

**09-SC-73, Interdisciplinary Science Building, Phase I, Brookhaven National Laboratory (BNL),  
Upton, New York  
Project Data Sheet is for PED/Construction**

**1. Significant Changes**

The most recent DOE O 413.3A approved Critical Decision (CD) is CD-1, Approve Alternative Selection and Cost Range, which was approved on September 23, 2008, with a preliminary Total Estimated Cost (TEC) range of \$61,300,000 to \$66,300,000.

A Federal Project Director with certification level II has been assigned to this project.

This Project Data Sheet is a continuation of a PED PDS proceeding to construction. The significant change is that the estimated size range of the new facility has been revised downward due to volatile market conditions and uncertainties in escalation. The final scope will be established at CD-2. The TEC range remains unchanged.

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

(fiscal quarter or date)

	CD-0	CD-1	(Design/PED Complete)	CD-2	CD-3	CD-4	D&D Start	D&D Complete
FY 2009	09/18/2007	2Q FY 2009	3Q FY 2010	2Q FY 2010	TBD	TBD	TBD	TBD
FY 2010	09/18/2007	09/23/2008 <sup>a</sup>	2Q FY 2010	2Q FY 2010	TBD	TBD <sup>b</sup>	TBD	TBD

CD-0 – Approve Mission Need

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, PED	TEC, Construction	TEC, Total <sup>c</sup>	OPC Except D&D <sup>d</sup>	OPC, D&D	OPC, Total	TPC
FY 2009	8,240	TBD	TBD	500	TBD	TBD	TBD
FY 2010	8,240	TBD	TBD	500	TBD	TBD	TBD

<sup>a</sup> The Department of Energy was under a continuing resolution for more than 5 months in FY 2009. As a result, this project did not receive PED funds and was not able to begin preliminary design until April 2009.

<sup>b</sup> The preliminary CD-4 range is 3Q FY 2012 to 4Q FY 2013.

<sup>c</sup> Preliminary Total Estimated Cost (TEC) range is \$61,300,000 to \$66,300,000. No construction funds, other than for early site preparation activities, will be used until the project performance baseline has been validated and CD-3 approved.

<sup>d</sup> Other Project Costs of \$500,000 are funded through laboratory overhead.

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

A large number of scientists and researchers at BNL are conducting science in left-over Army barracks that were modified to serve as laboratories and offices. These buildings are over 50 years old and have numerous functional and maintenance problems including wood rot, poor heat and ventilation, roof leaks, inadequate electrical services, and cramped space. Major investment would be needed to continue usage of these buildings that would otherwise be better invested in a new modern facility. In addition, the decentralized distribution of staff in old, ineffective buildings is demoralizing and decreases effective exchange of ideas between staff members.

The proposed Interdisciplinary Science Building, Phase I Project will construct 65,000 to 90,000 square feet high efficiency laboratories, offices, and support functions for energy-related research and development (R&D) in a new sustainable building. Efficient heating, ventilation, and air conditioning (HVAC) systems will be installed to support cutting edge research and the operation of sensitive instrumentation. The scope of the project includes design, construction, and start-up of the new facility, extension of existing site utilities to the new building, and demolition of a sufficient amount of excess facilities including building 185, to meet offsetting space requirements for the new building.

This type of space is limited at BNL and forces collaborative efforts into ad-hoc, sub-standard facilities which often limits the research. The proposed building will consolidate staff, improve employee moral, help retain and attract scientific talent, and improve capability to meet the DOE mission. This building will be designed to encourage peer interactions and collaborative visits by staff around the laboratory.

FY 2009 funds will be used for preliminary and final design and establishment of the performance baseline. FY 2010 funds will be used to continue construction activities.

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

#### 5. Financial Schedule

(dollars in thousands)

	Appropriations	Obligations	Recovery Act Costs	Costs
Total Estimated Cost (TEC)				
PED <sup>a</sup>				
FY 2009	8,240	8,240	—	4,000
FY 2010	—	—	—	4,240
Total, PED	8,240	8,240	—	8,240

<sup>a</sup> All design will be completed in less than 18 months.

(dollars in thousands)

	Appropriations	Obligations	Recovery Act Costs	Costs
<b>Construction</b>				
FY 2009 Recovery Act	18,673	18,673	500 <sup>a</sup>	—
FY 2010	39,387	39,387	2,000	—
Outyears	TBD	TBD	16,173	TBD
<b>Total, Construction</b>	<b>TBD</b>	<b>TBD</b>	<b>18,673</b>	<b>TBD</b>
<b>TEC</b>				
FY 2009	8,240	8,240	—	4,000
FY 2009 Recovery Act	18,673	18,673	500	—
FY 2010	39,387	39,387	2,000	4,240
Outyears	TBD	TBD	16,173	TBD
<b>Total, TEC</b>	<b>TBD</b>	<b>TBD</b>	<b>18,673</b>	<b>TBD</b>
<b>Other Project Cost (OPC)<sup>b</sup></b>				
FY 2008	500	500	—	500
<b>Total, OPC</b>	<b>500</b>	<b>500</b>	<b>—</b>	<b>500</b>
<b>Total Project Cost (TPC)</b>				
FY 2008	500	500	—	500
FY 2009	8,240	8,240	—	4,000
FY 2009 Recovery Act	18,673	18,673	500	—
FY 2010	39,387	39,387	2,000	4,240
Outyears	TBD	TBD	16,173	TBD
<b>Total, TPC</b>	<b>TBD</b>	<b>TBD<sup>c</sup></b>	<b>18,673</b>	<b>TBD</b>

<sup>a</sup> Involves early site preparation activities as approved by the Acquisition Executive.

<sup>b</sup> Other project Costs of \$500,000 are funded through laboratory overhead.

<sup>c</sup> This project has not yet received approval of CD-2; therefore, construction and TEC estimate displayed only include anticipated activities through FY 2010. Construction funds, other than for early site preparation activities, will not be executed.

## 6. Details of Project Cost Estimate

(dollars in thousands)

	Current Total Estimate	Previous Total Estimate	Original Validated Baseline
Total Estimated Cost (TEC)			
Design (PED)			
Design	6,918	7,485	N/A
Contingency	1,322	755	N/A
Total, PED	8,240	8,240	N/A
Construction			
Site Preparation	1,500	N/A	N/A
Other Construction	46,817	N/A	N/A
Contingency	9,743	N/A	N/A
Total, Construction	58,060	N/A	N/A
Total, TEC <sup>a</sup>	66,300	8,240	N/A
Contingency, TEC	11,065	755	N/A
Other Project Cost (OPC) <sup>b</sup>			
OPC except D&D			
Conceptual Planning	50	50	N/A
Conceptual Design	450	383	N/A
Start-Up	—	—	N/A
Contingency	—	67	N/A
Total, OPC except D&D	500	500	N/A
Contingency, OPC	—	67	
Total, TPC	66,800	8,740	N/A
Total, Contingency	11,065	822	N/A

## 7. Schedule of Project Costs

For schedule of project costs, see Section 5, “Financial Schedule.”

<sup>a</sup> This project has not yet received approval of CD-2; therefore, construction and TEC estimate displayed only include anticipated activities through FY 2010. Construction funds, other than for early site preparation activities, will not be executed without Acquisition Executive approval. The preliminary total estimated cost range is \$61,300,000 to \$66,300,000.

<sup>b</sup> Other Project Costs of \$500,000 are funded through laboratory overhead.

## 8. Related Operations and Maintenance Funding Requirements

Start of Operation or Beneficial Occupancy (fiscal quarter or date)	4 Q FY 2013
Expected Useful Life (number of years)	50
Expected Future Start of D&D of this capital asset (fiscal quarter)	4 Q FY 2063

### (Related Funding requirements)

(dollars in thousands)

	Annual Costs		Life Cycle Costs	
	Current Total Estimate	Previous Total Estimate	Current Total Estimate	Previous Total Estimate
Operations	16,500	N/A	660,000	N/A
Maintenance	1,500	N/A	60,000	N/A
Total, Operations & Maintenance	18,000	N/A	720,000	N/A

## 9. Required D&D Information

The project will demolish a sufficient amount of excess facilities to meet space offsetting requirements for the new building at the BNL site. The details of which specific buildings will be demolished will be developed as part of the performance baseline for CD-2.

## 10. Acquisition Approach

Design will be performed by an architect-engineer (A-E) firm with the subcontract managed by the BNL operating contractor. The A-E firm will be competitively selected based on qualifications. After completion of the design, the BNL operating contractor will solicit offers from prospective large and small business general construction firms and award a firm fixed price construction subcontract. Evaluation of bids will include consideration of each offeror's experience, safety record, and past performance in successfully completing similar construction projects. Award will then be made to the lowest priced, qualified, responsible, responsive bidder.

Site preparation, which includes clearing, utility isolation and relocation, and demolition of existing structures on the building site will be conducted under a separate subcontract to the BNL operating contractor. Demolition of excess facilities will be accomplished using either the BNL operating contractor's in-house resources or one of its basic ordering agreement subcontractors.