## 04-D-125, Chemistry and Metallurgy Research Building Replacement (CMRR) Project, Los Alamos National Laboratory (LANL), Los Alamos, New Mexico Project Data Sheet (PDS) is for Construction

# 1. Significant Changes

The CMRR project will construct two principal structures in three project phases. The first phase provides funding to construct the Radiological Laboratory/Utility/Office Building (RLUOB). The second phase, the RLUOB Equipment Installation (REI) effort, procures and installs the Special Facility Equipment (SFE) for the RLUOB. The third phase constructs the Nuclear Facility (NF). This data sheet presents the budget, costs, baselines and activities for each of the three phases separately.

RLUOB: The most recent DOE O 413.3B approved Critical Decision (CD) is a tailored CD-4, Approve Project Closeout, approved on June 24, 2010. The RLUOB was baselined in 2005 with a TPC of \$164,000. Construction of the building structure and related systems has been successfully completed; the facility will begin operations at the conclusion of the next phase of the CMRR project (REI).

REI: The most recent DOE O 413.3B approved CD is CD-2/3, Approve Performance Baseline and Start of Construction, approved on July 17, 2009 with a TPC of \$199,400 and a CD-4 date of April 30, 2013. This phase of the project is underway. At REI CD-4, the RLOUB will be functionally complete and turned over to operations. Project performance will be assessed with the completion of both RLUOB and REI for a combined total cost of \$363,400.

NF: The most recent DOE O 413.3B approved CD is CD-1, Approve Alternative Selection and Cost Range that was approved on May 18, 2005 with a preliminary cost range of \$745,000- \$975,000 and CD-4 in FY 2013. In April 2010, the CMRR Los Alamos National Security LLC (LANS) contractor completed an updated cost range estimate that reflected 45 percent engineering design maturity, changes in the assumptions for site seismic data, incorporation of lessons learned from previous nuclear projects in nuclear quality assurance construction, resolution of safety concerns identified by the Defense Nuclear Facilities Safety Board, and incorporation of commercial data on material costs and estimated escalation assumptions. The updated LANS cost range estimate based on 45 percent design is between \$3,710,000 and \$5,860,000, and is under review by NNSA.

The CMRR project team continues to work with the DOE Office of the Chief Financial Officer (CFO), the US Army Corps of Engineers (USACE) and the Department of Defense (DoD) Cost Assessment and Program Evaluation (CAPE) office to provide independent validation of the updated cost range estimate provided by LANS. In September 2010, the USACE completed a review of the methods and procedures used to develop estimates for CMRR design efforts resulting in improvements for transparency in the provided estimate. These improvements are applicable to the overall project estimation effort. The USACE will continue to work with the project team in future reviews. The DoD CAPE office will conduct an independent cost review in FY 2011.

Following reconciliation of the series of independent cost reviews, NNSA will establish an updated cost range estimate that will reflect approximately 45 percent design maturity. Additional reviews and updates to cost range estimates are anticipated as the design continues to mature. Consistent with

NNSA's increased emphasis on project management rigor, baseline cost and schedule will not be finalized until the project achieves 90 percent design maturity.

For FY 2012 and the outyears, Construction and Other Project Costs (OPC) are shown as To Be Determined (TBD). Estimates will be finalized once the project has achieved 90 percent design maturity and baseline approval. In the FY 2012 request, the Total Project Cost totals include both Construction and OPC and the TPC request will appear on the construction line item in the budget narrative and on supporting tables.

As represented in the FY 2012 request, Construction and OPC funds will be executed through the line item. Funds will be obligated and recorded in the appropriate object classes (object class 32.0 and 25.4) as defined in Office of Management and Budget Circular A-11.

A Federal Project Director at the appropriate level has been assigned to this project. This PDS is an update of the FY 2011 PDS. Section 6 contains the CMRR estimate provided in the FY 2011 PDS as the Previous Total Estimate. The TBD references included in the Current Total Estimate reflect ongoing efforts to refine this estimate and develop a baseline for the Nuclear Facility.

		(fiscal quarter or date)								
			PED					D&D		
	CD-0	CD-1	Complete C	D-2	CD-3	CD-4	D&D Start	Complete <sup>a</sup>		
FY 2004	7/16/2002	1QFY2004	3QFY2006	2	QFY2004	1QFY2011	N/A	N/A		
FY 2005	7/16/2002	3QFY2004	3QFY2007	3	QFY2005	3QFY2012	N/A	N/A		
FY 2006	7/16/2002	2QFY2005	1QFY2007 4	QFY2005 1	QFY2006	4QFY2010	N/A	N/A		
FY 2007	7/16/2002	9/30/2005	2QFY2007 1	QFY2006 1	QFY2006	1QFY2013	N/A	N/A		
FY 2008	7/16/2002	9/30/2005	2QFY2009	10/21/2005	1QFY2006	1QFY2013	N/A	N/A		
FY 2009	7/16/2002	9/30/2005	3QFY2010	TBD	TBD	TBD	N/A	N/A		
FY 2010	7/16/2002	9/30/2005	3QFY2011	TBD	TBD	TBD	N/A	N/A		

## 2. Design, Construction, and D&D Schedule

# **RLUOB Facility**

	(fiscal quarter or date)							
			PED					D&D
	CD-0	CD-1	Complete C	D-2	CD-3	CD-4	D&D Start	Complete
FY 2011	7/16/2002	5/18/2005	N/A	10/21/2005	10/21/2005	2/28/2010	N/A	N/A
FY 2012	7/16/2002	5/18/2005	N/A	10/21/2005	10/21/2005	6/24/2010	N/A	N/A

# **RLUOB Equipment Installation**

	(fiscal quarter or date)								
			PED			D&D			
	CD-0	CD-1	Complete C	D-2	CD-3	CD-4	D&D Start	Complete	
FY 2011	7/16/2002	5/18/2005 1	2/19/2007 7	/17/2009	7/17/2009	4/30/2013	N/A	N/A	
FY 2012	7/16/2002	5/18/2005 1	2/19/2007 7	/17/2009	7/17/2009	4/30/2013	N/A	N/A	

<sup>&</sup>lt;sup>a</sup> CMR D&D is not part of the CMRR project scope and will not be initiated until final start-up of CMRR Nuclear Facility operations, currently projected to occur no earlier than FY 2022. Inclusion of CMR D&D in the FY 2012 budget request is premature.

#### **Nuclear Facility**

	(fiscal quarter or date)								
			PED					D&D	
	CD-0	CD-1	Complete C	D-2	CD-3	CD-4	D&D Start	Complete	
FY 2011	7/16/2002	5/18/2005	12/19/2007	TBD	TBD	TBD	N/A	N/A	
FY 2012	7/16/2002	5/18/2005	12/19/2007	4Q FY2012	4Q FY2012	TBD	N/A	N/A	

CD-1 – Approve Alternative Selection and Cost Range

CD-2 – Approve Performance Baseline

CD-3 – Approve Start of Construction

CD-4 – Approve Start of Operations or Project Closeout

D&D Start – Start of Demolition & Decontamination (D&D) work

D&D Complete – Completion of D&D work

#### **3.** Baseline and Validation Status

	(dollars in thousands)								
		TEC, Final							
	TEC,	Design/		OPC	OPC,				
	PED	Construction T	EC, Total	Except D&D	D&D OPC,	Total	TPC		
FY 2004	N/A	N/A	500,000	100,000 N	/A N	/A	600,000		
FY 2005	N/A	N/A	500,000	100,000 N	/A N	/A	600,000		
FY 2006	N/A	N/A	750,000	100,000 N	/A N	/A	850,000		
FY 2007	N/A	N/A	738,097	100,000 N	/A N	/A	838,097		
FY 2008	65,939	672,158	738,097	100,000 N	/A N	/A	838,097		
FY 2009	TBD	TBD	TBD	TBD	N/A	TBD	TBD		
FY 2010	65,138	TBD	TBD	TBD	N/A	TBD	TBD		

#### **RLOUB** Facility

	(dollars in thousands)								
		TEC, Final							
	TEC,	Design/		OPC	OPC,				
	PED	Construction T	TEC, Total	Except D&D	D&D OPC,	Total	TPC		
FY 2011	N/A	159,130	159,130	4,870	N/A	4,870	164,000		
FY 2012	N/A	159,130	159,130	4,870	N/A	4,870	164,000		

#### **RLUOB Equipment Installation**

RECOD Equipment instantion										
	(dollars in thousands)									
		TEC, Final								
	TEC,	Design/		OPC	OPC,					
	PED	Construction 7	FEC, Total	Except D&D	D&D OPC,	Total	TPC			
FY 2011	N/A	152,900	152,900	46,500	N/A	46,500	199,400			
FY 2012	N/A	152,900	152,900	46,500	N/A	46,500	199,400			

## **Nuclear Facility**

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	(dollars in thousands)									
		TEC, Final								
	TEC,	Design/		OPC	OPC,					
	PED	Construction 7	TEC, Total	Except D&D	D&D OPC	C, Total	TPC			
FY 2011	65,138	TBD	TBD	TBD	N/A	TBD	TBD			
		3,239,862-	3,305,000 -	405,000-		405,000-	3,710,000 -			
FY 2012	65,138	5,169,862	5,235,000	625,000 N/	А	625,000	5,860,000			

#### 4. Project Description, Justification, and Scope

#### **Project Description**

The CMRR Project seeks to relocate and consolidate mission critical analytical chemistry, material characterization (AC/MC), and actinide research and development (R&D) capabilities, as well as providing special nuclear material (SNM) storage and large vessel handling capabilities to ensure continuous national security mission support capabilities at LANL.

#### Justification

In January 1999, the NNSA approved a strategy for managing risks at the CMR Building. This strategy recognized that the 50-year-old CMR Facility could not continue to support its mission at an acceptable level of risk to public and worker health and safety without operational restrictions. In addition, the strategy committed NNSA and LANL to manage the existing CMR Building to a planned end of life and to develop long-term facility and site plans to replace and relocate CMR capabilities elsewhere at LANL as necessary to maintain support of national security missions. The CMR capabilities are currently substantially restricted; additionally, in order to reduce costs and risks in operating the aging CMR facility, wing consolidation has occurred. These operational restrictions preclude the full implementation of the level of operations DOE/NNSA requires as documented through the Record of Decision for the 2008 LANL Site-Wide Environmental Impact Statement, and in the 2008 Complex Transformation Supplemental Programmatic Environmental Impact Statement. The CMRR project will relocate mission-critical CMR capabilities at LANL to Technical Area (TA)-55 near the existing Plutonium Facility (Building PF-4). The CMRR Project will also provide for SNM storage capabilities in order to sustain national security missions at LANL, and reduce risks to the public and workers.

## Scope

The CMRR project consists of designing, constructing and achieving operational readiness for two discrete facilities to meet the national security missions assigned to LANL.

- RLUOB: Construction of a facility to house laboratory space of approximately 19,500 net square feet capable of handling radiological quantities of SNM; a utility building sized to provide utility services (including chilled and hot water, potable hot/cold water, compressed air, and process gases) for all CMRR facility elements; office space for CMRR workers located outside of perimeter security protection systems; and space for centralized TA-55 training activities. The RLUOB becomes fully functional and operational after the completion of the equipment installation effort for this facility in the REI phase.
- REI: Equipment installation includes gloveboxes, hoods, AC/MC instrumentation, security and communication hardware, and final facility tie-ins and operational readiness/turnover activities. The

performance baseline for the RLUOB Equipment Installation effort was approved on July 17, 2009. Funding for the design, procurement, and installation/construction of the RLUOB equipment installation portion is supported through this data sheet.

• NF: Consists of the design, construction, and operational readiness of approximately 22,500 net square feet of Hazard Category II, Security Category I nuclear laboratory space for analytical chemistry/material characterization and actinide research and development operations. Additionally, this facility will include SNM Storage and space to accommodate large vessel handling. Initial site utilities and construction support activities and all associated Special Facilities Equipment (SFE) for the NF, which includes gloveboxes, hoods, and materials transfer system, will be addressed in the baseline for the NF. The CMRR NF capabilities support virtually all nuclear programs at LANL, including pit certification and surveillance, pit manufacturing, and waste operations. Additionally, the CMRR NF will operate in an integrated fashion with the existing PF-4 facility to incorporate production efficiencies and minimize operating costs. The opportunity to improve performance in both the engineering and construction activities will continue to be evaluated to optimize cost and schedule performance.

In FY 2012, funding will be used for RLUOB equipment fabrication, installation, testing, and acceptance. This work will be physically completed by the end of FY 2012, with a transition to operations by 3Q FY 2013.

In FY 2012, funds will also be used to advance the design of the NF. Safety concerns for the NF previously identified by the Defense Nuclear Facilities Safety Board (DNFSB) were certified as resolved by the two agencies (DNFSB and NNSA) on September 14, 2009. To enable completion of dedicated NF design, design engineering and analysis will continue for a select number of safety components by manufacturers. Since the NF requires such a large effort, during FY 2011 within this Project Data Sheet, the project team is exploring options of dividing some of the work into smaller, more manageable, subprojects. These activities may include procurement/modification of site utilities, construction support infrastructure, and soil improvement work. No funding will be used for these purposes until a project performance baseline has been validated and the appropriate milestone in accordance with DOE O 413.3B has been approved for these smaller projects.

The project is being conducted in accordance with the project management requirements in DOE O 413.3B, Program and Project Management for the Acquisition of Capital Assets, and all appropriate project management requirements have been met.

Funds appropriated for this project may be used to provide independent assessments and other direct support determined necessary by the FPD for the planning and execution of this project.

## 5. Financial Schedule

# **RLUOB Facility**

U U	(dollars in thousands)						
App	ropriations	Obligations	Costs				
TEC (PED and Construction) <sup>a</sup>							
FY 2004	9,941	0	0				
FY 2005	39,684	49,625	ů 0				
FY 2006	54,450	54,450	15,933				
FY 2007	41,933	41,933	29,364				
FY 2008	13,122	13,122	50,085				
FY 2009	0	0	58,348				
FY 2010	0	0	4,393				
FY 2011	0	0	1,007				
Total, TEC	159,130	159,130	159,130				
OPC <sup>b</sup>							
FY 2007	1,153	1,153	0				
FY 2008	0	0	1,153				
FY 2009	3,717	3,717	2,455				
FY 2010	0	0	649				
FY 2011	0	0	613				
Total, OPC	4,870	4,870	4,870				
Total Project Cost (TPC)							
FY 2004	9,941	0	0				
FY 2005	39,684	49,625	0				
FY 2006	54,450	54,450	15,933				
FY 2007	41,933	41,933	29,364				
FY 2008	13,122	13,122	51,238				
FY 2009	4,870	4,870	60,803				
FY 2010	0	0	5,042				
FY 2011	0	0	1,620				
Total, TPC	164,000	164,000	164,000				

<sup>&</sup>lt;sup>a</sup> PED funding for RLUOB was provided under 03-D-103-01.

<sup>&</sup>lt;sup>b</sup> OPCs for CMRR were not segregated by project phase until FY 2009. Aggregate OPCs for earlier years are reported with the NF.

## **RLUOB Equipment Installation (REI)**

	(dollars in thousands)					
Арр	ropriations	Obligations	Costs			
Total Estimated Cost (TEC)						
PED 0		0	0			
Total, PED (PED 03-D-103-01)	0	0	(			
Final Design						
FY 2007	11,489	11,489	3,109			
FY 2008	2,009	2,009	9,260			
FY 2009	0	0	1,129			
Total, Final Design (TEC 04-D-125)	13,498	13,498	13,498			
Total, Design	13,498	13,498	13,498			
Construction						
FY 2008	19,604	19,604	0			
FY 2009	4,998 4	, , , , , , , , , , , , , , , , , , , ,	941			
FY 2010	40,000	40,000	36,122			
FY 2011	59,000 5	,	2,084			
FY 2012	15,800 1	5,800 1	7,255			
Total, Construction (TEC 04-D-125)	139,402	139,402	139,402			
TEC						
FY 2007	11,489	11,489	3,109			
FY 2008	21,613	21,613	9,260			
FY 2009	4,998 4		070			
FY 2010	40,000 4		6,122			
FY 2011	59,000 5	9,000 8	2,084			
FY 2012 Total, TEC	<u> </u>	5,800 1 5 2,900 15	7,255			
	- ,		<u>-</u>			
Other Project Cost (OPC)						
OPC except D&D <sup>a</sup>						
FY 2009	3,079	3,079	5,602			
FY 2010	10,700	10,700	8,177			
FY 2011	14,100	14,100	14,100			
FY 2012	14,123	14,123	14,123			
FY 2013	4,498	4,498	4,498			
Total, OPC except D&D	46,500	46,500	46,500			
D&D						
0	0		0			
Total, D&D	0	0	C			

<sup>&</sup>lt;sup>a</sup> OPCs for CMRR were not segregated by project phase until FY 2009. Aggregate OPCs for earlier years are reported with the NF.

	(dollars in thousands)					
Арр		oligations	Costs			
OPC	•					
FY 2009	3,079	3,079	5,602			
FY 2010	10,700	10,700	8,177			
FY 2011	14,100	14,100	14,100			
FY 2012	14,123	14,123	14,123			
FY 2013	4,498	4,498	4,498			
Total, OPC	46,500	46,500	46,500			
Total Project Cost (TPC)						
FY 2007	11,489	11,489	3,109			
FY 2008	21,613	21,613	9,260			
FY 2009	8,077	8,077	10,672			
FY 2010	50,700 5	0,700 4	4,299			
FY 2011	73,100 7	3,100 9	6,184			
FY 2012	29,923 2	9,923 3	1,378			
FY 2013	4,498 4,	498 4,	498			
Total, TPC	199,400 19	9,400 19	9,400			
Nuclear Facility						
Total Estimated Cost (TEC)						
PED						
FY 2004	9,500	0	0			
FY 2005	13,567	23,067	1,848			
FY 2006	27,910	27,910	19,147			
FY 2007	14,161	14,161	27,213			
FY 2008	0	0	15,079			
FY 2009	0	0	-329			
FY 2010	0	0	44			
FY 2011	0	0	2,136			
Total, PED (PED 03-D-103-01)	65,138	65,138	65,138			
Final Design	39,406	39,406 1	5,454			
FY 2008	92,196	92,196 4	5,972			
FY 2009	57,000	57,000 6	2,252			
FY 2010	166,000	166,000 10	4,500			
FY 2011	TBD	TBD TBD				
FY 2012	TBD	TBD TBD				
FY 2013	TBD	TBD TBD				
FY 2014	TBD	TBD TBD				
FY 2015	TBD	TBD TBD				
Total, Final Design (TEC 04-D-125) Total, Design	TBD	TBD TBD				
Construction						
FY 2011	0	0	0			
FY 2012	TBD	TBD TBD	Ŭ			
FY 2013	TBD	TBD TBD				
FY 2014	TBD	TBD TBD				
FY 2015	TBD	TBD TBD				
FY 2016	TBD	TBD TBD TBD TBD				
FY 2017	TBD	TBD TBD				
Total, Construction, (TEC 04-D-125)	TBD	TBD TBD				
. oui, construction, (120 07 D 120)	100					

	(dollars in thousands)					
App	ropriations	Obligations	Costs			
TEO						
TEC	0.500	0.0				
FY 2004	9,500		0.40			
FY 2005	13,567	23,067 1	,848			
FY 2006	27,910	27,910 1	9,147			
FY 2007	14,161	14,161 2	7,213			
FY 2008	39,406	39,406 3	0,533			
FY 2009	92,196	92,196 4	5,643			
FY 2010	57,000	57,000 6	2,296			
FY 2011	166,000	166,000 10	6,636			
FY 2012	TBD	TBD TBD				
FY 2013	TBD	TBD TBD				
FY 2014	TBD	TBD TBD				
FY 2015	TBD	TBD TBD				
FY 2016	TBD	TBD TBD				
FY 2017	TBD	TBD TBD				
Total TEC	TBD	TBD TBD				
Other Project Cost (OPC)						
OPC except D&D						
FY 2002	1,665 1,	, 665 1,	665			
FY 2003	12,174 1	2,174 1	2,174			
FY 2004	7,214 7,		214			
FY 2005	7,164 7,		164			
FY 2006	1,400 1		064			
FY 2007	3,712 3		408			
FY 2008	5,712 5, 0	, , , , , , , , , , , , , , , , , , , ,				
			1,105			
FY 2009	1,205 1,		018			
FY 2010	1,200	1,200	913			
FY 2011	2,500 2,		594			
FY 2012	TBD	TBD	TBD			
FY 2013	TBD	TBD	TBD			
FY 2014	TBD	TBD	TBD			
FY 2015	TBD	TBD	TBD			
FY 2016	TBD	TBD	TBD			
FY 2017	TBD	TBD	TBD			
Total, OPC except D&D	TBD	TBD	TBD			
D&D TBD		TBD	TBD			
Total, D&D	TBD	TBD	TBD			
OPC						
FY 2002	1,665 1,	· · · · · · · · · · · · · · · · · · ·	665			
FY 2003	12,174 1	2,174 1	2,174			
FY 2004	7,214 7,		214			
FY 2005	7,164 7,	, 164 7,	164			
FY 2006	1,400	1,400	1,064			
FY 2007	3,712	3,712	1,408			
FY 2008	0	0	1,105			
FY 2009	1,205	1,205	1,018			
FY 2010	1,200	1,200	913			
	, , , ,	2				

	(dollars	in thousands)	
App		ligations	Costs
FY 2011	2,500 2,	500 2,	594
FY 2012	TBD	TBD	TBD
FY 2013	TBD	TBD	TBD
FY 2014	TBD	TBD	TBD
FY 2015	TBD	TBD	TBD
FY 2016	TBD	TBD	TBD
FY 2017	TBD	TBD	TBD
Total, OPC	TBD	TBD	TBD
Total Project Cost (TPC)			
FY 2002	1,665 1,	665 1,	665
FY 2003	12,174 1	2,174 1	2,174
FY 2004	16,714 7,	214 7,	214
FY 2005	20,731	30,231	9,012
FY 2006	29,310	29,310	20,211
FY 2007	17,873	17,873	28,621
FY 2008	39,406	39,406	31,638
FY 2009	93,401	93,401	46,661
FY 2010	58,200	58,200	63,209
FY 2011	168,500	168,500	109,230
FY 2012	TBD	TBD	TBD
FY 2013	TBD	TBD	TBD
FY 2014	TBD	TBD	TBD
FY 2015	TBD	TBD	TBD
FY 2016	TBD	TBD	TBD
FY 2017	TBD	TBD	TBD
Total, TPC	TBD	TBD	TBD
Overall Project			
Total Estimated Cost (TEC)			
PED <sup>a</sup>			
FY 2004	9,500	0	0
FY 2005	13,567	23,067	1,848
FY 2006	27,910	27,910	19,147
FY 2007	14,161	14,161	27,213
FY 2008	0	0	15,079
FY 2009	0	0	-329
FY 2010	0	0	44
FY 2011	0	0	2,136
Total, PED (PED 03-D-103-01)	65,138	65,138	65,138
Final Design & Construction			
(TEC 04-D-125)			
(TEC 04-D-125) FY 2004	9,941	0	0
FY 2004 FY 2005	39,684	49,625	0
FY 2005 FY 2006			
FY 2006 FY 2007	54,450 53,422	54,450 53,422	15,933 32,473
FY 2008	74,141	74,141	74,799

<sup>a</sup> CMRR RLUOB, SFE and NF have completed preliminary design using PED funds included 03-D-103. Design beyond preliminary will be completed using TEC funds included in 04-D-125.

	(0	dollars in thousands)	
Арр	ropriations	Obligations	Costs
FY 2009	97,194	97,194	109,390
FY 2010	97,000	97,000	102,767
FY 2011	225,000	225,000	187,591
FY 2012	TBD	TBD	TBD
FY 2013	TBD	TBD	TBD
FY 2014	TBD	TBD	TBD
FY 2015	TBD	TBD	TBD
FY 2016	TBD	TBD	TBD
FY 2017	TBD	TBD	TBD
Total, Final Design & Construction			
(TEC 04-D-125)	TBD	TBD	TBD
TEO			
TEC EV 2004	10 //1	Ο	0
FY 2004	19,441	0	0
FY 2005	53,251	72,692	1,848
FY 2006	82,360	82,360	35,080
FY 2007	67,583	67,583	59,686
FY 2008	74,141	74,141	89,878
FY 2009	97,194	97,194	109,061
FY 2010	97,000	97,000	102,811
FY 2011	225,000	225,000	189,727
FY 2012	TBD	TBD	TBD
FY 2013	TBD	TBD	TBD
FY 2014	TBD	TBD	TBD
FY 2015	TBD	TBD	TBD
FY 2016	TBD	TBD	TBD
FY 2017	TBD	TBD	TBD
Total, TEC <sup>a</sup>	TBD	TBD TBI	)
Other Project Cost (OPC)			
OPC Except D&D			
FY 2002	1,665	1,665	1,665
FY 2003	12,174	12,174	12,174
FY 2004	7,214	7,214	7,214
FY 2005	7,164	7,164	7,164
FY 2006	1,400	1,400	1,064
FY 2007	4,865	4,865	1,408
FY 2008	0	0	2,258
FY 2009	8,001	8,001	9,075
FY 2010	11,900	11,900	9,739
FY 2011	16,600	16,600	17,307
FY 2012	TBD	TBD	TBD
FY 2013	TBD	TBD	TBD
FY 2014	TBD	TBD	TBD
FY 2015	TBD	TBD	TBD
FY 2016	TBD	TBD	TBD
FY 2017	TBD	TBD	TBD
Total, OPC Except D&D	TBD	TBD	TBD
· 1			

<sup>a</sup> Section 9 provides preliminary pre-conceptual cost and schedule information for CMR D&D.

App     ropriations     Obligations     Costs       D&D     N/A     N/A     N/A     N/A       OPC		(0	(dollars in thousands)			
Total, D&D     N/A     N/A     N/A       OPC     1,665     1,665     1,665     1,665       FY 2003     12,174     12,174     12,174     12,174       FY 2004     7,214     7,214     7,214     7,214       FY 2005     7,164     7,164     7,164     7,164       FY 2006     1,400     1,400     1,064       FY 2008     0     0     2,258       FY 2009     8,001     8,001     9,075       FY 2010     11,900     11,900     9,0739       FY 2010     11,900     11,900     9,0739       FY 2010     11,900     11,900     9,0739       FY 2011     16,600     16,600     17,307       FY 2012     TBD     TBD     TBD       FY 2013     TBD     TBD     TBD       FY 2014     TBD     TBD     TBD     TBD       FY 2017     TBD     TBD     TBD     TBD       Total Project Cost (TPC)     FY 2005     60,415     79,856		ropriations	Obligations	Costs		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	D&D					
FY 2002 $1,665$ $1,665$ $1,665$ $1,665$ FY 2003 $12,174$ $12,174$ $12,174$ $12,174$ FY 2005 $7,164$ $7,214$ $7,214$ $7,214$ FY 2006 $1,400$ $1,400$ $1,000$ $1,064$ FY 2007 $4,865$ $4,865$ $1,408$ FY 200800 $2,258$ FY 2010 $11,900$ $11,900$ $9,075$ FY 2010 $11,900$ $16,600$ $17,307$ FY 2011 $16,600$ $16,600$ $17,307$ FY 2012TBDTBDTBDFY 2013TBDTBDTBDFY 2014TBDTBDTBDFY 2015TBDTBDTBDFY 2016TBDTBDTBDFY 2017TBDTBDTBDTotal, OPC Except D&DTBDTBDTBDTotal Project Cost (TPC)72,44872,44861,094FY 2005 $60,415$ $79,856$ $9,012$ FY 2006 $83,760$ $83,760$ $36,144$ FY 2007 $72,448$ $72,448$ $61,094$ FY 2008 $74,141$ $74,141$ $92,136$ FY 2010 $108,900$ $108,900$ $112,550$ FY 2010 $108,900$ $108,900$ $122,550$ FY 2011 $241,600$ $241,600$ $207,034$ FY 2013 $300,000$ $350,000$ TBDFY 2014 $350,000$ $350,000$ TBDFY 2015 $350,000$ $350,000$ TBDFY 2016 $350,$	Total, D&D	N/A	N/A	N/A		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	OPC					
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2002	1,665	1,665	1,665		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2003	12,174	12,174	12,174		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $						
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			7,164			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2006	1,400	1,400	1,064		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2007	4,865	4,865	1,408		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2008	0	0			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2009	8,001				
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2010	11,900	11,900			
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2011	16,600	16,600	17,307		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2012	TBD	TBD	TBD		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2013	TBD	TBD	TBD		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2014	TBD	TBD	TBD		
$\begin{array}{c c c c c c c c c c c c c c c c c c c $	FY 2015	TBD	TBD	TBD		
Total, OPC Except D&DTBDTBDTBDTBDTotal Project Cost (TPC)FY 20021,6651,6651,665FY 200312,17412,17412,174FY 200426,6557,2147,214FY 200560,41579,8569,012FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2010105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2016	TBD	TBD	TBD		
Total Project Cost (TPC)     FY 2002   1,665   1,665   1,665     FY 2003   12,174   12,174   12,174     FY 2004   26,655   7,214   7,214     FY 2005   60,415   79,856   9,012     FY 2006   83,760   83,760   36,144     FY 2007   72,448   72,448   61,094     FY 2008   74,141   74,141   92,136     FY 2010   105,195   105,195   118,136     FY 2010   108,900   102,550   FY 2011   241,600   241,600   207,034     FY 2012   300,000   300,000   TBD   TBD   TBD   TBD     FY 2015   350,000   350,000   TBD   FBD   TBD   TBD	FY 2017	TBD	TBD	TBD		
FY 20021,6651,6651,665FY 200312,17412,17412,174FY 200426,6557,2147,214FY 200560,41579,8569,012FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	Total, OPC Except D&D	TBD	TBD	TBD		
FY 20021,6651,6651,665FY 200312,17412,17412,174FY 200426,6557,2147,214FY 200560,41579,8569,012FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	Total Project Cost (TPC)					
FY 200312,17412,17412,174FY 200426,6557,2147,214FY 200560,41579,8569,012FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD		1,665	1,665	1,665		
FY 200426,6557,2147,214FY 200560,41579,8569,012FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD						
FY 200560,41579,8569,012FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2004					
FY 200683,76083,76036,144FY 200772,44872,44861,094FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2005					
FY 200874,14174,14192,136FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000300,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2006					
FY 2009105,195105,195118,136FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2007	72,448	72,448	61,094		
FY 2010108,900108,900112,550FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2008	74,141	74,141	92,136		
FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2009	105,195	105,195	118,136		
FY 2011241,600241,600207,034FY 2012300,000300,000TBDFY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2010	108,900	108,900	112,550		
FY 2013300,000300,000TBDFY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2011	241,600	241,600			
FY 2014350,000350,000TBDFY 2015350,000350,000TBDFY 2016350,000350,000TBDFY 2017TBDTBDTBD	FY 2012	300,000	300,000	TBD		
FY 2015 350,000 350,000 TBD   FY 2016 350,000 350,000 TBD   FY 2017 TBD TBD TBD	FY 2013	300,000	300,000	TBD		
FY 2016     350,000     350,000     TBD       FY 2017     TBD     TBD     TBD	FY 2014			TBD		
FY 2016     350,000     TBD       FY 2017     TBD     TBD	FY 2015		350,000	TBD		
FY 2017 TBD TBD TBD				TBD		
	Total, TPC					

# 6. Details of Project Cost Estimate

	(dolla	rs in thousan	lds)
	Current		Original
	Total		Validated
	Estimate	Estimate	Baseline
Total Estimated Cost (TEC)			
Design (PED & TEC)			
Design TBD		465,276	TBD
Contingency TBD		80,000	TBD
Total, Design (PED 03-D-103, TEC 04-D-125)	TBD	545,276	TBD
Construction			
Site Preparation	TBD	300,000	TBD
Equipment TB	D	235,000	TBD
Other Construction	TBD	1,606,823	TBD
Contingency TB	D	702,000	TBD
Total, Construction	TBD	2,843,823	TBD
Total, PED & TEC (PED 03-D-103, TEC 04-D-125)	TBD	/ /	TBD
Contingency, TEC	TBD	782,000	TBD
Other Project Cost (OPC)			
OPC except D&D			
Conceptual Planning	TBD	5,000	TBD
Conceptual Design	TBD	26,497	TBD
Start-Up TBD		280,404	TBD
Contingency TBD		94,000	TBD
Total, OPC except D&D	TBD	405,901	TBD
D&D			
D&D N/A		N/A	N/A
Contingency N/	А	N/A	N/A
Total, D&D	N/A	N/A	N/A
		TDD	TDD
Total, OPC	TBD TBD	TBD TBD	TBD TBD
Contingency, OPC	IBD	IBD	IBD
Total, TPC	3,710,000-		
	5,860,000	TBD 1	ГВ D
Total, Contingency	TBD	TBD	TBD

# 7. Schedule of Appropriation Requests

	(dollars in thousands)									
		Prior Years	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	Outyears	Total
FY 2005	TEC	159,130								159,130
RLOUB	OPC	4,068	802							4,870
Baseline	TPC	163,198	802	0	0	0	0	0	0	164,000
FY 2009	TEC	38,100	40,000	59,000	15,800					152,900
REI	OPC	5,602	11,900	12,100	12,400	4,498				46,500
Baseline	TPC	43,702	51,900	71,100	28,200	4,498	0	0	0	199,400
	TEC	159,130								159,130
FY 2010	OPC	4,068	802							4,870
RLOUB	TPC	163,198	802	0	0	0	0	0	0	164,000
	TEC	38,100	40,000	59,000	15,800					152,900
FY 2010	OPC	5,602	11,900	12,100	12,400	4,498				46,500
REI	TPC	43,702	51,900	71,100	28,200	4,498	0	0	0	199,400
	TEC	131,600	57,500	129,000	289,200	300,000	300,000	300,000	1,504,631	3,011,931
FY 2010	OPC	34,481	2,000	2,500	3,000	3,500	4,000	4,550	300,500	354,531
NF	TPC	166,081	59,500	131,500	292,200	303,500	304,000	304,550	1,805,131	3,366,462
	TEC	38,100	40,000	59,000	15,800					152,900
FY 2011	OPC	5,602	11,900	12,100	12,400	4,498				46,500
REI	TPC	43,702	51,900	71,100	28,200	4,498	0	0	0	199,400
	TEC	131,600	57,500	166,000	289,200	300,000	300,000	300,000	1,532,769	3,077,069
FY 2011	OPC	34,481	2,000	2,500	3,000	3,500	4,000	4,550	300,500	354,531
NF	TPC	166,081	59,500	168,500	292,200	303,500	304,000	304,550	1,833,269	3,431,600
	TEC	38,100	40,000	59,000	15,800					152,900
FY 2012	OPC	3,079	10,700	14,100	14,123	4,498				46,500
REI	TPC	41,179	50,700	73,100	29,923	4,498	0	0	0	199,400
	TEC	196,740	57,000	166,000	TBD	TBD	TBD	TBD	TBD	TBD
FY 2012	OPC	34,534	1,200	2,500	TBD	TBD	TBD	TBD	TBD	TBD
NF	TPC	231,274	58,200	168,500	TBD	TBD	TBD	TBD	TBD	TBD

(dollars in thousands)

## 8. Related Operations and Maintenance Funding Requirements

Start of Operation or Beneficial Occupancy (fiscal quarter or date)	4QFY2009 <sup>a</sup>
Expected Useful Life (number of years)	50
Expected Future Start of D&D of this capital asset (fiscal quarter)	TBD

## (Related Funding requirements)

	(dollars in thousands)			
	Annua	l Costs	Life Cyc	ele Costs
	Current	Previous	Current	Previous
	Total	Total	Total	Total
	Estimate	Estimate	Estimate	Estimate
Operations TBD		TBD	TBD	TBD
Maintenance TBD		TBD	TBD	TBD
Total, Operations & Maintenance	125,000	N/A	6,300,000	N/A

## 9. Required D&D Information

As directed by the DOE Acquisition Executive at CMRR CD-0, NNSA and LANL developed a pre-conceptual cost and schedule range for the D&D requirements of the existing CMR Building located at TA-3 during the CMRR conceptual design. The initial pre-conceptual cost estimate range for D&D of the CMR Building is approximately \$200,000 - \$350,000 (un-escalated FY 2004 dollars) with an associated schedule estimate range of 4-5 years. This information was presented as part of CMRR CD-1 per Secretarial direction issued at CD-0.

During the 3<sup>rd</sup> Quarter of FY 2005, the D&D of the existing CMR facility received CD-0 as a separate project in conjunction with CMRR CD-1 approval. Current Future Years Nuclear Security Program/Integrated Construction Program Plan (FYNSP/ICPP) funding profiles do not include the funding for the D&D of the CMR Facility. The NNSA will not initiate CMR D&D activities until completion and operational start-up of the CMRR Nuclear Facility, currently projected to be operational well after the FYNSP budget planning window. As such, budget formulation for the CMR D&D project is premature for the FY 2012 budget submission and will not be included in future CMRR Project Data Sheets. The D&D CMR Facility budget will occur upon the establishment of a project number and update of the FYNSP/ICPP in outyear budget cycles.

The CMR D&D commitment is reflected in this CPDS for completeness. However, as planning for this D&D activity matures, NNSA may elect to enable this effort as a separate project, execute it as an element of a wider project or program for a portfolio of D&D activities at LANL, or bundle it with other, yet undefined activities.

<sup>&</sup>lt;sup>a</sup> This date corresponds to the beneficial occupancy of the RLUOB construction phase only. NF date and related funding requirements are TBD.

Area	Gross Square Feet (gsf)
TA-55-400 (Radiological Laboratory & Office Building)	187,127
TA-55-440 (Central Utility Building)	20,998
TA-55-500 (Security Category I/Hazard Category II Nuclear Facility)	395,230 (beneficial occupancy post
	FY 2018)
TA-3, Building 29 (CMR)	(571,458)
LANL "banked excess" necessary to offset one-for-one requirement	31,897

Name and site location of existing facility to be replaced: CMR (TA-3, Building 29)

When originally conceptualized, the replacement facilities for CMR, the RLUOB and NF, were thought to result in a significantly smaller space than the CMR facilities being replaced. However, owing to needs to meet modern health, waste, safety, and security functions, the combined space for CMRR is now expected to exceed the space for CMR.

The CMRR has incorporated the NNSA Fiscal Year Banking of Excess Facilities Elimination, New Construction and Net Banked Square Footage reporting process that documents, through the DOE Facilities Information Management System (FIMS), the data associated with new construction added by the RLUOB and the NF. The new construction square footage is accounted for once beneficial occupancy is received and is subsequently offset with LANL "banked excess" additional D&D space to meet the "one-for-one" requirement within the FY 2002 Energy and Water and Water Development Appropriations Bill conference report (107-258). Given planned new construction (including CMRR) at LANL and planned excess facility reductions, the excess program is projecting it will have banked well over a million and a half square feet before CMR is demolished. The gross square feet of the CMRR NF is a preliminary estimate and will be updated as the design develops.

# **10. Acquisition Approach**

Design and Construction Management will be implemented by Los Alamos National Security through the LANL Management and Operating Contract. The CMRR Acquisition Strategy is based on procurement strategies specific for each major component of the CMRR project in order to mitigate overall technical and schedule risk. The RLUOB was implemented via LANL-issued design-build subcontract based on performance specifications developed during CMRR Conceptual Design. The SFE associated with the RLUOB and the NF will be implemented via one or more LANL-issued final designbid-construction contracts. Design-build contracting may also be employed for discrete, well defined, procurements. Other contracting mechanisms may also be utilized that are best suited, after analysis for individual and discrete procurements. The performance baseline will be established upon completion of final design for each portion of the Project. Options are being considered for construction of the main NF structure, but the current plan is to acquire one or more qualified specialty contractors through the site M&O under commercial terms.