

**INTEGRATED OCEAN DRILLING PROGRAM
United States Implementing Organization
JOI Alliance**

**Joint Oceanographic Institutions, Inc.
Lamont-Doherty Earth Observatory of Columbia University
Texas A&M University**

**ANNUAL PROGRAM PLAN APPENDIX
FY07 to NSF**

For Time Period
1 October 2006 to 30 September 2007

**AMOUNT PROPOSED FY07: \$5,608,477 (SIC)
AMOUNT PROPOSED FY07: \$5,387,659 (POC)
TOTAL AMOUNT PROPOSED FY07: \$10,996,136 (POC + SIC)**

Respectfully Submitted to:
National Science Foundation



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1. EXECUTIVE SUMMARY

1.1. ANNUAL PROGRAM PLAN APPENDIX OVERVIEW

This IODP-USIO FY07 SIC Annual Program Plan Appendix outlines the U.S. Implementing Organization (USIO) scope of work for those Integrated Ocean Drilling Program (IODP) activities and deliverables for FY07 that are specifically covered under the U.S. Systems Integration Contract (SIC) OCE-0352500. The scope and budget justification for these activities were derived from the National Science Foundation (NSF) guidance to the USIO and the outcomes from other related discussions.

This Appendix is written as a companion to the “Integrated Ocean Drilling Program, United States Implementing Organization, JOI Alliance (Joint Oceanographic Institutions, Inc., Lamont-Doherty Earth Observatory of Columbia University, and Texas A&M University¹) Annual Program Plan FY07 to IODP-MI,” submitted on 31 July 2006, which contains requests for USIO Science Operation Cost (SOC) and Platform Operation Cost (POC) activities.

The “Executive Summary” section of this Appendix provides budget definitions, the guidance received from NSF on 13 February 2006 related to SIC costs, and details regarding the IODP-USIO FY07 Annual Program Plan SOC, POC, and SIC budget request organized by institutional (e.g., Joint Oceanographic Institutions, Inc. [JOI], Lamont-Doherty Earth Observatory [LDEO] of Columbia University, and Texas A&M University [TAMU]) breakdowns for each work breakdown element (WBE).

The Executive Summary presentation is meant to provide NSF Program Managers with a breakdown of the JOI Alliance institutional budget requests, which relate to the contractual relationships and fiscal reporting structure of the USIO, as presented in quarterly reports submitted to NSF for SOC, POC, and SIC budgets. This breakdown provides supplemental information in support of the roll-up USIO SOC and POC budgets that are provided in the main body of the IODP-USIO FY07 Annual Program Plan and the roll-up USIO SIC budgets.

See the IODP-USIO FY07 Annual Program Plan for detailed descriptions of SOC- and POC-supported IODP-USIO activities for FY07.

In addition to the institutional summary provided in the Executive Summary, USIO tasks and budgets specific to SIC-supported activities are addressed in Sections 3–9 of this Appendix. Section 2 describes the organizational structure of the JOI Alliance/USIO as it relates to SIC-supported activities, additional information about staff assignments is provided in the IODP-USIO FY07 Annual Program Plan.

1.2. IODP-USIO BUDGET DEFINITIONS

1.2.1. NSF GUIDANCE

As called for in NSF Contract OCE-0352500, NSF provided a memo to the IODP-USIO on 13 February 2006 that outlined the FY07 Mission Forecast for the JOI Alliance as the U.S. System Integration Contractor (SIC) for the IODP. The mission forecast included the following guidance regarding the development of USIO SIC budget estimates:

¹ In this document, references to TAMU include Texas A&M Research Foundation (TAMRF).

This mission forecast is based on the FY 2007 science plan recommended by the Science Planning and Policy Oversight Committee (SPPOC) at its Zurich meeting (*SPPOC Motion 0601-13*), as well as budget projections supplied to the lead agencies by IODP-MI.

Please submit a FY07 SIC Program Plan that details the FY07 drilling and science operation activities, as defined from your responsibilities given in Contract OCE-0352500. Please also undertake appropriate action to prepare for projects recommended for FY08 implementation by the IODP SAS.

The FY07 SIC Program Plan shall include a budget and funding summary that identifies POC, SOC, and SIC items. Other activities and reporting requirements to be included in the Program Plan are identified in Contract OCE-0352500. You should place special emphasis on completion of the Programmatic Environmental Impact Statement (PEIS).

The budget target for Contract OCE-0352500, covering POC and SIC activities, is \$11,500,000. Inevitably, questions will arise regarding implementation activities that require consultation with NSF. We look forward to working with you in ensuring the success of IODP.

Subsequent to issuance of this forecast, discussions with NSF clarified the target for POC (\$7,500,000) and for SIC (\$4,000,000) activities. The POC budget submitted as part of the IODP-USIO FY07 Annual Program Plan was estimated at \$5,387,659. Further discussions between NSF and JOI identified the need to fully describe the estimated costs of delivering the full range of anticipated IODP-USIO FY07 activities based on the assumptions, risks, and uncertainties inherent in the current situation.

The additional assumptions that were used to estimate SIC-related costs are presented below and in the subsequent sections of this Appendix. These include:

- 1) Contractual costs, including USIO management and administration efforts, for maintaining the TAMU Science Operations Department's Technical Support, Operations, and Material Support Sections, the TAMU Tools and Analytical Services Department's Analytical and Engineering Services Sections, and the LDEO Technical and Engineering Services Department prior to vessel operations in FY08.
- 2) Other contractual costs not considered as SOCs or POCs, such as U.S.-oriented JOI Alliance platform-related Education and Outreach activities (e.g., Historically Black Colleges and Universities [HBCU] fellowships, Teacher at Sea initiative, and curriculum development).

1.3. USIO BUDGET ASSUMPTIONS

1.3.1. PROGRAM-WIDE ASSUMPTIONS FOR USIO ACTIVITIES

The requested USIO budgets for SOC-, POC-, and SIC-supported activities are based on a number of assumptions. Please refer to Section 1.4.2. "FY07 USIO Budget Assumptions and Risks" of the IODP-MI FY07 Annual Program Plan, submitted on 31 July 2006, for the assumptions used related to the SOC and POC budgets. Many of these also relate to the SIC budget.

1.3.2. PROVIDING A FULLY CAPABLE U.S. SCIENTIFIC OCEAN DRILLING VESSEL

In addition to the Program-wide assumptions described in Section 1.3.1, the SIC budget was built based on the following definitions that delineate Major Research Equipment and Facility Construction (MREFC) costs, SIC, and SOC/POC expedition expenses that are related to the initiation of drilling operations in early FY08 but which have been requested in the main body of the

IODP-USIO FY07 Annual Program Plan. **Note:** The MREFC costs are outlined in the U.S. Scientific Ocean Drilling Vessel (SODV) FY07 Work Plan; these costs are not included in the IODP-USIO FY07 Program Plan.

The SIC budget includes the estimated costs that are required to prepare the U.S. SODV for riserless drilling operations. These costs are based on a currently accepted definition of the boundary between SODV Project and mobilization activities and estimated costs. The mobilization costs include estimated costs that are a direct result of “mobilizing” the vessel for operational activities following the completion of conversion, commissioning, sea trials designed to test the refurbished riserless drilling vessel, and fulfilling the acceptance criteria for the SODV. The definition of “mobilization” has been the subject of talks over many months between the USIO and SODV Project; these discussions have also involved the appropriate NSF Program Managers. For this revision of the Program Plan Appendix we will use the assumptions listed below.

The definition of the boundary between SODV costs and mobilization costs is fundamental to understanding the mobilization requirements. In addition, the definition of the boundary between mobilization requirements and “operational” requirements covered by SOC and POC costs is fundamental to understanding the true cost of mobilization.

The IODP-USIO FY07 SOC and POC budgets assume that the U.S. SODV conversion shipyard will be in Singapore and that the initial expedition will begin with a 5-day port call and transit to Honolulu, Hawaii, followed by a single-day port call where scientists will board the vessel prior to on-site operations. During the initial expedition transit from Singapore to Honolulu, Hawaii, additional technical staff members will sail to tune the laboratory systems independent of expedition systems. If the shipyard is not located in Singapore, there could be additional costs associated with repositioning the vessel from the conversion shipyard to the area of initial operations.

Assumptions:

In addition to SIC operational requirements, SIC costs include the following:

- (a) Costs in support of testing of laboratory and/or drilling equipment for the interval between completion of the SODV acceptance process and in the science portion of the first USIO expedition for the IODP.
- (b) Costs to return laboratory or drilling consumable inventories (i.e., core liners, drill bits, laboratory supplies) to acceptable operating levels after SODV acceptance process sea trials, based on the minimum inventories required for IODP operations.
- (c) Costs to return the vessel’s drilling mud levels back to minimum operational limits, based on the minimum inventories required for IODP operations.

1.3.3. POC AND SIC ESTIMATED BUDGETS FOR USIO ACTIVITIES

Following the guidance provided by NSF, the JOI Alliance total budget request to NSF of \$10,996,136 can be partitioned into two programmatic categories: (1) IODP-USIO platform operations, which are detailed as POCs in the budget submitted on 31 July 2006, and (2) SIC costs that (a) are required to maintain a future U.S. scientific ocean drilling capability for the IODP and (b) relate to the initiation of mobilization activities of the U.S. riserless drilling vessel in FY07 in preparation for the completion of the conversion, acceptance, and commissioning of the SODV by the end of October 2007.

The cost breakdown for FY07 is a request for \$5,387,659 in POC expenses and \$5,608,477 in SIC expenses.

1.4. FY07 IODP-USIO BUDGET SUMMARIES

1.4.1. FY07 IODP-USIO SOC, POC, AND SIC WBE BUDGET SUMMARY

As described Section 1.4 of this Appendix, the following budget summaries and detailed budgets describe the overall USIO FY07 requests to both IODP-MI (for SOC) and NSF (for POC and SIC), subdivided by JOI Alliance institution. This information is provided to orient NSF Program Managers about the institutional breakdowns for the overall USIO roll-up budgets and provide a framework for interpreting fiscal data in Quarterly Reports delivered by the USIO.

Element	JOI	LDEO	TAMU	Total
Total SOC Costs	914,970	1,776,751	7,164,717	9,856,438
Total POC Costs	523,941	113,853	4,749,865	5,387,659
Total SIC Costs	983,476	471,658	4,153,343	5,608,477
GRAND TOTAL	\$2,422,387	\$2,362,262	\$16,067,925	\$20,852,574

In the following IODP-USIO budget summary tables, the line item total requested for each WBE is defined as the total of both the direct and indirect costs for that element. These costs are separated out for each USIO institution in the summary totals that add to the “grand total” for each institution. USIO/JOI and USIO/LDEO calculate indirect costs on a percentage of the direct costs using formulas described in the “Budget and Budget Justification” subsections of each WBE section of this Appendix. The USIO/TAMU budget is structured with a single administrative fee that can be found in the Management and Administration element budget for the SOC and POC budget requests in the IODP-USIO FY07 Annual Program Plan. The grand totals for direct, indirect, and total costs for each institution and the entire IODP-USIO are shown for the SOC, POC, and SIC budget requests, respectively. The budget summary tables provide an integrated view of all the budget requests detailed in the WBE sections of the IODP-USIO FY07 Annual Program Plan and this Appendix. The detailed budget justification for these requests can be found in Sections 3–9 of this Appendix.

1.4.2. FY07 IODP-USIO SOC WBE BUDGET SUMMARY BY INSTITUTION

Element	JOI	LDEO	TAMU	Total
Management and Administration	523,941	283,468	973,992	1,781,401
Technical, Engineering, and Science Support	0	1,353,688	2,983,962	4,337,650
Subtotal Technical, Engineering, and Science Support	0	1,278,663	2,953,962	4,232,625
Subtotal Engineering Development	0	75,025	30,000	105,025
Core Curation	0	0	1,899,480	1,899,480
Subtotal Core Curation	0	0	866,482	866,482
Subtotal DSDP/ODP Core Redistribution	0	0	1,032,998	1,032,998
Data Management	0	139,595	541,234	680,829
Publications	0	0	766,049	766,049
Logging	0	0	0	0
Education and Outreach	391,028	0	0	391,028
Grand Total IODP-USIO SOC WBE	\$914,970	\$1,776,751	\$7,164,717	\$9,856,438

Notes: JOI Indirect Costs are included in the Management and Administration (M&A) and Education and Outreach (E&O) elements. LDEO Indirect Costs are included in the M&A; Technical, Engineering, and Science Support; Data Management; and Logging elements. TAMU Administrative Fee is included in the M&A element.

Element	JOI	LDEO	TAMU	Total
Total Direct Costs	692,945	1,291,065	7,071,450	9,055,460
Indirect Costs and Administrative Fees	222,025	485,686	93,267	800,978
Grand Total	\$914,970	\$1,776,751	\$7,164,717	\$9,856,438

1.4.3. FY07 IODP-USIO POC WBE BUDGET SUMMARY BY INSTITUTION

Element	JOI	LDEO	TAMU	Total
Management and Administration	523,941	72,991	659,108	1,256,040
Technical, Engineering, and Science Support	0	40,862	4,090,757	4,131,619
Subtotal Technical, Engineering, and Science Support	0	40,862	4,090,757	4,131,619
Subtotal Engineering Development	0	0	0	0
Core Curation	0	0	0	0
Subtotal Core Curation	0	0	0	0
Subtotal DSDP/ODP Core Redistribution	0	0	0	0
Data Management	0	0	0	0
Publications	0	0	0	0
Logging	0	0	0	0
Education and Outreach	0	0	0	0
Grand Total IODP-USIO POC WBE	\$523,941	\$113,853	\$4,749,865	\$5,387,659

Notes: JOI Indirect Costs are included in the Management and Administration (M&A) and Education and Outreach (E&O) elements. LDEO Indirect Costs are included in the M&A; Technical, Engineering, and Science Support; Data Management; and Logging elements. TAMU Administrative Fee is included in the M&A element.

Element	JOI	LDEO	TAMU	Total
Total Direct Costs	387,454	83,282	4,656,598	5,127,334
Indirect Costs and Administrative Fees	136,487	30,571	93,267	260,325
Grand Total	\$523,941	\$113,853	\$4,749,865	\$5,387,659

1.4.4. FY07 IODP-USIO SIC WBE BUDGET SUMMARY BY INSTITUTION

Element	JOI	LDEO	TAMU	Total
Management and Administration	613,316	214,768	181,407	1,009,491
Technical, Engineering, and Science Support	0	256,890	3,971,936	4,228,826
Subtotal Technical, Engineering, and Science Support	0	256,890	3,971,936	4,228,826
Subtotal Engineering Development	0	0	0	0
Core Curation	0	0	0	0
Subtotal Core Curation	0	0	0	0
Subtotal DSDP/ODP Core Redistribution	0	0	0	0
Data Management	0	0	0	0
Publications	0	0	0	0
Logging	0	0	0	0
Education and Outreach	370,160	0	0	370,160
Grand Total USIO-IODP SIC WBE	\$983,476	\$471,658	\$4,153,343	\$5,608,477

Notes: JOI Indirect Costs are included in the Management and Administration (M&A) and Education and Outreach (E&O) elements. LDEO Indirect Costs are included in the M&A; Technical, Engineering, and Science Support; Data Management; and Logging elements. TAMU Administrative Fee is included in the M&A element.

Element	JOI	LDEO	TAMU	Total
Total Direct Costs	817,559	310,706	4,153,343	5,281,608
Indirect Costs and Administrative Fees	165,917	160,952	0	326,869
Grand Total	\$983,476	\$471,658	\$4,153,343	\$5,608,477

1.4.5. FY07 IODP-USIO SOC WBE BUDGET DETAIL BY INSTITUTION

Element/Expense Category	JOI	LDEO	TAMU	Total
Management and Administration				
Salaries and Fringes	257,704	169,687	763,431	1,190,822
Travel	56,500	9,469	48,323	114,292
Supplies	15,500	1,930	11,176	28,606
Shipping	9,750	257	2,354	12,361
Communication	13,000	1,628	11,135	25,763
Contractual Services	7,500	0	0	7,500
Equipment	12,500	2,735	7,200	22,435
Other Direct Costs	15,000	515	37,106	52,621
Total Direct Costs	387,454	186,221	880,725	1,454,400
Modified Total Direct Costs (if applicable)	0	183,486	0	183,486
Indirect Costs or Administrative Fees	136,487	97,247	93,267	327,001
Total Management and Administration	\$523,941	\$283,468	\$973,992	\$1,781,401
Technical, Engineering, and Science Support				
Technical, Engineering, and Science Support				
Salaries and Fringes	0	490,693	1,307,853	1,798,546
Travel	0	58,750	301,731	360,481
Supplies	0	22,920	173,068	195,988
Shipping	0	9,475	53,170	62,645
Communication	0	6,300	18,898	25,198
Contractual Services	0	297,443	0	297,443
Equipment	0	29,000	299,050	328,050
Other Direct Costs	0	45,485	800,192	845,677
Day Rate	0	0	0	0
Fuel and Lubricants	0	0	0	0
Per Diem	0	0	0	0
Port Calls	0	0	0	0
Insurance	0	0	0	0
Travel—ODL	0	0	0	0
Other	0	45,485	800,192	845,677
Technical, Engineering, and Science Support Total Direct Costs	0	960,066	2,953,962	3,914,028
Modified Total Direct Costs (if applicable)	0	601,126	0	601,126
Indirect Costs or Administrative Fees	0	318,597	0	318,597
Subtotal Technical, Engineering, and Science Support	0	1,278,663	2,953,962	4,232,625
Engineering Development				
Salaries and Fringes	0	0	0	0
Travel	0	5,000	0	5,000
Supplies	0	5,000	0	5,000
Contractual Services	0	35,000	0	35,000
Equipment	0	0	0	0
Other Direct Costs	0	7,500	30,000	37,500
Engineering Development Total Direct Costs	0	52,500	30,000	82,500
Modified Total Direct Costs (if applicable)	0	42,500	0	42,500
Indirect Costs or Administrative Fees	0	22,525	0	22,525
Subtotal Engineering Development	0	75,025	30,000	105,025
Total Technical, Engineering, and Science Support	\$0	\$1,353,688	\$2,983,962	\$4,337,650

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FY07 IODP-USIO SOC WBE BUDGET DETAIL BY INSTITUTION (CONTINUED)

Element/Expense Category	JOI	LDEO	TAMU	Total
Core Curation				
Core Curation				
Salaries and Fringes	0	0	537,199	537,199
Travel	0	0	35,701	35,701
Supplies	0	0	24,700	24,700
Shipping	0	0	22,600	22,600
Communication	0	0	4,660	4,660
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	241,622	241,622
Core Curation Total Direct Costs	0	0	866,482	866,482
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal Core Curation	0	0	866,482	866,482
DSDP/ODP Core Redistribution				
Salaries and Fringes	0	0	262,864	262,864
Travel	0	0	22,500	22,500
Supplies	0	0	93,263	93,263
Shipping	0	0	531,171	531,171
Other Direct Costs	0	0	123,200	123,200
DSDP/ODP Core Redistribution Total Direct Costs	0	0	1,032,998	1,032,998
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal DSDP/ODP Core Redistribution	0	0	1,032,998	1,032,998
Total Core Curation	\$0	\$0	\$1,899,480	\$1,899,480
Data Management				
Salaries and Fringes	0	71,278	443,190	514,468
Travel	0	3,000	30,561	33,561
Supplies	0	1,000	5,000	6,000
Shipping	0	500	1,000	1,500
Communication	0	500	0	500
Contractual Services	0	0	0	0
Equipment	0	3,000	0	3,000
Other Direct Costs	0	13,000	61,483	74,483
Total Direct Costs	0	92,278	541,234	633,512
Modified Total Direct Costs (if applicable)	0	89,278	0	89,278
Indirect Costs or Administrative Fees	0	47,317	0	47,317
Total Data Management	\$0	\$139,595	\$541,234	\$680,829

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FY07 IODP-USIO SOC WBE BUDGET DETAIL BY INSTITUTION (CONTINUED)

Element/Expense Category	JOI	LDEO	TAMU	Total
Publications				
Salaries and Fringes	0	0	619,147	619,147
Travel	0	0	55,538	55,538
Supplies	0	0	11,549	11,549
Shipping	0	0	8,622	8,622
Communication	0	0	8,240	8,240
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	62,953	62,953
Total Direct Costs	0	0	766,049	766,049
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Publications	\$0	\$0	\$766,049	\$766,049
Logging				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Logging	\$0	\$0	\$0	\$0
Education and Outreach				
Salaries and Fringes	133,091	0	0	133,091
Travel	53,500	0	0	53,500
Supplies	7,000	0	0	7,000
Shipping	4,200	0	0	4,200
Communication	0	0	0	0
Contractual Services	107,700	0	0	107,700
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	305,491	0	0	305,491
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	85,537	0	0	85,537
Total Education and Outreach	\$391,028	\$0	\$0	\$391,028
Grand Total Direct Costs	692,945	1,291,065	7,071,450	9,055,460
Indirect Costs/Administrative Fee	222,025	485,686	93,267	800,978
TOTAL FY07 SOC BUDGET	\$914,970	\$1,776,751	\$7,164,717	\$9,856,438

1.4.6. FY07 IODP-USIO POC WBE BUDGET DETAIL BY INSTITUTION

Element/Expense Category	JOI	LDEO	TAMU	Total
Management and Administration				
Salaries and Fringes	257,704	44,119	455,903	757,726
Travel	56,500	2,462	67,402	126,364
Supplies	15,500	502	7,890	23,892
Shipping	9,750	67	1,586	11,403
Communication	13,000	423	7,925	21,348
Contractual Services	7,500	0	0	7,500
Equipment	12,500	0	7,200	19,700
Other Direct Costs	15,000	134	17,935	33,069
Total Direct Costs	387,454	47,707	565,841	1,001,002
Modified Total Direct Costs (if applicable)	0	47,707	0	47,707
Indirect Costs or Administrative Fees	136,487	25,284	93,267	255,038
Total Management and Administration	\$523,941	\$72,991	\$659,108	\$1,256,040
Technical, Engineering, and Science Support				
Technical, Engineering, and Science Support				
Salaries and Fringes	0	9,681	643,365	653,046
Travel	0	0	40,754	40,754
Supplies	0	0	2,119,424	2,119,424
Shipping	0	0	10,590	10,590
Communication	0	294	3,610	3,904
Contractual Services	0	0	0	0
Equipment	0	0	541,000	541,000
Other Direct Costs	0	25,600	732,014	757,614
Day Rate	0	0	0	0
Fuel and Lubricants	0	0	0	0
Per Diem	0	0	0	0
Port Calls	0	0	0	0
Insurance	0	0	0	0
Travel—ODL	0	0	165,000	165,000
Other	0	25,600	567,014	592,614
Technical, Engineering, and Science Support Total Direct Costs	0	35,575	4,090,757	4,126,332
Modified Total Direct Costs (if applicable)	0	9,975	0	9,975
Indirect Costs or Administrative Fees	0	5,287	0	5,287
Subtotal Technical, Engineering, and Science Support	0	40,862	4,090,757	4,131,619
Engineering Development				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Engineering Development Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal Engineering Development	0	0	0	0
Total Technical, Engineering, and Science Support	\$0	\$40,862	\$4,090,757	\$4,131,619

(Continued on next two pages.)

FY07 IODP-USIO POC WBE BUDGET DETAIL BY INSTITUTION (CONTINUED)

Element/Expense Category	JOI	LDEO	TAMU	Total
Core Curation				
Core Curation				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Core Curation Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal Core Curation	0	0	0	0
DSDP/ODP Core Redistribution				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Other Direct Costs	0	0	0	0
DSDP/ODP Core Redistribution Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal DSDP/ODP Core Redistribution	0	0	0	0
Total Core Curation	\$0	\$0	\$0	\$0
Data Management				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Data Management	\$0	\$0	\$0	\$0

(Continued on next page.)

FY07 IODP-USIO POC WBE BUDGET DETAIL BY INSTITUTION (CONTINUED)

Element/Expense Category	JOI	LDEO	TAMU	Total
Publications				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Publications	\$0	\$0	\$0	\$0
Logging				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Logging	\$0	\$0	\$0	\$0
Education and Outreach				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Education and Outreach	\$0	\$0	\$0	\$0
Grand Total Direct Costs	387,454	83,282	4,656,598	5,127,334
Indirect Costs/Administrative Fee	136,487	30,571	93,267	260,325
TOTAL FY07 POC BUDGET	\$523,941	\$113,853	\$4,749,865	\$5,387,659

1.4.7. FY07 IODP-USIO SIC WBE BUDGET DETAIL BY INSTITUTION

Element/Expense Category	JOI	LDEO	TAMU	Total
Management and Administration				
Salaries and Fringes	33,372	125,568	178,882	337,822
Travel	37,000	7,007	843	44,850
Supplies	0	1,428	567	1,995
Shipping	0	191	0	191
Communication	20,000	1,205	515	21,720
Contractual Services	425,000	0	0	425,000
Equipment	13,000	7,024	600	20,624
Other Direct Costs	0	381	0	381
Total Direct Costs	528,372	142,804	181,407	852,583
Modified Total Direct Costs (if applicable)	0	135,780	0	135,780
Indirect Costs or Administrative Fees	84,944	71,964	0	156,908
Total Management and Administration Budget	\$613,316	\$214,768	\$181,407	\$1,009,491
Technical, Engineering, and Science Support				
Technical, Engineering, and Science Support				
Salaries and Fringes	0	161,702	1,389,384	1,551,086
Travel	0	2,250	88,690	90,940
Supplies	0	2,000	762,631	764,631
Shipping	0	625	193,240	193,865
Communication	0	662	7,866	8,528
Contractual Services	0	0	0	0
Equipment	0	0	1,191,363	1,191,363
Other Direct Costs	0	663	338,762	339,425
Day Rate	0	0	0	0
Fuel and Lubricants	0	0	0	0
Per Diem	0	0	0	0
Port Calls	0	0	0	0
Insurance	0	0	0	0
Travel—ODL	0	0	0	0
Other	0	663	338,762	339,425
Technical, Engineering, and Science Support Total Direct Costs	0	167,902	3,971,936	4,139,838
Modified Total Direct Costs (if applicable)	0	167,902	0	167,902
Indirect Costs or Administrative Fees	0	88,988	0	88,988
Subtotal Technical, Engineering, and Science Support	0	256,890	3,971,936	4,228,826
Engineering Development				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Engineering Development Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal Engineering Development	0	0	0	0
Total Technical, Engineering, and Science Support Budget	\$0	\$256,890	\$3,971,936	\$4,228,826

(Continued on next two pages.)

FY07 IODP-USIO SIC WBE BUDGET DETAIL BY INSTITUTION (CONTINUED)

Element/Expense Category	JOI	LDEO	TAMU	Total
Core Curation				
Core Curation				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Core Curation Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal Core Curation	0	0	0	0
DSDP/ODP Core Redistribution				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Other Direct Costs	0	0	0	0
DSDP/ODP Core Redistribution Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Subtotal DSDP/ODP Core Redistribution	0	0	0	0
Total Core Curation Budget	\$0	\$0	\$0	\$0
Data Management				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Data Management Budget	\$0	\$0	\$0	\$0

(Continued on next page.)

FY07 IODP-USIO SIC WBE BUDGET DETAIL BY INSTITUTION (CONTINUED)

Element/Expense Category	JOI	LDEO	TAMU	Total
Publications				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Publications Budget	\$0	\$0	\$0	\$0
Logging				
Salaries and Fringes	0	0	0	0
Travel	0	0	0	0
Supplies	0	0	0	0
Shipping	0	0	0	0
Communication	0	0	0	0
Contractual Services	0	0	0	0
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Logging Total Direct Costs	0	0	0	0
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	0	0	0	0
Total Logging Budget	\$0	\$0	\$0	\$0
Education and Outreach				
Salaries and Fringes	153,666	0	0	153,666
Travel	53,525	0	0	53,525
Supplies	4,200	0	0	4,200
Shipping	896	0	0	896
Communication	0	0	0	0
Contractual Services	76,900	0	0	76,900
Equipment	0	0	0	0
Other Direct Costs	0	0	0	0
Education and Outreach Total Direct Costs	289,187	0	0	289,187
Modified Total Direct Costs (if applicable)	0	0	0	0
Indirect Costs or Administrative Fees	80,973	0	0	80,973
Total Education and Outreach Budget	\$370,160	\$0	\$0	\$370,160
Grand Total Direct Costs	817,559	310,706	4,153,343	5,281,608
Grand Total Indirect Costs/Administrative Fee	165,917	160,952	0	326,869
GRAND TOTAL FY07 SIC BUDGET	\$983,476	\$471,658	\$4,153,343	\$5,608,477

2. ORGANIZATIONAL STRUCTURE

2.1 MAPPING OF DEPARTMENTS TO WBES

2.1.1. USIO/JOI ALLIANCE OVERVIEW

The overall organizational structure of the JOI Alliance is described in Section 3.1. “Overall Organizational Structure” in the IODP-USIO FY07 Annual Program Plan, submitted on 31 July 2006 to the IODP central management office (IODP Management International, Inc. [IODP-MI]). The organizational structure employed by the U.S. Implementing Organization (USIO) is designed to mirror the seven-work breakdown element (WBE) accounting structure used by the Integrated Ocean Drilling Program (IODP). A description of how the WBE organizational structure maps to the Joint Oceanographic Institutions, Inc. (JOI) Alliance institutional departments is provided below. See Table A1 for a listing of all staff members, the WBE to which they are assigned, their estimated percentage of SIC effort, and identification of new positions in FY07.

2.1.2. JOINT OCEANOGRAPHIC INSTITUTIONS, INC.

For the USIO, JOI has the principal responsibility for managing the development of a Programmatic Environmental Impact Statement (PEIS) for USIO riserless drilling operations, leading long-term strategic planning for the USIO, and overseeing overall programmatic, contractual, and fiscal management activities associated with the IODP-USIO FY07 Annual Program Plan.

JOI is also responsible for leading and coordinating the implementation of Education and Outreach activities for the USIO, which include a SIC focus on formal education and diversity enhancement activities.

These tasks at JOI are supported through the Management and Administration element and the Education and Outreach element. See Table A1 for a listing of all SIC-funded staff, the WBE to which they are assigned, their estimated percentage of SIC effort, and identification of new positions in FY07. Also see the organizational charts (Figures 3 and 9) in the IODP-MI FY07 Annual Program Plan. JOI staff listed in Table A1 with a “(1)” as their assigned WBE are funded through indirect costs and support all activities at JOI.

2.1.3. LAMONT-DOHERTY EARTH OBSERVATORY OF COLUMBIA UNIVERSITY

The deliverables for which USIO/Lamont-Doherty Earth Observatory (LDEO) of Columbia University is responsible are organized into four distinct functional divisions under the Director’s office. To ensure programmatic integration, the Director and Deputy Director provide management and contractual oversight for all logging services and planning and implementation of logging operations for USIO operations. USIO/LDEO provides logging data acquisition aboard the riserless drilling vessel via a subcontract to Schlumberger Offshore Services and through staffing of shipboard scientific and technical personnel. LDEO-Borehole Research Group (BRG) oversees subcontracts with Leicester University (LUBR), Laboratoire de Géophysique et Hydrodynamique en Forage (LGHF), University of Aachen, and Ocean Research Institute (ORI) to provide shipboard scientific personnel and support for special projects.

The USIO/LDEO organizational structure partitions functional and technical activities into manageable units that seamlessly integrate and map into WBES used by IODP. See Table A1 for a listing of all SIC-funded staff, the WBE to which they are assigned, their estimated percentage of

SIC effort, and identification of new positions in FY07. Also see the organizational charts (Figures 3 and 4) in the IODP-USIO FY07 Annual Program Plan.

Management/Administration: The responsibilities, tasks, deliverables, and costs for headquarters/administration map into this element (Director, Administrative Assistant, Deputy Director, and positions reporting to Deputy Director).

Technical, Engineering, and Science Support: The responsibilities, tasks, deliverables, and costs for the Science Operations Department and the Engineering and Technical Services Department map into this element, as do the networking, processing, and computing aspects of the Information Services Department.

2.1.4. TEXAS A&M UNIVERSITY

The scientific deliverables for which USIO/Texas A&M University (TAMU) and Texas A&M Research Foundation (TAMRF) are responsible are organized into three distinct functional divisions under the Headquarters office. To ensure programmatic integration, two Deputy Directors oversee and manage the Science Services and Data Services divisions. The Deputy Directors and the Vice President, TAMRF, who serves as the Manager of Administrative Services, report to the Director of Science Services for technical direction and guidance.

The USIO/TAMU and TAMRF organizational structure partitions functional and technical activities into manageable units that seamlessly integrate and are easily mapped into WBEs. See Table A1 for a listing of all SIC-funded staff, the WBE to which they are assigned, their estimated percentage of SIC effort, and identification of new positions in FY07. Also see the organizational charts (Figures 3 and 4) in the IODP-USIO FY07 Annual Program Plan.

Management and Administration: The responsibilities, tasks, deliverables, and costs for the Headquarters and Administrative Service Departments map into this element.

Technical, Engineering, and Science Support: The responsibilities, tasks, deliverables, and costs for the Science Operations Department and Tools and Analytical Services Departments map into this element. In addition, the Information Technology Support Section of the Information Technology and Data Services Department and this department's Manager and Information Services Assistant are incorporated in this WBE.

Table A1. Positions and percentage efforts.

Employee	USIO Office	Position	WBE Element	% Effort SIC
Management and Administration				
David Divins	JOI	Director, Ocean Drilling Programs	M & A	10%
TBN (FY06)	JOI	Associate Director, Ocean Drilling Programs	M & A	10%
Carol Kokinda	JOI	Director, Operations	(1)	
Strat Caros	JOI	Operations Associate	(1)	
Eldon Hayman	JOI	Director, Finance	(1)	
Winsome Dawes	JOI	Accounting Manager	(1)	
Kaprina Robinson	JOI	Staff Accountant	(1)	
Derek Herr	JOI	Accountant	(1)	
Theresa Strong	JOI	Administration Assistant	(1)	
Julie Farver	JOI	Meeting/Travel Manager	(1)	
Rashaad Elliott	JOI	Travel Associate	(1)	
Robert Wright	JOI	IT Manager	(1)	
Dave Goldberg	LDEO	Director	M & A	22%
Marsha Meyer	LDEO	Administrative Assistant	M & A	34%
Alberto Malinverno	LDEO	Principal Scientist	M & A	9%
Mary Reagan	LDEO	Deputy Director	M & A	32%
Carl Brenner	LDEO	Technical Services Specialist	M & A	15%
Felicia Taylor	LDEO	Project Coordinator	M & A	19%
Jeff Fox	TAMU	Director	M & A	10%
Agatha Moy	TAMU	Administrative Coordinator	M & A	10%
Jack Baldauf	TAMU	Deputy Director of Science Services	M & A	5%
Rick McPherson	TAMRF	Vice President, TAMRF	M & A	10%
Linda Norton	TAMRF	Office Manager	M & A	5%
Lynn Schulze	TAMRF	Associate Vice President, TAMRF Contracts, Property, and Procurement	M & A	10%
Michelle Strickland	TAMRF	Supervisor of Procurement	M & A	5%
Randy Watkins	TAMRF	Senior Procurement Specialist	M & A	15%
Kim Lee	TAMRF	Procurement Specialist I	M & A	20%
Mary Pat Thraen	TAMRF	Supervisor of Property/Databases	M & A	10%
Teresa Sakmone	TAMRF	Administrative Assistant	M & A	10%
Bill Lancaster	TAMRF	Associate Vice President, TAMRF Fiscal Affairs	M & A	10%
Betty Skopik	TAMRF	Supervisor of Accounts Payable/Accounts Receivable	M & A	10%
Ivonne Kindt	TAMRF	Assistant Supervisor of Accounts Payable/Accounts Receivable	M & A	5%
LaNelle Boyd	TAMRF	Payables Specialist	M & A	15%
Allison McMullin	TAMRF	Student Worker	M & A	5%
Valeria Day	TAMRF	Supervisor of Budget Planning/Analysis	M & A	15%
TBN (FY06)	TAMRF	Budget Analyst	M & A	15%

Notes: (1) These positions are funded by JOI General and Administrative (G&A) costs (indirect costs) and work on all JOI programs. † Ship operations are provided through a subcontractor. TBN = to be named. The date by which the position is anticipated to be filled is provided in parentheses. All “FY06” positions are anticipated to be filled prior to the start of FY07. Employee names reflect the individuals employed in each position at the date of the submission of this document.

Employee	USIO Office	Position	WBE Element	% Effort SIC
Sharon Sanders	TAMRF	Budget Analyst	M & A	5%
Carolyn Engledow	TAMRF	Supervisor of Payroll	M & A	10%
Kay Huff	TAMRF	Payroll Coordinator	M & A	10%
Kim Johnson	TAMRF	Supervisor of Human Resources/Insurance Services	M & A	10%
Kathy Bass	TAMRF	Supervisor of Travel/Conference Coordination	M & A	10%
Sande Rogers	TAMRF	Travel Disbursement Specialist	M & A	10%
Denise DeShetler	TAMRF	Travel Services Specialist	M & A	5%
Technical, Engineering, and Science Support				
Overseas Drilling Limited Subcontract †			TE&SS	
Mitch Malone	TAMU	Manager of Science Operations	TE&SS	35%
Janice Muston	TAMU	Administrative Assistant	TE&SS	70%
Jaime Sanchez	TAMU	Graduate Assistant Research	TE&SS	40%
Pat Thompson	TAMU	Supervisor of Materials Support	TE&SS	35%
Dave Lehnert	TAMU	Materials Specialist	TE&SS	30%
Robert Mitchell	TAMU	Marine Logistics Coordinator	TE&SS	30%
Larry Obee	TAMU	Marine Logistics Coordinator	TE&SS	30%
Sandy Dillard	TAMU	Shipping and Receiving Coordinator	TE&SS	30%
Bob Kralich	TAMU	Materials Technician	TE&SS	30%
John Jaskinia	TAMU	Student Worker	TE&SS	25%
Myron Lind	TAMU	Student Worker	TE&SS	25%
Brian Wolf	TAMU	Student Worker	TE&SS	25%
TBN (FY06)	TAMU	Student Worker	TE&SS	25%
TBN (FY06)	TAMU	Student Worker	TE&SS	25%
TBN (FY06)	TAMU	Student Worker	TE&SS	25%
Brad Julson	TAMU	Supervisor of Technical Support	TE&SS	13%
Chieh Peng	TAMU	Assistant Laboratory Officer	TE&SS	8%
TBN (FY06)	TAMU	Assistant Laboratory Officer	TE&SS	8%
Eric Jackson	TAMU	Marine Laboratory Specialist	TE&SS	75%
Peter Kannberg	TAMU	Marine Laboratory Specialist	TE&SS	75%
Mike Storms	TAMU	Supervisor of Operational Support	TE&SS	40%
Gene Pollard	TAMU	Operations Engineer	TE&SS	40%
Ron Grout	TAMU	Operations Superintendent	TE&SS	15%
TBN (FY06)	TAMU	Supervisor of Science Support	TE&SS	35%
Carlos Alvarez Zarikian	TAMU	Staff Scientist	TE&SS	35%
Cedric John	TAMU	Staff Scientist	TE&SS	35%
Adam Klaus	TAMU	Staff Scientist	TE&SS	33%
TBN (FY06)	TAMU	Staff Scientist	TE&SS	28%
TBN (FY06)	TAMU	Staff Scientist	TE&SS	35%
TBN (FY06)	TAMU	Staff Scientist	TE&SS	45%
TBN (1/1/07)	TAMU	Staff Scientist	TE&SS	45%
TBN (4/1/07)	TAMU	Staff Scientist	TE&SS	45%
Jay Miller	TAMU	Manager of Tools and Analytical Services (Interim)	TE&SS	40%
Marti Kaer	TAMU	Administrative Assistant	TE&SS	60%
Karen Graber	TAMU	Staff Researcher	TE&SS	30%
Blake Hardgrave	TAMU	Student Worker	TE&SS	10%
Derryl Schroeder	TAMU	Supervisor of Engineering Services	TE&SS	30%
Bob Aduddell	TAMU	Engineer	TE&SS	40%
Liping Chen	TAMU	Engineer	TE&SS	70%
Kevin Grigar	TAMU	Engineer	TE&SS	55%
TBN (FY06)	TAMU	Engineer	TE&SS	70%
TBN (FY06)	TAMU	Engineer	TE&SS	70%
Eric Schulte	TAMU	Senior Design Technician	TE&SS	45%

Employee	USIO Office	Position	WBE Element	% Effort SIC
Dean Ferrell	TAMU	Designer	TE&SS	70%
Mike Meiring	TAMU	Designer	TE&SS	70%
TBN (FY06)	TAMU	Designer	TE&SS	25%
Lisa Brandt	TAMU	Laboratory Specialist	TE&SS	5%
Erik Moortgat	TAMU	Research Specialist	TE&SS	5%
Dwight Hornbacher	TAMU	Applications Developer IV	TE&SS	5%
TBN (FY06)	LDEO	Manager of Engineering and Technical Services	TE&SS	25%
Walt Masterson	LDEO	Engineering/Logistics Coordinator	TE&SS	50%
Will Keogh	LDEO	Electrical Engineer	TE&SS	50%
Stefan Mrozewski	LDEO	Mechanical Engineer	TE&SS	38%
Golam Sarker	LDEO	Engineering Technical Analyst	TE&SS	50%
Core Curation				
No SIC-related activities are defined for this element.				
Data Management				
No SIC-related activities are defined for this element.				
Publications				
No SIC-related activities are defined for this element.				
Logging				
No SIC-related activities are defined for this element.				
Education and Outreach				
Leslie Peart	JOI	Director, Education	E&O	35%
Matthew Niemitz	JOI	Program Assistant	E&O	70%

3. MANAGEMENT AND ADMINISTRATION

3.1. RESPONSIBILITIES

The U.S. Implementing Organization (USIO) of the Integrated Ocean Drilling Program (IODP) provides integrated management that is led by the contractor (Joint Oceanographic Institutions, Inc. [JOI]) in coordination with the other two USIO members (Lamont-Doherty Earth Observatory [LDEO] of Columbia University and Texas A&M University [TAMU]). Responsibilities of the USIO management staff include oversight and assurance of the performance of management, administrative, financial, and information systems that support the USIO riserless drilling vessel and vessel operations; strategic planning; mission delivery; resource allocation and prioritization; and overall science services delivery.

The USIO will serve as the primary source for clear and effective communication and the coordination of linkages with USIO stakeholders including the National Science Foundation (NSF), IODP central management office (IODP Management International [IODP-MI]), Japan Marine Science and Technology Center (JAMSTEC), Center for Deep Earth Exploration (CDEX), European Consortium for Ocean Drilling Research (ECORD) Management Agency (EMA), ECORD Science Operator (ESO), Chinese Ministry of Science and Technology (MOST), and other IODP partners. Liaisons will be provided as needed with Science Advisory Structure (SAS) panels (e.g., Science Advisory Structure Executive Committee [SASEC], Science Planning Committee [SPC]) and IODP-MI Task Forces (e.g., Operations Task Force [OTF], Operations Review Task Force [ORTF]), as well as with other implementing organizations (IOs) and IODP-MI.

3.2. DELIVERABLES IN FY07

- Exercise management and financial controls to ensure compliance with contract provisions and encourage creative, effective, and efficient delivery of U.S. Systems Integration Contract (SIC)-related tasks and services that will ensure the preservation of U.S. scientific ocean drilling capability as defined by NSF guidance.
- Oversee the development of a Programmatic Environmental Impact Statement (PEIS) for USIO riserless drilling operations in FY07 and beyond.
- Implement a health, safety, and environment (HSE) program for the USIO riserless drilling vessel and shore-based facilities.

3.3. BUDGET AND BUDGET JUSTIFICATION

Element/Expense Category	Total
Management and Administration	
Salaries and Fringes	337,822
Travel	44,850
Supplies	1,995
Shipping	191
Communication	21,720
Contractual Services	425,000
Equipment	20,624
Other Direct Costs	381
Total Direct Costs	852,583
Modified Total Direct Costs (if applicable)	135,780
Indirect Costs or Administrative Fees	156,908
Total Management and Administration Budget	\$1,009,491

Funds for this work breakdown element (WBE) are budgeted as follows:

Salaries and Fringes—Salaries and fringes, including an anticipated cost-of-living allowance and estimated fringe benefits rate, for staff supporting the USIO. See Table A1 for a listing of all staff members, the element to which they are assigned, and their estimated percentage of SIC effort.

Travel—Transportation, per diem, and lodging for SAS panel meetings and task force meetings, contractor meetings, scientific and technical meetings, and port call visits.

Supplies—General office supplies, expendables, and operational supplies.

Shipping—Postage, express mail, courier services.

Communication—Telephone and fax charges and Internet services.

Contractual Services—Consultant and contract services to substantially advance work to complete the USIO PEIS for operations in FY07 and beyond (\$425,000).

Equipment—Procurement, upgrading, or fabrication of equipment. Equipment replacement during FY07 and computers, monitors, and printers for new staff.

Other Direct Costs—Costs not covered in the other categories, including repairs and temporary help for USIO/LDEO.

Indirect Costs—Administrative and financial costs associated with operating the Program. The specific equations used to calculate these costs vary by institution, as explained below.

General and Administrative Costs—The NSF-approved provisional rate of 28% was used to calculate general and administrative (G&A) costs on all JOI charges. G&A costs are charged on all direct costs, and on the first \$100,000 of all subcontracts JOI administers (e.g., PEIS environmental consultant subcontract = \$28,000) under a particular contract

Indirect Costs—Indirect costs at 53% are assessed on all USIO/LDEO charges except permanent equipment, tuition remission, and downhole tool insurance. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect cost for all of the existing subcontracts was included in the FY04 Program Plan, so these subcontracts are not subject to indirect cost during FY07. Modified total direct costs (MTDC) are the total direct costs minus these exceptions.

Administrative Fee—None budgeted for Texas A&M Research Foundation (TAMRF).

4. TECHNICAL, ENGINEERING, AND SCIENCE SUPPORT

4.1. RESPONSIBILITIES

The U.S. Implementing Organization (USIO) is responsible for providing scientific operational planning for the USIO riserless drilling vessel expeditions in response to the National Science Foundation (NSF)/Integrated Ocean Drilling Program (IODP) science planning structure and interfacing IODP central management office (IODP Management International, Inc. [IODP-MI]). The USIO will also manage, coordinate, and perform the activities and furnish or procure the services, materials, and facilities necessary to support the scientific research, marine operations, and shore-based requirements associated with IODP.

4.2. DELIVERABLES IN FY07

- Conduct long-range science support and operational planning in support of IODP, including identification of long-lead time items.
- Maintain and manage shore-based laboratory, test facilities, associated instruments, and support structure to provide reliable calibrated tools for use on the USIO riserless drilling vessel. Train laboratory support staff and test analytical equipment prior to deployment on the drilling vessel.
- Maintain state-of-the-art drilling and logging equipment and instrumentation required to meet Program objectives. Identify and prioritize technology developments to meet scientific requirements.
- Work with third-party tool developers for expedition-specific deployments, and ensure that the developers are aware of, and meet, all IODP reporting and technical third-party tool requirements.
- Provide ship- and shore-based technical and engineering support for improving shipboard facilities, developing new measurement systems and/or technology to support scientific and operational needs of IODP, and improving reliability and performance of existing measurement and coring systems.
- Maintain an active application-development environment to support current and future USIO custom applications for data capture, transfer, access, and analysis during expeditions.
- Provide materials and logistical support required for preparation of FY08 expedition implementation, including servicing and developing enhancements to tools, hardware, and laboratory infrastructure equipment that will be retained for use on the U.S. riserless drilling vessel.
- Assess new operations technology/techniques and existing processes, including port call reconnaissance; storage strategies for ship and shore; shipping and inventory procedures for supplies; procedures and related software (Project A) for estimating expedition hardware requirements, costs, and time estimates; software used for participant tracking and report generation; and the project management process.
- Assist in developing asset management database.
- Provide training to staff, including expedition project management training, safety training (i.e., HazMat recertification), and training to keep abreast of new technological advances.

- Develop documentation necessary to obtain certification as a favored importer of record (C-TPAT); review existing and, if necessary, create new technical legacy documentation related to IODP-USIO Phase 1 operations, including all standard operating procedures.
- Act as USIO liaison to meetings with the other implementing organizations (IOs), IODP-MI, and the Science Advisory Structure (SAS), as appropriate.
- Support technical exchange program by providing technical staff to participate in *CHIKYU* cruises.
- Develop and maintain downhole tool service and calibration facility.
- Determine optimum downhole tool configuration and maintenance protocols.
- Provide logistical support in support of mobilization of the U.S. Scientific Ocean Drilling Vessel (SODV).
- Purchase supplies and consumables needed for the operation of the analytical instruments and laboratories.
- Calibrate and test instrumentation and data upload and downloads.
- Begin mobilization and testing of shipboard analytical, inventory, and technical systems, and downhole tools.

4.3. BUDGET AND BUDGET JUSTIFICATION

Element/Expense Category	Total
Technical, Engineering, and Science Support	
Technical, Engineering and Science Support	
Salaries and Fringes	1,551,086
Travel	90,940
Supplies	764,631
Shipping	193,865
Communication	8,528
Contractual Services	0
Equipment	1,191,363
Other Direct Costs	339,425
Day Rate	0
Fuel and Lubricants	0
Per Diem	0
Port Calls	0
Insurance	0
Travel—ODL	0
Other	339,425
Relocation	5,625
Training	738
Business Conferences	3,470
Insurance	7,005
Services	301,606
Furniture	5,625
Recruiting	5,025
Maintenance and Repair	10,331
Technical, Engineering, and Science Support Total Direct Costs	4,139,838
Modified Total Direct Costs (if applicable)	167,902
Indirect Costs or Administrative Fees	88,988
Subtotal Technical, Engineering, and Science Support	4,228,826
Engineering Development	
Salaries and Fringes	0
Travel	0
Supplies	0
Contractual Services	0
Equipment	0
Other Direct Costs	0
Engineering Development Total Direct Costs	0
Modified Total Direct Costs (if applicable)	0
Indirect Costs or Administrative Fees	0
Subtotal Engineering Development	0
Total Technical, Engineering, and Science Support Budget	\$4,228,826

Funds for this work breakdown element (WBE) are budgeted as follows:

Salaries and Fringes—Salaries and fringes, including an anticipated cost-of-living allowance and estimated fringe benefits rate, for staff supporting the USIO. See Table A1 for a listing of all staff members, the element to which they are assigned, and their estimated percentage of U.S. Systems Integration Contract (SIC) effort.

Travel—Transportation, per diem, and lodging for professional meetings, SAS panel meetings, subcontractor meetings, meetings to discuss operational issues with the Center for Deep Earth Exploration (CDEX) and European Consortium for Ocean Research Drilling (ECORD) Science Operator (ESO), IODP-USIO joint management team meetings, long-lead planning meetings for

FY08 expeditions, travel expenses for staff that will participate in *CHIKYU* shakedown cruises, and USIO/Texas A&M University (TAMU) staff sailing on the Singapore transit to Honolulu, Hawaii, to complete non-expedition related tasks (airline tickets will be purchased in September 2007 to ensure seating availability for departure to Singapore in late October 2007.).

Supplies—General office, laboratory, and operational supplies. Laboratory supplies for testing and operating the U.S. drilling vessel's analytical systems during the transition period between demobilization and FY08 operations and for the maintenance and operation of the shore-based laboratory facilities; laboratory supplies, instruments, equipment, and fabrication of test interface hardware for conducting a comprehensive test program for downhole tools; and cost to replenish laboratory system supplies consumed on the transit to Honolulu, Hawaii in early FY08, and to return supplies to operational inventory levels. Inventory levels are based on the anticipated usage of each item (estimated from usage rates averaged over 6 expeditions).

Shipping—Postage, express mail, and freight. General office postage for regular correspondence and small packages and shipping that support non-expedition related activities, and cost for transportation of SIC-related supplies to Singapore.

Communication—Telephone and fax charges and Internet services. Standard line charges and long distance.

Contractual Services—None budgeted.

Equipment—Procurement, upgrading, or fabrication of equipment. Pressure core sampler, instrumented water sampler, hydraulic piston delivery system, dynamometer, Riverside Campus refurbishment, hoist, Davis-Villinger Temperature-Pressure Probe (DVTP/P) electronics, advanced piston corer (APC) Methane tool upgrade, sediment consolidation press, APC evaluation and implementation equipment, and cost to return drilling and coring equipment to operational inventory levels (drill collars, core and drill bits, subs and outer core barrel components, beacons, and mud motors).

Other Direct Costs—Costs not covered in the other categories.

Day Rates—None budgeted.

Fuel and Lubricants—None budgeted.

Per Diem—None budgeted.

Port Calls—None budgeted.

Insurance—None budgeted.

Travel-ODL—None budgeted.

Relocation—Relocation costs for new employees. Moving expenses for newly hired professional staff.

Training—Registration, transportation, per diem, and lodging expenses related to professional training. Technical, shipping, management, and personnel training for Science Operations staff.

Business Conferences—Incidental expenses associated with meetings hosted by USIO/TAMU, including liaison meetings and precruise planning meetings for FY07 and future years.

Insurance—Annual insurance premiums for USIO vehicles.

Services—Expert assistance including copier services; external copying; programming assistance to revise Project A and time estimator software and for weather assessments of planned FY08 and future operating areas; and subcontractor coring technicians to be used in preparation of all drilling/coring hardware for FY08 and future years.

Furniture—Office furniture. A portion of the cost of furniture for new staff.

Recruiting—Employee recruitment including local advertisements and advertisements in science journals and trade journals and other costs related to recruiting professional staff for FY07 and future operations.

Maintenance and Repair—Maintenance agreements and equipment repairs including miscellaneous maintenance and repair costs for refurbished TE&SS systems and subsystems; maintenance agreements for engineering software licenses; departmental copier maintenance agreements; and maintenance and repair of office equipment.

Indirect Costs—Administrative and financial costs associated with operating the Program.

Indirect Costs—Indirect costs at 53% are assessed on all USIO/Lamont-Doherty Earth Observatory (LDEO) of Columbia University charges except permanent equipment, tuition remission, and downhole tool insurance. In addition, subcontracts are charged indirect costs on the first \$25,000 of each contract. The indirect cost for all of the existing subcontracts was included in the FY04 Program Plan, so these subcontracts are not subject to indirect cost during FY07. Modified total direct costs (MTDC) are the total direct costs minus these exceptions.

Administrative Fee—None budgeted for Texas A&M Research Foundation (TAMRF).

5. CORE CURATION

There are no Core Curation SIC responsibilities or deliverables in FY07.

6. DATA MANAGEMENT

There are no Data Management SIC responsibilities or deliverables in FY07.

7. PUBLICATIONS

There are no Publications SIC responsibilities or deliverables in FY07.

8. LOGGING

There are no Logging SIC responsibilities or deliverables in FY07.

9. EDUCATION AND OUTREACH

9.1. RESPONSIBILITIES

Education and Outreach responsibilities include establishing measures to effectively communicate both shore- and ship-based components of Integrated Ocean Drilling Program (IODP) activities to the public in collaboration with the IODP central management office (IODP Management International, Inc. [IODP-MI]) and the other implementing organizations (IOs), and encouraging awareness of and interest in the scientific results of the Program. This requires direct and indirect interfacing with students and educators and conducting a variety of activities targeting U.S. middle school, high school, undergraduate, and limited museum audiences.

9.2. DELIVERABLES IN FY07

- Coordinate and facilitate the implementation of U.S. education activities to cooperate with the other U.S. education and outreach groups.
- Conduct teacher education activities, including teacher workshops and School of Rock activities.
- Conduct repository-based teacher workshops that educate teachers about drilling, curation, and scientific techniques used in ocean drilling research.
- Develop, field test, evaluate, and disseminate educational and associated curriculum activities.
- Conduct workshops at regional and national teacher conferences and distribute current IODP resources, recruit teachers to participate in curriculum evaluation, and promote the opportunity to participate in other U.S. Implementing Organization (USIO) programs.
- Design and print platform enrichment activities, such as posters, highlighting IODP science programs.
- Promote diversity in ocean drilling through Historically Black Colleges and Universities (HBCU) fellowships and Minorities Striving and Pursuing Higher Degrees of Success (MS-PHD'S) in Earth System Science activities.

9.3. BUDGET AND BUDGET JUSTIFICATION

Element/Expense Category	Total
Education and Outreach	
Salaries and Fringes	153,666
Travel	53,525
Supplies	4,200
Shipping	896
Communication	0
Contractual Services	76,900
Equipment	0
Other Direct Costs	0
Education and Outreach Total Direct Costs	289,187
Modified Total Direct Costs (if applicable)	0
Indirect Costs or Administrative Fees	80,973
Total Education and Outreach Budget	\$370,160

Funds for this work breakdown element (WBE) are budgeted as follows:

Salaries and Fringes—Salaries and fringes, including an anticipated cost-of-living allowance and estimated fringe benefits rate for staff supporting the USIO. See Table A1 for a listing of all staff members, the element to which they are assigned, and their estimated percentage of U.S. Systems Integration Contract (SIC) effort.

Travel—Transportation, per diem, and lodging costs to support participants in the repository-based School of Rock activities; HBCU fellowship and intern program; MS-PHD'S partnerships in diversity; and dissemination of platform enrichment activities.

Supplies—General office supplies and expendables and operational supplies including partial costs of informational materials, posters, and brochures for congressional outreach and platform enrichment activities.

Shipping—Postage, express mail, courier services, and freight, including shipping of booth materials to national and regional meetings.

Communication—None budgeted.

Contractual Services—Consultant and contract services for platform enrichment activities, stipends to teachers participating in School of Rock activities, stipends to fellowship and internship recipients from HBCU, poster printing and design, and an evaluation of the School of Rock program.

Equipment—None budgeted.

Other Direct Costs—None budgeted.

Indirect Costs—Administrative and financial costs associated with operating the Program.

General and Administrative Costs—The National Science Foundation (NSF)-approved provisional rate of 28% was used to calculate general and administrative (G&A) costs on all Joint Oceanographic Institution, Inc. (JOI), charges. G&A costs are charged on all direct costs, and on the first \$100,000 of all subcontracts JOI administers under a particular contract.