total scope of the project. The WBS is a multilevel framework that organizes and graphically displays elements representing work to be accomplished in logical relationships. Each descending level represents an increasingly detailed definition of a project component. Project components may be products or services. It is the structure and code that integrates and relates all project work (technical, schedule, and cost) and is used throughout the life cycle of a project to identify and track specific work scopes.

Work Package (WP) – Commonly defined as “a task or set of tasks performed within a control account”. However, this term is often confusing due to its use in various tools. For example, in Cobra, a WP, and its ID refers to a P6 Task and its “Activity ID”. This usage is acceptable in Cobra because in EVMS terms a WP is any level of activity below the Control Account. However, in P6, a WP is sometimes referred to as an element of the Work Breakdown Structure (WBS). Throughout this document, WP, Task, and Activity are interchangeable, synonymous terms and do not refer to a particular level of the WBS.

## 2 Intent of Desk Top Instruction (DTI)

The intent of this DTI is to provide further clarification of intent and direction found in Fermi Research Alliance Earned Value Management System (EVMS) procedures. It is expected that all Project personnel are first familiar and compliant with the EVMS procedures, and then seek clarification from the DTI.

Compliance with the procedures is expected; therefore, if there are conflicts between procedures and the DTI, the EVMS procedures are to be followed. Some Baseline Change considerations may not be identified or clarified in the DTI because they are adequately addressed in the procedures.

## 3 BCR Requirements:

The baseline can be impacted in various elements by a Baseline Change Request (BCR) each with unique impacts. Each element must be tracked and reconciled with the baseline. The elements which can be impacted by BCRs include budgeted cost, contingency, Management Reserve (MR), Undistributed Budget (UB), Total Project Cost (TPC), scope, and schedule. Project scope and schedule impacts are mainly addressed in other project documents including BCR Forms, WBS Dictionaries, Schedules, and Work Authorization Documents.

- A) Although anyone on the project can initiate a change request, the Control Account Manager (CAM) is responsible for any changes within his/her Control Account (CA). Therefore, with the exception of directed changes, they must review and ensure appropriate documentation is prepared to substantiate the change, including documenting proposed alterations to the currently approved project baseline scope, schedule, and/or budget. If the initiator is other than the CAM, the initiator must inform CAM and seek approval as part of the approval process.
- B) The CAM or initiator works with Project Controls to prepare an accurate and complete BCR package. The package contains the documentation necessary to support proposed scope, budget and/or schedule change(s). Each BCR must:
  - Show the affected WBS element, the level and complexity of the change.
  - Be reviewed for consistency, completeness, correctness, and appropriate routing by Project Controls before submittal for approval and after implementation.
  - Show Budget Impact (Before & After)
  - Show Contingency and Management Reserve Impact
  - Update Appropriate Documents (All documents reflect BCR number which affected/initiated document)
- C) BCRs are important to the maintenance and accuracy of the TPC and reporting requirements therefore BCRs should be implemented in a timely manner.
- D) Work does not proceed without approval (BCR approval or WAD) see 12.PM-003 Work Authorization.

### 3.1 BCR Log(s)

BCR log(s) are intended to track financial impacts including budgeted cost, MR, Contingency, and Total Project Cost (TPC). A detailed change log is maintained to record all changes to authorized work and to reconcile original budgets and schedules with all changes for the Control Account

The following are examples of BCR logs necessary to meet the intent of EVMS guidance. These examples are created by the posted BCR standard excel template. However, it should be noted that due to projects special needs and funding requirements the examples reflect a minimal data requirement.

PROJECT\_BCR\_log.xlsx

Baseline Change Summary Log

1 of 1

Template used

Project B Change Summary									
Original Baseline	Current/Not Approved/Adjusted Baseline	\$ Chg	\$	\$	\$	\$	\$	Start Date	Finish Date
		118,249,996	1,000,000	11,450,039	271,000,000				
		219,267,777	(611,168)	22,023,245	272,677,000				

  

Project Log of Baseline Change Requests												
BCR#	Description of Change	Date Submitted	Level	BCKG Impact	NR Impact	Contingency Impact	TPC Impact	Schedule Impact (Days)	Approval Status	Date of Last Status	Month- Year of BCR Implementation	Reference Document
001	Changes to remove target handling control room	8/20/2013	2	95,489	(95,489)	-	-	-	Approved			4411
002	Recommendations from Director's Review	8/20/2014	2	261,274	(261,274)	-	-	-	Approved			4444
003	Same as	8/20/2014	2	(21,900)	21,900	-	-	-	Approved			4473
004	Cost leveling; new CD-3c strategy	10/2/2014	2	500,080	(500,080)	-	-	-	Approved			4539
005	Resource/Cost corrections	10/29/2014	2	24,284	(24,284)	-	-	-	Approved			4703
006	Corrections made to CR02	11/7/2014	2	(172,850)	172,850	-	-	-	Approved			4721
007	Changes due to DOE Review recommendations	11/23/2014	2	78,581	(78,581)	-	-	-	Approved	20-Dec-17		4726
008	PI15 Rate changes	11/23/2014	2	(3,699,794)	3,699,442	-	-	-	Approved	20-Dec-17		4749
009	Include central DS&S support	11/23/2014	2	518,178	(518,178)	-	-	-	Approved	20-Dec-17		4837
010	Revised (and type PS cost) major, minor CRV and Superconducting magnet	11/24/2014	2	208,446	(202,446)	-	-	-	Approved	17-Dec-17		4840
011	CD-2/3b Approval Delay	11/23/2014	2	73,874	(73,874)	-	-	-	Approved	15-Dec-17		4958
012	PS & OS approval terms & accelerator design reviews	1/7/2015	2	815,964	(815,964)	(1,000,000)	-	-	Approved	28-Jan-2018	Dec-15	5029
-	Additional funding which should added to contingency	1/24/2015				2,677,000	2,677,000		Approved			
Approved Net Impact				\$	717,811	(1,611,168)	2,570,262	2,677,000				
Pending Net Impact				\$	-	-	-	-				
Total Net Impact				\$	717,811	(1,611,168)	2,570,262	2,677,000				
Data Check with Core Change Log Data				\$	219,267,776	1,000,000						
				\$	(1)	1,611,168						

PROJECT\_BCR\_log.xlsx

Baseline Change Control Account Log

1 of 1

BCR #	BCR Description	Control Account	CAM	Prior Start	Revised Start	Start Impact (Days)	Prior Finish	Revised Finish	Finish Impact (Days)	Values		
										BAC Before	BAC After	Cost Impact Increase/(Decrease)
001										12,680,712.38	12,776,201.38	95,489.00
002										186,839,049.71	187,200,323.73	361,274.02
003										201,545,611.44	201,524,061.58	(21,549.86)
004										202,943,386.82	203,443,466.43	500,079.61
005										30,303,038.86	30,268,754.75	(34,284.11)
006										191,299,097.75	191,126,448.06	(172,849.69)
007										101,599,396.87	101,677,479.52	78,082.65
008										197,543,525.86	195,843,731.58	(1,699,794.08)
009										14,227,346.44	14,745,524.70	518,178.26
010										52,076,260.12	52,279,706.40	203,446.28
011	CD-2/3b Approval Delay	475.03.02	06758N Leckowski, Thomas	7/2/2012	7/2/2012	0	2/15/2017	4/4/2017	-34	45,377.84	45,511.40	133.57
		475.03.04.01	06758N Leckowski, Thomas	1/21/2015	1/21/2015	0	3/21/2016	5/6/2016	-34	12,991,260.76	13,058,780.11	67,519.35
		475.03.04.03	06758N Leckowski, Thomas	4/3/2015	4/3/2015	0	10/15/2019	10/15/2019	0	752,873.32	758,424.48	5,551.16
		475.03.04.04	05374N Coleman, Rick	11/21/2014	1/16/2015	0	6/3/2015	7/16/2015	-30	0.00	0.00	0.00
		475.03.05	06758N Leckowski, Thomas	2/29/2016	2/29/2016	0	5/10/2017	6/28/2017	-39	374,466.35	374,836.53	370.18
011 Total										14,169,978.27	14,237,552.52	73,574.25
012										157,695,665.36	158,511,629.64	815,964.28
Grand Total												717,810.60

Baseline Change Level 2 and CAM Report

WBS L2	CAM	Control Account	BCR #	BCR Description	Prior Start	Revised Start	Prior Finish	Revised Finish	Values		
									BAC Before	BAC After	Cost Impact Increase/(Decrease)
475.01	Project Management								113,123,850.33	116,033,902.43	710,251.88
475.02	03438N Leveling, Tony	475.02.04	002	Establish internal baseline and incorporate recommendations from Director's Review.	-	-	-	-	2,182,006.03	2,016,087.84	(165,918.19)
			003	New rate adjustments for labor fringe and overhead.	-	-	-	-	2,007,409.78	2,021,381.58	13,971.80
			004	Cost leveling; new CD-3c strategy	-	-	-	-	2,021,381.58	2,020,563.78	(817.80)
			006	Corrections made to CR002	-	-	-	-	2,016,087.84	2,007,409.78	(8,678.06)
			008	PI15 Rate changes	-	-	-	-	2,020,563.78	1,965,278.96	(55,284.82)
			012	Solenoids PS and DS Contract terms and Accelerator design reviews	7/2/2012	7/2/2012	4/1/2020	7/30/2020	1,965,278.96	1,967,483.71	2,204.75
	05374N Coleman, Rick	475.02.09	002	Establish internal baseline and incorporate recommendations from Director's Review.	-	-	-	-	10,886,042.80	10,614,323.48	(271,719.32)
			003	New rate adjustments for labor fringe and overhead.	-	-	-	-	10,502,655.11	10,551,039.33	48,384.24
			004	Cost leveling; new CD-3c strategy	-	-	-	-	10,551,039.33	10,146,316.37	(404,722.96)
			006	Corrections made to CR002	-	-	-	-	10,814,323.48	10,502,655.11	(311,668.37)
			012	Solenoids PS and DS Contract terms and Accelerator design reviews	7/2/2012	7/2/2012	7/16/2020	7/16/2020	10,883,411.04	10,124,288.42	(759,122.62)
	06975N Johnstone, Carol	475.02.07	002	Establish internal baseline and incorporate recommendations from Director's Review.	-	-	-	-	5,740,132.93	5,835,629.15	145,396.20
			003	New rate adjustments for labor fringe and overhead.	-	-	-	-	5,835,629.15	5,808,333.82	(27,295.33)
			004	Cost leveling; new CD-3c strategy	-	-	-	-	5,808,333.82	5,835,629.15	27,295.33
			006	Corrections made to CR002	-	-	-	-	5,835,629.15	5,835,688.26	59.11
	08689N Werkema, Steve	475.02.01	002	Establish internal baseline and incorporate recommendations from Director's Review.	-	-	-	-	3,433,889.47	3,426,488.85	(7,400.62)
			003	New rate adjustments for labor fringe and overhead.	-	-	-	-	3,426,488.85	3,469,038.19	42,549.34
			004	Cost leveling; new CD-3c strategy	-	-	-	-	3,469,038.19	3,497,702.74	28,664.54
			006	Corrections made to CR002	-	-	-	-	3,426,488.85	3,426,488.82	(0.03)
			008	PI15 Rate changes	-	-	-	-	3,467,702.74	3,327,723.34	(139,979.40)
			012	Solenoids PS and DS Contract terms and Accelerator design reviews	7/2/2012	7/2/2012	9/21/2020	10/14/2020	3,327,723.34	3,322,343.06	(5,380.28)

### 3.2 Schedules for BCR Documentation

There are three required schedules which should be included in each BCR

1. BCR Impacted Milestone Tier Schedule
2. BCR Impacted Activities
3. BCR Critical (or Near Critical) Path

### 3.2.1 General guidelines

- To maintain consistency and due to most schedules defaulting to black milestones bars with Baseline (BL) yellow bars, use yellow bars for activity BL.
- Other Requirements to be Shown
  - Change Type Legend
  - Printed Date/Time
  - Gantt Chart Legend (Timescale is Project Option)
  - Page Number
  - Filters Used
- Filters and Required Columns are specific to each report and will be addressed separately with each schedule
- If the BCR impacts cost only, for example rate changes, then the BCR form should clearly identify “No schedule impacts and no Schedules will be attached to the BCR reports.”
- Global layouts for the P6 standard reports are available
  - BCR Critical (or Near Critical) Path
  - BCR Impacted Activities
  - BCR Milestone Tier Schedule
- In addition to consistency, automation and standard reports will improve efficiency
- Date format: Because of the international nature of our work we should use DD-Mon-YYYY
- P6 Timescale (Gantt chart is optional but recommended)
  - Consider using quarters or Months for the lower row
  - Consider using BCR approval date -2M for the start, just to avoid giving up a lot of real estate to the historical period, in which there should be no changes.
- Grouping and sorting - hide if empty
- Consider using whole integers for data i.e. no decimal
- Consider removing Gantt Chart Summary Bars
- Change Type Guidelines – The “Change Type” code field in P6 is used to identify the type of change. The characters to be used are A – for Added activity, C – Changed coding, D – Deleted activity, H – Historical Activity, L – Logic change, W – WBS change, X – Resultant from exterior changes, M – Modified Activity.
  - Added/new activities (A):
    - Code the activity with the change number and change type
  - Changed coding only (C):
    - If the only change you are making to an activity is an assigned activity code or adding an activity code to an activity
  - Deleted / historical activities (D or H):
    - Identify the change number and change type in addition with whether you removed logic and/or changed dates/durations/constraints
      - Example: “BCR001 H” – If an activity was planned to start and did not and no BCWP has been taken, BCWS will be set equal to 0. The remaining work will be planned as a new/added activity.

- Example: “BCR001 H”— If an activity has BCWP, then BCWS will be set equal to BCWP. The remaining work will be planned as a new/added activity.
- For deleted activities you can put that you removed all logic and the activities you removed logic from you should have the change # and type
  - “BCR001 D” NOTE: removed pred/succ “XYZ”
- Logic changes (when just a logic change was made) (L):
  - “BCR001 L” – Use this for FS relationships and when no logic is removed.
  - “BCR001 L: Removed pred. ID 475.01.0100 and changed pred. 475.01.0111 to SS Lag 10; added succ’s”
  - All changes to logic between projects need to be listed because you cannot import inter-project logic.
- WBS changes (when just the WBS was changed) (W):
  - Example: “BCR001 W: Changed WBS from 475.02.02.02.15 to 475.02.02.03.15; changed CTC from 475.339 to 475.500”
- Resultant from external changes (X) or affected by upstream changes
  - This is used when a duration or logic change to an upstream activity caused this activity to move left or right
- Modified Activities (M)
  - Added or deleted logic/logic type/lag
  - Resource/budget changes
  - WBS changed from...to....
  - CTC changed from...to....
  - Description changes: Just mention that the description changed so the implementer knows to replace the existing description in the baseline
  - Duration changes from...to....
  - Add/Remove/change of constraints
  - Example: “BCR001 M: Deleted pred. 475.02.02.0200; changed duration from 100 to 75; changed budget on resources”

### 3.2.2 BCR Milestone Tier Schedule

SLI UUP Project											Change Type Legend												27-Feb-15	
BCR Schedule Rot by Milestone Tier											A = Added Activity C = Changed Coding D = Deleted Activity H = Historical Activity L = Logic Change M = Modified Activity W = WBS change X = Result of Exterior Change												09:23	
Activity ID	Activity Name	BL Start	BL Finish	Start	Finish	BL Total Float	Total Float	BL Start Variance	BL Finish Variance	BCR#	Change Type	FY2014	FY2015	FY2016	FY2017	FY2018	MIS							
There are not Milestones affected by BCR003 HV and ICW Contracts Clarification per POs															If there are no affected Milestones this must be noted									

SLI UUP Project											Change Type Legend												26-Feb-15	
BCR Schedule Rot by Milestone Tier											A = Added Activity C = Changed Coding D = Deleted Activity H = Historical Activity L = Logic Change M = Modified Activity W = WBS change X = Result of Exterior Change												13:12	
Activity ID	Activity Name	BL Start	BL Finish	Start	Finish	BL Total Float	Total Float	BL Start Variance	BL Finish Variance	BCR#	Change Type	FY2014	FY2015	FY2016	FY2017	FY2018	MIS							
<b>T1 Milestone - DOE Program</b>																								
600.T1.1000	T1 - Project Complete	14-Feb-19	14-Feb-19	14-Feb-19	14-Feb-19	0.00d	0.00d	0.00d	0.00d															
<b>T2 Milestone - DOE Federal Project Director</b>																								
600.A110	T2 - CD-2/3A ESAAB Approval (Target: 15-Jan-15)	08-Jun-15	08-Jun-15	08-Jun-15	08-Jun-15	924.00d	924.00d	0.00d	0.00d															
600.A120	T2 - CD-3B IPR Complete	14-Feb-19	20-Nov-1	20-Nov-1	20-Nov-1	807.00d	807.00d	0.00d	0.00d															
600.A130	T2 - CD-3B ESAAB Approval	08-Jun-15	22-Dec-1	22-Dec-1	22-Dec-1	787.00d	787.00d	0.00d	0.00d															
600.1440	T2 - Construction Complete	28-Jun-17	28-Jun-17	28-Jun-17	28-Jun-17	407.00d	407.00d	0.00d	0.00d															
600.A140	T2 - CD-4 IPR Complete	21-Nov-1	21-Nov-17	21-Nov-17	21-Nov-17	305.00d	305.00d	0.00d	0.00d															
600.A150	T2 - CD-4 ESAAB Approval	21-Nov-1	21-Nov-17	21-Nov-17	21-Nov-17	305.00d	305.00d	0.00d	0.00d															
<b>T3 Milestone - Fermilab Directorate</b>																								
600.A190	T3 - CD-2/3A ESAAB Approval (Target: 15-Jan-15)	30-Jan-15	14-Aug-17	30-Jan-15	14-Aug-17	0.00d	0.00d	0.00d	0.00d															
600.010	T3 - Issue Subcontract for MISS Control Building Pre-Procurement	27-Apr-15	27-Apr-15	27-Apr-15	27-Apr-15	111.00d	95.00d	0.00d	0.00d															

Remaining Level of Effort Project Baseline Remaining Work Baseline Milestone

Actual Level of Effort Actual Work Critical Remaining Work Milestone

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TASK filters: RLM - Activities with Variance per BCR, RLM - Activity Milestones.

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- Required Columns (Can be redefined to make easier to understand or fit better)
  - Activity ID
  - Activity Name
  - BL Start
  - BL Finish
  - Start
  - Finish
  - BL Total Float
  - Total Float
  - Variance -BL Start (BL Start Variance)
  - Variance -BL Finish (BL Finish Variance)
  - BCR#
  - Change Type
  
- Filter
  - Milestones
  - Activities with Variance Per BCR (Start, Finish)
  - May filter for only DOE and Project Reportable Tiers
  
- Group and Sort
  - Group By Milestone Tier
  - Sort by Early Start

### 3.2.3 BCR Impacted Activities

SLU UUP Project											Change Type Legend				27-Feb-15 09:22			
BCR Schedule Roll by Activity											A = Added Activity G = Changed Coding D = Deleted Activity H = Historical Activity L = Logic Change M = Modified Activity X = Result of Exterior Change W = WBS change							
Activity ID	Responsible Person	Activity Name	BL Start	BL Finish	Start	Finish	BL Start Variance	BL Finish Variance	BL Dur Variance	BL Matl Cost Var	BL Labor Units Var	BL NonFarm Lbr Units Var	BCR#	Change Type	FY2014	FY2015	FY2016	2017
<b>600.02.01.02 HV Engineering - Final Design</b>																		
<b>Control Account Manager: Wielgos, Randal J</b>																		
<b>Control Account: 600.02 High-Voltage Electrical Upgrade</b>																		
600.02.01.02.1060		HV - Perform 95% Complete Final Design of Electrical Infrastructure (PED)	02-Feb-15	16-Jul-15	02-Feb-15	31-Aug-15	0.00d	-32.00d	-32.00d	\$0	0.00h	0.00h						
600.02.01.02.1065		HV - Perform 100% Complete Final Design of Electrical Infrastructure_Comments_Issue and CorEd (PED)	02-Feb-15	16-Jul-15	02-Feb-15	31-Aug-15	0.00d	-32.00d	-32.00d	\$0	0.00h	0.00h						
600.02.01.02.1067		HV - Perform Design Revisions of Electrical Infrastructure_CorEd (PED)			01-Jun-15	30-Jun-15			-22.00d	(\$137,600)	0.00h	0.00h	BCR003	A				
600.02.01.02.1069		HV - Perform Design Revisions of Electrical Infrastructure_Automation & HMI Dev (PED)			01-Jul-15	31-Jul-15			-22.00d	(\$40,000)	0.00h	0.00h	BCR003	A				
600.02.01.02.1072		HV - Perform Design Revisions of Electrical Infrastructure Following DOE Rev_Bid Review-Construction (PED)			03-Aug-15	31-Aug-15			-21.00d	(\$20,000)	0.00h	0.00h	BCR003	A				
<b>No Control Account</b>																		
600.02.01.02.3010		HV - DOE Evaluate Bids for Electrical Infrastructure Construction (PED)	22-Apr-15	16-Jul-15	22-Apr-15	31-Jul-15	0.00d	-11.00d	-11.00d	\$0	0.00h	0.00h	BCR003	M				
600.02.01.02.3012		HV - Evaluate Independent Design Review Comments			22-Apr-15	29-May-15			-27.00d	\$0	0.00h	0.00h	BCR003	A				
<b>600.03.01.02 ICW Engineering - Final Design</b>																		
<b>Control Account Manager: Fedorowicz, Charles A</b>																		
<b>Control Account: 600.03 Industrial Cooling Water Upgrade</b>																		
600.03.01.02.1040		ICW - Perform 95% Complete Final Design of ICW Infrastructure (PED)	02-Feb-15	30-Jul-15	02-Feb-15	12-Aug-15	0.00d	-9.00d	-9.00d	\$0	0.00h	0.00h						
600.03.01.02.3000		ICW - Conduct Independent Design Review (PED)	08-Apr-15	21-Apr-15	01-Apr-15	21-Apr-15	5.00d	0.00d	-5.00d	\$0	0.00h	0.00h	BCR003	M				
600.03.01.02.1045		ICW - Perform 100% Complete Final Design of ICW Infrastructure (PED)	08-Apr-15	05-May-15	01-Apr-15	30-Apr-15	5.00d	3.00d	-2.00d	(\$36,000)	0.00h	0.00h	BCR003	M				
600.03.01.02.1075		ICW - Finalize Documents Based on Review Comments (PED)			01-May-15	12-Aug-15			-72.00d	(\$60,000)	0.00h	0.00h	BCR003	A				
<b>No Control Account</b>																		
600.03.01.02.1038		ICW - Award Final Design ICW Contract			02-Feb-15	27-Feb-15			-20.00d	\$0	0.00h	0.00h	BCR003	A				
600.03.01.02.1050		ICW - Request for Proposal (RFP) for ICW Infrastructure Construction (PED)	08-Apr-15	05-May-15	01-Apr-15	28-Apr-15	5.00d	0.00d	\$0	0.00h	0.00h	0.00h	BCR003	X				
600.03.01.02.3010		ICW - DOE Evaluate Bids for ICW Infrastructure Construction (PED)	05-May-15	30-Jul-15	28-Apr-15	23-Jul-15	5.00d	5.00d	0.00d	\$0	0.00h	0.00h	BCR003	X				
600.03.01.02.1090		ICW - Evaluate Bids for ICW Infrastructure Construction (PED)	05-May-15	18-May-15	28-Apr-15	12-May-15	5.00d	5.00d	0.00d	\$0	0.00h	0.00h	BCR003	X				
600.03.01.02.1070		ICW - Finalize Documents Based on CCR Comments (PED)	22-Apr-15	05-May-15	01-May-15	05-May-15	-7.00d	0.00d	7.00d	\$0	0.00h	0.00h	BCR003	M				

- Required Columns (Can be redefined to make easier to understand or fit better)
  - Activity ID
  - Activity Name
  - BL Start
  - BL Finish
  - Start
  - Finish
  - Variance -BL Start (BL Start Variance)
  - Variance -BL Finish (BL Finish Variance)
  - Variance – BL Project Duration (BL Dur Variance)
  - Variance – BL Material Cost (BL Matl Cost Var)
  - Variance – BL Labor Units (BL Labor Units Var)
  - Variance – Nonlabor Units (BL NF Lbr Units Var)
  - BCR#
  - Change Type
- Filter
  - Activities with Variance Per BCR (Start, Finish, Labor Units, Nonlabor Units, Material Cost, Duration)
- Group and Sort
  - Group By WBS, CAM, CA
  - Sort by Early Start

### 3.2.4 BCR Critical (or Near Critical) Path

SLU LUUP Project											Change Type Legend					27-Feb-15 09:25			
BCR Affect on Critical Path											A = Added Activity G = Changed Coding D = Deleted Activity H = Historical Activity								
Activities Where BL Total float or BCR File Total float is less than or equal to 0 Days											L = Logic Change M = Modified Activity X = Result of Exterior Change W = WBS change								
Activity ID	Activity Name	BL Start	BL Finish	Start	Finish	BL Total Float	Total Float	BL Start Variance	BL Finish Variance	BL Proj Dur Var	BCR#	Change Type	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	
600.02.01.02.1060	HV - Perform 95% Complete Final Design of Electrical Infrastru	02-Feb-15	07-Apr-15	02-Feb-15	07-Apr-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d	BCR003 M							
600.03.01.02.1039	ICW - Juward Final Design ICW Contract	02-Feb-15	07-Apr-15	02-Feb-15	27-Feb-15	0.00d	0.00d	0.00d	-20.00d	5.00d	29.00d	BCR003 M							
600.03.01.02.1040	ICW - Perform 95% Complete Final Design of ICW Infrastruct.	02-Feb-15	07-Apr-15	02-Mar-15	31-Mar-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d	BCR003 M							
600.02.01.02.1046	HV - Perform 100% Complete Final Design of ICW Infrastruct	08-Apr-15	05-May-15	01-Apr-15	30-Apr-15	0.00d	0.00d	0.00d	0.00d	3.00d	-2.00d	BCR003 M							
600.02.01.02.1056	HV - Perform 100% Complete Final Design of Electrical Infrastr	08-Apr-15	05-May-15	08-Apr-15	05-May-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d	BCR003 M							
600.02.01.02.1080	HV - Perform Comment and Compliance Review of Final Desig	08-Apr-15	21-Apr-15	08-Apr-15	21-Apr-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.01.02.1060	ICW - Perform Comment and Compliance Review of Final Des	08-Apr-15	21-Apr-15	08-Apr-15	21-Apr-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.02.01.02.1040	HV - Finalize Documents Based on CCR Comments	22-Apr-15	05-May-15	22-Apr-15	05-May-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.01.02.1070	ICW - Finalize Documents Based on CCR Comments (PED)	22-Apr-15	05-May-15	21-May-15	05-May-15	0.00d	0.00d	0.00d	-7.00d	0.00d	7.00d	BCR003 M							
600.01.02.1010	Publish Documents for CD-3B Director's Review (Target Date:	06-May-15	18-May-15	06-May-15	18-May-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.02.1020	Perform CD-3B Director's Review	20-May-15	21-May-15	20-May-15	21-May-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.02.1030	Consolidate Director's Review Comments for CD-3B IPR	22-May-15	18-Jun-15	22-May-15	18-Jun-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.02.1040	Publish Documents for CD-3B IPR	22-Jun-15	26-Jun-15	22-Jun-15	26-Jun-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.02.1050	Perform CD-3B IPR	14-Jul-15	16-Jul-15	14-Jul-15	16-Jul-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.03.1000	Modify Project documents following CD-3B IPR	17-Jul-15	13-Aug-15	17-Jul-15	13-Aug-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.03.1010	Issue Notice to Proceed	14-Aug-15	11-Sep-15	14-Aug-15	11-Sep-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1040	ICW - Install Pipe Station (0 - 00 to 18 - 40)	14-Sep-15	06-Nov-15	14-Sep-15	06-Nov-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1060	ICW - Install Pipe Station (18 - 40 to 22 - 40)	08-Nov-15	22-Dec-15	08-Nov-15	22-Dec-15	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1080	ICW - Install Pipe Station (22 - 40 to 38 - 00)	23-Dec-15	23-Feb-16	23-Dec-15	23-Feb-16	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1070	ICW - Install Pipe Station (38 - 00 to 66 - 00)	24-Feb-16	28-Jun-16	24-Feb-16	28-Jun-16	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1090	ICW - Install Pipe Station (66 - 00 to 77 - 00)	30-Jun-16	11-Aug-16	30-Jun-16	11-Aug-16	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1100	ICW - Install Pipe Station (77 - 00 to 89 - 00)	12-Aug-16	07-Oct-16	12-Aug-16	07-Oct-16	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1140	ICW - Install Pipe Station (89 - 00 to Casey's Pump House)	10-Oct-16	24-Jan-17	10-Oct-16	24-Jan-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.1140	ICW - Complete Tie-In of CMTF Pump House	25-Jan-17	21-Feb-17	25-Jan-17	21-Feb-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.03.02.01.3000	ICW - Independent Support for Commissioning	25-Jan-17	21-Feb-17	25-Jan-17	21-Feb-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1020	Publish Documents for CD-4 Director's Review	01-Jun-17	14-Jun-17	01-Jun-17	14-Jun-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1030	Fermilab CD-4 Director's Review	15-Jun-17	15-Jun-17	15-Jun-17	15-Jun-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1040	Consolidate Director's Review Comments for CD-4 IPR	16-Jun-17	28-Jun-17	16-Jun-17	28-Jun-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1080	Publish Documents for CD-4 IPR	30-Jun-17	14-Jul-17	30-Jun-17	14-Jul-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1050	DOE Performs CD-4 Review	17-Jul-17	17-Jul-17	17-Jul-17	17-Jul-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1070	Modify Project Documents Following DOE CD-4 Review	18-Jul-17	14-Aug-17	18-Jul-17	14-Aug-17	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								
600.01.04.1100	Project Float (18 months)	15-Aug-17	14-Feb-19	15-Aug-17	14-Feb-19	0.00d	0.00d	0.00d	0.00d	0.00d	0.00d								

- Required Columns (Can be redefined to make easier to understand or fit better)
  - Activity ID
  - Activity Name
  - BL Start
  - BL Finish
  - Start
  - Finish
  - BL Total Float
  - Total Float
  - Variance -BL Start (BL Start Variance)
  - Variance -BL Finish (BL Finish Variance)
  - Variance - BL Project Duration (BL Dur Variance)
  - BCR#
  - Change Type
- Filter
  - Not LOE activity type or PMT
  - Not FY Start/Finish Milestones
  - Activities Where BL Total Float is x (or less) or Activities Where Current File Total Float is x (or less)
  - The x value is project's choice
  - Minimum Requirement is Critical (defined as 0 TF)
  - Project can change report to show near Critical by changing TF value

- Group and Sort
  - No Group
  - Sort by Early Start
- Other Requirements
  - Same as other Schedules

### **3.3 BCR Form**

#### **3.3.1 Purpose of BCR Form**

The purpose of the BCR form is to document the BCR process and Impacts. It is used by the stakeholders e.g. Change Control Board (CCB), Project Manager (PM), DOE, etc. to understand the prudence of accepting the change request. It should have enough detail to convince stakeholders of the need for and impacts of the change. It is a managerial overview or brief which presents the case and backup data may be referenced to answer more detailed queries.

The form starts the process and may only contain Rough Order of Magnitude (ROM) schedule and cost impacts for presentation to stakeholders. Therefore, cost and schedule impacts may be expressed within an acceptable range e.g. \$90K to 110K for cost and 30 working days +- 6 working days. Provided the detailed cost and schedule impacts are within the previously accepted impact range, the BCR form may be retroactively updated with final implementation documentation, as an attachment or reference to implementation documents. The process of moving from ROM to detailed data does not negate the justification or acceptability of the change, therefore resigning or authorizing is not required when final data is within previously accepted ranges. It should be noted that BCR logs and other implementation documents will contain the true cost and schedule impact data.

#### **3.3.2 Minimum requirements**

- BCR Number which is referenced and used by all other BCR documentation
- Who requested the Change
- Status of Change (Submitted, Rejected, Approved, Implemented)
- Date Submitted
- Change Level (at what level the change needs authorized to be Implemented)
- Affected WBS and WBS Description – Should be brought to Highest common level i.e. if multiple CA in same L2 then reflect L2
- Change type (Cost, Schedule, Administrative, etc.)
- Supporting Documentation as applicable
- Affected subprojects, if applicable
- Change Control Board Disposition Date
  - Trace to either Meeting minutes or emails showing date of meeting and disposition
  - May link or keep record of meeting minutes or email describing meeting and disposition from CCB on Distribution
- Signatures or electronic approvals (with dates), may be attachments
- Text
  - Brief description of the Change
  - Justification for change
    - Why it is needed or reasons it must be implemented
    - Consequences of not approving the change request
  - Impact the change will cause to the project
    - Impact of change
    - Both cost and schedule impacts could be ROM express by range or +-
      - Cost shown in dollars

- Schedule express by before and after dates
- Schedule shown by number of working days
- Identify Key affected milestones (e.g. KPP, DOE CDs, or PEP referenced)
- cost, schedule, risk, technical or scope impacts
- Effect of Change to Critical Path
- Known impacts to other documentation should also be identified, for example if the PEP needs to be updated due to a change in a key milestone

### 3.3.3 Optional or Suggested

Revision – During the life of the BCR cycle the BCR form may take several iterations. Tracking these iterations is not required but desired.

## 4 Document Revision History

Date	Version	Author	Description
1/17/2016	0.0	Rich Marcum	Developed DTI