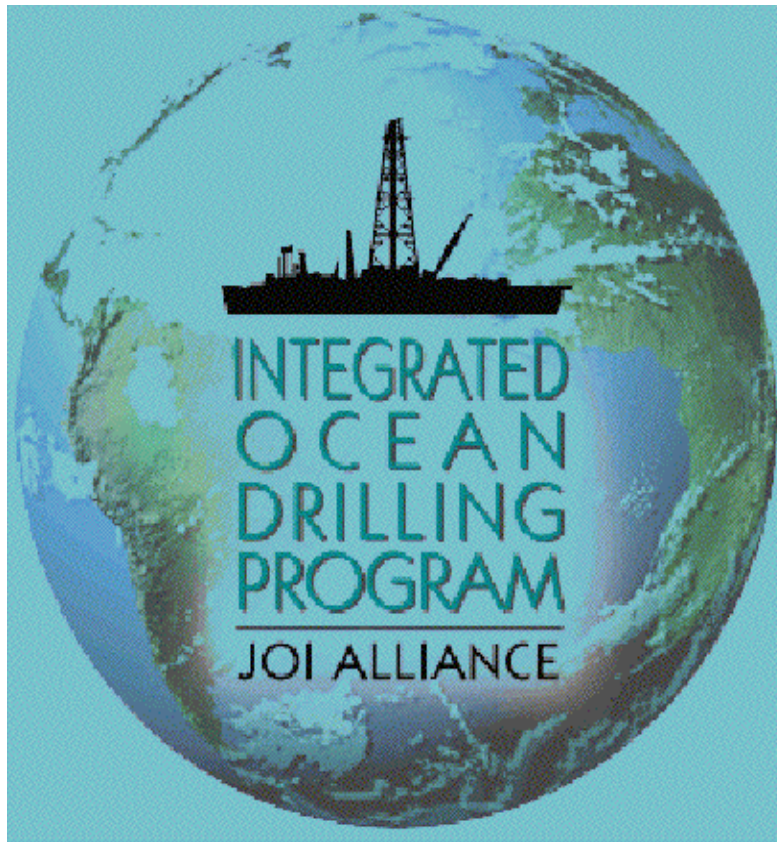


20 May 2004



1 January–31 March 2004

Quarterly Report 2

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TABLE OF CONTENTS

TABLE OF CONTENTS	1
INTRODUCTION.....	3
EXPEDITION OPERATIONS.....	3
IODP-USIO Expedition Schedule	3
Expedition Planning and Implementation Activities	3
PHASE 1 MOBILIZATION ACTIVITIES	5
Plans for Mobilization	5
Status of Equipment.....	5
Insurance and Indemnification.....	6
Health, Safety, and Environment (HSE) Procedures.....	6
Environmental Assessment.....	6
TECHNOLOGY DEVELOPMENT	7
Projects and Other Activities	7
Analytical Tool Development.....	8
INFORMATION TECHNOLOGY	8
Ship-to-Shore Communication Strategy	8
REPORTS/PUBLICATIONS	8
IODP-USIO Program Plan for IODP-MI and NSF	8
USIO-IODP Policy Manual	8
EDUCATION/OUTREACH	8
Education	8
Web.....	9
Public Affairs	9
IODP-USIO SUPPORT ACTIVITIES.....	10
Interactions with IODP-MI and IODP Implementing Organizations	10
APPENDIX A: CONTRACTUAL ACTIVITIES.....	11
APPENDIX B: FINANCE REPORT	12
APPENDIX C: PERSONNEL STATUS	12
APPENDIX D: CONFERENCE AND MEETING SCHEDULE	13
APPENDIX E: TRAVEL.....	13
APPENDIX F: DATA REQUESTS	14
APPENDIX G: SAMPLE REQUESTS	14
APPENDIX H: PUBLIC AFFAIRS	14
APPENDIX I: PUBLICATIONS	14
APPENDIX J: WEB	14
APPENDIX K: CORE REPOSITORY CONSOLIDATION	16
APPENDIX L: MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION (MREFC) ACCOUNT SCIENTIFIC OCEAN DRILLING VESSEL (SODV) PROJECT.....	16
APPENDIX M: IODP-USIO QUARTERLY REPORT DISTRIBUTION LIST.....	20

INTRODUCTION

The organization of this quarterly report reflects activities and deliverables that are outlined in the Integrated Ocean Drilling Program U.S. Implementing Organization (IODP-USIO) Program Plan as implemented by the JOI Alliance during the second quarter of FY04.

EXPEDITION OPERATIONS

IODP-USIO EXPEDITION SCHEDULE

	Expedition	Port (Origin)	Dates ^{1,2}	Total Days (Port/Sea)	Days at Sea (Transit/Ops ³)	Co-Chief Scientists	Alliance Contacts
	Transit	Pusan	1 ⁴ –21 June 2004	20 (2/18)	18/0	N/A	TBN
1	Juan de Fuca	Astoria	21 June–29 August	69 (6/63)	11/52	TBN	A. Klaus
	Transit	Acapulco	29 August–13 September	15 (1/14)	14/0	N/A	TBN
2	North Atlantic 1	Bermuda	13 September–30 October	47 (2/45)	14/31	TBN	M. Malone
3	Core 1	Ponta Delgada	30 October–18 December	49 (4/45)	8/37	TBN	J. Miller
4	Core 2	Ponta Delgada	18 December '04–10 February 2005	54 (5/49)	8/41	TBN	J. Miller
5	North Atlantic 2	Ponta Delgada	10 February–5 April	54 (5/49)	15/34	TBN	P. Blum
	Transit	Reykjavik	5 April–23 April	18 (3/15)	15/0	N/A	TBN
	Demobilization	Galveston ⁵	23 April–15 May	22 (22/0)	0/0	N/A	TBN

Notes:

1 Ship is scheduled to arrive 0600 hr on first day of port call.

2 Initial cruise date reflects first day of port call; ship sails when ready.

3 Ops = Operations (includes both on-site and between-site times).

4 Actual start date needs to be finalized.

5 Demobilization port needs to be finalized.

The operational schedule was completed following Science Planning Committee (SPC) and Operations Committee (OPCOM) discussion in September 2003 and reflects the situation as of 30 October 2003. The IODP-USIO operational schedule will be updated following the IODP-MI OPCOM meeting in April 2004.

EXPEDITION PLANNING AND IMPLEMENTATION ACTIVITIES

The principal expedition planning activities during the reporting period were the Pollution Prevention and Safety Panel (PPSP) review of the sites proposed for IODP-USIO Expeditions 1 through 5 and the development of operations requirements and related costs for incorporation into the FY05 Program Plan and to improve estimates of costs budgeted in the FY04 Program Plan.

IODP-USIO EXPEDITION¹ 1 (PROPOSAL 545): JUAN DE FUCA

Expedition Planning: Operations requirements and related costs for IODP-USIO Expedition 1 continued to be refined as the scientific plans for these expeditions developed. IODP-USIO Expedition 1 in particular is proving operationally challenging because of the complex

¹ Expedition nomenclature will be adjusted in the future to reflect naming protocols to be established by IODP-MI.

requirements of planned Cork installation, which will include expanded microbiological specifications.

Pre-cruise Meeting: The pre-cruise meeting for IODP-USIO Expedition 1 was held 26–27 March 2004 in College Station. The prospectus for Expedition 1 was completed, but distribution was deferred pending an official IODP-MI decision on the expedition naming/numbering convention for IODP.

Expedition Staffing: Science staffing for IODP-USIO Expedition 1 was completed. Three technical support berths remained to be filled. T. Sugihara, the new Center for Deep Earth Exploration (CDEX) Laboratory Officer, was invited to sail on IODP-USIO Expedition 1 as a member of the technical support group. T. Tsuji (Ocean Research Institute) was invited to sail as a logging trainee. He will receive shore-based training at Lamont-Doherty Earth Observatory in April 2004.

Technology: The initial proposal for IODP-USIO Expedition 1 was to install three multilevel long-term seafloor observatories in the western flank of the Juan de Fuca Ridge. The primary hole was to have four instrumented zones hydraulically isolated for chemistry, microbiology, and hydrogeology experiments. The operations plan was changed to split the primary, deep installation into two less complex installations. Savings in cementing operations offset the additional expense for the extra Cork II. However, the cost for the expedition exceeds the Project A estimate and what was budgeted for this expedition in the FY04 Program Plan. The extra expense is primarily due to the microbiology requirement for special sampling tubes made of titanium and a hose of high-purity polymer. An enhanced resistivity tool, the Q-AIT, will be available for a one-time no-cost use during IODP-USIO Expedition 1. If the deployment is successful, this tool may replace the current resistivity tool, the DIT-E, in the future. All hardware is on order, with the longest lead delivery date set for 15 May 2004.

IODP-USIO EXPEDITIONS 2 AND 5 (PROPOSALS 572 AND 543): NORTH ATLANTIC 1 AND NORTH ATLANTIC 2

Expedition Planning: Operations requirements and related costs for IODP-USIO Expeditions 2 and 5 continued to be refined as the scientific plans for these expeditions developed. JOI Alliance personnel continued discussions about the downhole logging operations for these expeditions. Briefing materials regarding plans for logging operations were prepared and forwarded to the co-chief scientists for input and comment. Discussions continued with Overseas Drilling, Ltd. (ODL), regarding weather service and safety requirements for proposed drilling off Greenland during IODP-USIO Expedition 2.

Pre-cruise Meeting: A pre-cruise meeting for IODP-USIO Expedition 2 will be conducted during the next quarter.

Expedition Staffing: Science staffing for IODP-USIO Expedition 2 will take place in the next quarter, after nominations have been received from the IODP members.

IODP-USIO EXPEDITIONS 3 AND 4 (PROPOSAL 512): CORE 1 AND CORE 2

Expedition Planning: Operations requirements and related costs for IODP-USIO Expeditions 3 and 4 continued to be refined as the scientific plans for these expeditions developed. Discussions regarding the potential use of a third-party magnetometer were initiated among the tool's

proponents, the logging staff scientist, the expedition project manager, and other JOI Alliance staff. It will be necessary for the Science Measurements Panel (SciMP) to review and provide a recommendation to OPCOM about the deployment of this tool at its next meeting.

Pre-cruise Meeting: A pre-cruise meeting for IODP-USIO Expeditions 3 and 4 will be held during the next quarter on May 4-6.

Expedition Staffing: Science staffing for IODP-USIO Expeditions 3 and 4 will take place in the next quarter, after nominations have been received from the IODP members. M. Linek (University of Aachen) was named as a logging trainee for IODP-USIO Expedition 4. She will receive shore-based training at Lamont-Doherty Earth Observatory (LDEO) in July.

Technology: The IODP-USIO Science Services, TAMU Engineering Services Department is responsible for design and procurement of the drilling equipment, which includes the use of the Hard Rock Reentry System (HRRS) to install 24 to 36 m of 13-3/8-in casing at two sites, along with the installation of a second 10-3/4-in casing string in each hole. Casing equipment will be available for a third backup hole. IODP-USIO Expedition 3 will complete coring at proposed Site AMHW-01A, which is planned as a >400 m penetration in the hanging wall in 2550 m water depth. Technical discussions were completed, and a final quote for a second hammer drill was received from SDS Corporation Limited in Australia and is being evaluated. The vendor has only one hammer available and will start fabrication of a second, backup hammer after receiving the purchase order. All major equipment is on order.

During IODP-USIO Expedition 4, coring will be completed at proposed Site AMFW-01A, which is planned as a >700-m penetration in the dome (peridotite) in 1630 m water depth. The HRRS installation of ~24–36 m of 13-3/8 in casing will be set during IODP-USIO Expedition 3. The 10-3/4 in casing string will be set if hole conditions require it. A joint pre-cruise meeting for IODP-USIO Expeditions 3 and 4 is scheduled on May 4–6 to coordinate operations planning for the two expeditions. The hammer drill and casing equipment for a third alternate site will be available on IODP-USIO Expedition 4.

PHASE 1 MOBILIZATION ACTIVITIES

PLANS FOR MOBILIZATION

Staffing and loading plans continue to be developed. The mobilization plan was developed and finalized during this quarter. ODL has advised the JOI Alliance that it will not be necessary for the *JOIDES Resolution* to go into drydock before commencing IODP-USIO operations.

Accordingly the ship will be available for the IODP-USIO in Gamagori, Japan, at the end of May. Equipment will be reinstalled and the laboratories readied for use during the transit from Japan to Astoria, Oregon. The shipboard laboratory, data acquisition systems, and downhole tools will all be fully functional for IODP-USIO Expedition 1. The Active Heave Compensator (AHC) will be serviced during port call in Japan. Drill pipe and other operational hardware will be loaded in Astoria.

STATUS OF EQUIPMENT

Laboratory equipment removed from the *JOIDES Resolution* at the end of the Ocean Drilling Program (ODP) in September 2003 will be reinstalled during the transit.

Replacement computer equipment (desktops and peripherals) were purchased and shipped to Japan. The equipment will be installed and tested by the IODP-USIO Science Services, TAMU, Information Technology and Data Services Department staff during the transit. Additional equipment, if needed, will be shipped to the Astoria, Oregon, port call in time for the first expedition.

Final testing of the new wireline heave compensation winch took place during this quarter. The equipment was subjected to a long-term simulated load test, and the unit performed very well without failure. The unit will be formally accepted in early May 2004 pending successful completion of all remaining system tests and review of heave correction algorithms and unit response.

A gas injection (GI) seismic source was selected for use during IODP-USIO Phase 1 operations based on the very successful deployments of this source during ODP as well as its broad utility and serviceability and the goal of minimizing the potential impact on marine mammals.

The wireline heave compensator currently on the *JOIDES Resolution* will be removed during the transit. A logging equipment shop for Schlumberger will be located in its place to create a much safer workshop environment for the logging engineer.

INSURANCE AND INDEMNIFICATION

On 13 January 2004, IODP-USIO Science Services, TAMU/TAMRF, submitted a letter requesting government indemnification of IODP-USIO vessels to Joint Oceanographic Institutions, Inc. (JOI), which forwarded this request to NSF for review

IODP-USIO Science Services, LDEO, discussions with downhole tool underwriters continued through the reporting period. Gaining coverage at rates similar to ODP's FY03 rates will be possible, and appropriate downhole tool coverage will be in place by the start of Expedition 1.

HEALTH, SAFETY, AND ENVIRONMENT (HSE) PROCEDURES

A draft IODP statement about environmental policy was developed during discussions with members of the implementing organizations (IOs) and Pollution Prevention Safety Panel (PPSP) prior to the Nagasaki PPSP meeting in December 2003. A similar document was drafted for health and safety activities this quarter. These documents will provide the guidance for documents completed by each IO. JOI Alliance personnel continued discussions about environmental assessment, health, safety, and environment planning, and issues related to the Marine Mammal Protection Act (MMPA), with input from the LDEO Office of Marine Affairs.

ENVIRONMENTAL ASSESSMENT

The JOI Alliance evaluated firms to conduct an environmental assessment (EA) for IODP-USIO Phase 1 vessel operations. The EA will consist of updating the existing ODP 1985 environmental impact statement for use for during IODP-USIO Phase 1.

TECHNOLOGY DEVELOPMENT

PROJECTS AND OTHER ACTIVITIES

SIMULATED BOREHOLE TEST FACILITY

The fabrication drawings and the bill of materials for a simulated borehole test facility (SBTF) were completed and hardware is being procured. The SBTF is designed to simulate dynamic tool insertion in sediments under lithostatic pressure and hydrostatic pressure up to 3000 psi and to be modular to accommodate the Instrumented Water Sampler (IWS), Davis-Villinger Temperature Probe (DVTP), Davis-Villinger Temperature-Pressure Probe (DVTTP), Advanced Piston Corer Temperature (APCT) tool, and Pressure Core Sampler (PCS). The insertion of tools is accomplished using the advanced piston corer (APC) “speed” pin concept, in which the hydraulic insertion force is set by the shear strength of a series of shear pins. The overriding purpose of the SBTF is to shorten the development cycle of downhole tools by testing prototypes under operational conditions without having to go to sea.

COSTA RICA DIVE SUPPORT

The IODP-USIO Science Services, TAMU, Tools and Analytical Service Department’s Engineering Services section supported a third-party submersible dive intended to replace instrumentation located in two borehole observatories installed during ODP Leg 205. A winch platform was designed and fabricated to remove and install the instrument strings. The winch operated properly, although it was cumbersome for manipulation by the submersible *Alvin* and had slower line speed than desired. Debris in the bottom of the 4-1/2-in casing of the first borehole hampered latching onto the instrument string. Jars were added to the tool string, and then during the process of winching down the eyehook connector the tool string was inadvertently released and dropped to the bottom of the hole. A fishing tool was fabricated aboard ship and successfully used to grab the tool string. The retrieval operation was suspended as time ran out. An ancillary program letter was submitted to the IODP SAS proposing to use the *JOIDES Resolution* to retrieve and replace the instrument strings during the transit between IODP-USIO Expeditions 1 and 2.

IODP-USIO SCIENCE SERVICES, TAMU ENGINEERING SERVICES

The IODP-USIO Science Services, TAMU, Engineering Services Section provides centralized support for rig instrumentation and downhole measurement tools, as well as maintains state-of-the-art tools for science operations on the riserless drilling vessel. Three APCT (Adara) tool electronics were calibrated for use during IODP-USIO Expedition 1. A temporary ice water bath is being fabricated for onshore use to verify calibrations of APCT, DVTP, and DVTTP tools destined for use during IODP-USIO Expedition 1. The Engineering Services Section provides centralized documentation control, inventory control, technical support, and orderly implementation of upgrades and changes. Nine downhole tools are included: the APCT tool, Water-Sampling Temperature Probe (WSTP), DVTP, DVTTP, APC-Methane tool, PCS Methane (PCSM) tool, PCS, Downhole Sensor Sub (DSS), and IWS. Rig instrumentation and some aspects of the active heave compensator are also supported.

Instrumented Water Sampler: The IWS is expected to be operational in IODP-USIO Phase 1 operations. Feedback control software is being debugged. Sea trials during ODP Leg 208 made it obvious that rapid development of the IWS (and DVTTP) required a shore-based facility to test the penetration mechanics of probe geometries and the effectiveness of filtering schemes for fluid sampling and pore pressure measurements.

Temperature Testing Chamber: IODP-USIO Science Services, LDEO, has taken delivery of a temperature testing chamber and will soon receive rapid prototyping equipment. It is expected that the new testing and fabricating capabilities will be a service provided to the larger IODP community.

ANALYTICAL TOOL DEVELOPMENT

The battery holders for the Core Barrel–Retrievable Memory Module (CB-RMM) have been completely redesigned, fabricated and installed by IODP-USIO Science Services, LDEO. The system is fully operational and ready for deployment. The JOI Alliance development of new core barrels for the logging-while-coring system began during this quarter. Existing mechanical drawings were pulled from file for review.

INFORMATION TECHNOLOGY

SHIP-TO-SHORE COMMUNICATION STRATEGY

Very small aperture terminal (VSAT) satellite communication systems for the *JOIDES Resolution* were solicited through an RFP issued by IODP-USIO Science Services, TAMU. Selection and implementation will occur before the ship transits to Astoria, Oregon, in preparation for IODP-USIO Expedition 1. IODP-USIO Phase 1 voice and data services are planned to be very similar to those that were available aboard the *JOIDES Resolution* during the final ODP legs.

REPORTS/PUBLICATIONS

IODP-USIO PROGRAM PLAN FOR IODP-MI AND NSF

The JOI Alliance initiated preparations for the IODP-USIO FY05 Program Plan in January 2004. NSF and the Ministry of Education, Culture, Sports and Technology (MEXT) of Japan provided revised definitions of science operations costs (SOC) and platform operations costs (POC) in February 2004. In March, the IODP-USIO FY04 Program Plan was submitted to NSF and distributed.

USIO-IODP POLICY MANUAL

The JOI Alliance initiated the revision process to update the ODP policy manual for IODP-USIO activities. JOI began a review of the revised sections of the document.

EDUCATION/OUTREACH

EDUCATION

TEACHER AT SEA INITIATIVE

The JOI Alliance implemented the IODP-USIO–sponsored teacher-at-sea initiative. Tasks included preparation of program goals and objectives, an informational fact sheet and application form, and development of a selection procedure. Deadline for submission of applications is 5 April 2004.

HISTORICALLY BLACK COLLEGES AND UNIVERSITIES FELLOWSHIP PROGRAM

The JOI Alliance initiated planning for the IODP-USIO–sponsored fellowship program. Tasks included preparation of fellowship principles, an informational fact sheet, call for fellowship

projects, and application form, and development of a selection procedure. The deadline for submission of fellowship project ideas is 5 April 2004.

CONFERENCES

In partnership with U.S. Science Support Program (USSSP), the JOI Alliance sponsored a booth at the National Science Teachers' Association (NSTA) Conference, Atlanta, Georgia, which began on 31 March 2004. F. Rack (JOI Director, Ocean Drilling Programs [ODP and IODP-USIO]) is scheduled to present a talk titled "IODP—Science in Search of Earth's Secrets: Exploring Earth Processes through Scientific Ocean Drilling" as part of NSTA's Earth and Space Science Day on 3 April 2004.

WEB

JOI Alliance Web Site

A JOI Alliance Web site (www.joialliance.org) was created in response to the need to provide information about the NSF Major Research Equipment and Facilities Construction (MREFC) account and planning for the Scientific Ocean Drilling Vessel (SODV) project (see "Appendix L").

IODP-USIO SCIENCE SERVICES, TAMU, WEB SITE

Content that was added to the IODP-USIO Sciences, TAMU, Web site during the quarterly period is listed in "Appendix J."

PUBLIC AFFAIRS

INFORMATION FOR THE PUBLIC

JOI has been working to ensure a smooth transition from ODP to IODP for both the media and public. Staff members responded to requests for information from the public, educators, and journalists and issued news releases on scientific ocean drilling research. One news release on ODP/IODP was issued during this reporting period, highlighting a paper on sea level change by K. Miller (Rutgers University) that appeared in the Geological Society of America Bulletin.

Articles about IODP published during January–March 2004 are listed in "Appendix H."

CONGRESSIONAL OUTREACH

JOI worked with members of Congress and their staffs to increase understanding of scientific ocean drilling and obtain funding to begin conversion of an IODP-USIO Phase 2 vessel. JOI joined with other science and engineering organizations to participate in Congressional Visits Day on 3 and 4 March 2004, making the case to congressional members for increased science funding, generally, and ocean drilling research, specifically.

PUBLIC RELATIONS MATERIALS

The JOI Alliance began preparation of materials on the IODP-USIO Phase 1 riserless vessel, including a new image library, port call public relations procedures, media lists, new public affairs letterhead, an IODP-USIO brochure, and IODP-USIO products (e.g., T-shirts, hats, mugs, etc.).

PORT CALL EVENTS

The JOI Alliance began planning for port call tours and a VIP event for the Astoria, Oregon, port call before the first IODP-USIO expedition in June 2004.

IODP-USIO SUPPORT ACTIVITIES

INTERACTIONS WITH IODP-MI AND IODP IMPLEMENTING ORGANIZATIONS

IODP-MI AND IODP IMPLEMENTING ORGANIZATIONS MEETING

Members of the JOI Alliance attended the IODP-MI–sponsored IO meeting in Edinburgh, Scotland, 26–28 February 2004, participated in discussions about the FY04 and FY05 Program Plans, and discussed potential avenues for collaborative projects (e.g., training, staffing, development, etc.) with the other implementing organizations.

IODP-MI EDUCATION AND OUTREACH WORKSHOP

Ann Klaus (IODP-USIO Science Services, TAMU) represented the IODP-USIO at the IODP-MI–sponsored education and outreach meeting in Austin, Texas, 20–23 February 2004.

APPENDIX A: CONTRACTUAL ACTIVITIES

JOI

JOI CONTRACT WITH NSF OCE-0352500

On 13 February 2004, JOI submitted a request for NSF indemnification of IODP-USIO drilling vessels. NSF indemnification would provide many benefits to NSF and the JOI Alliance such as lower insurance costs and increased stakeholder confidence that their drilling interests will be protected. The request is being evaluated by NSF.

On 8 March 2004, JOI received a \$10 million increment of funding for activities through 24 August 2004.

JOI SUBCONTRACT WITH TAMRF JSC 4-02

Modification 1 approved the TAMRF's FY04 Program Plan and provided an \$8.5 million increment of funding for activities through 24 August 2004.

JOI SUBCONTRACT WITH LDEO JSC 4-03

Modification 1 approved LDEO's FY04 Program Plan and provided a \$2.4 million increment of funding for activities through 24 August 2004.

TAMRF/TAMU

TAMRF SUBCONTRACT WITH ODL

A proposed subcontract for the IODP-USIO Phase 1 vessel, *JOIDES Resolution*, was submitted to ODL for review and comments on 1 March 2004. Responses and comments were received from ODL on 3 March 2004. IODP-USIO Science Services, TAMU/TAMRF, will have a summary of outstanding issues by the first part of April 2004 and will initiate a meeting for negotiations for these items.

CONTRACTS/PROCUREMENT ACTIVITY (\$100,000 OR GREATER)

The following requests for information (RFI)/requests for quote (RFQ) were issued:

14 January 2004, RFI for an inventory database management system.

16 March 2004, RFQ for a hazard survey assessment.

The following purchase orders were issued:

Cabett Services, Inc., for \$238,784 for the purchase of a hydraulic umbilical.

AM International, Inc., for \$240,443 for the purchase of 4-1/2-in packers.

Sermatech Power Solutions for \$166,057 for drill pipe coating services.

PROPERTY ACTIVITY

On 27 January 2004, IODP-USIO Science Services, TAMU/TAMRF, received e-mail verification that TAMRF is not required to submit quarterly reports for property acquisitions of \$5000 or less.

MISCELLANEOUS ACTIVITY

On 7 January 2004, IODP-USIO Science Services, TAMU/TAMRF, submitted to JOI the IODP certificate of insurance.

APPENDIX B: FINANCE REPORT

Please contact info@joiscience.org for hard copies of the financial tables.

APPENDIX C: PERSONNEL STATUS

JOI

Candidates for the Associate Director and for the Assistant Director, Ocean Drilling Programs, positions were interviewed in March 2004. M. Kleinrock will begin working full-time on 19 April 2004 as the new Associate Director, Ocean Drilling Programs. K. Kryc will begin working full time on 1 June 2004 as the new Assistant Director, Ocean Drilling Programs.

M. Cortes was promoted from Program Associate to Senior Program Associate, Ocean Drilling Programs, effective 1 January 2004.

LDEO

Two positions in the IODP-USIO Science Services, LDEO, Engineering Services Department were filled. G. Sarker accepted the Technical Analyst position. W. Keogh will begin working as Electrical Engineer on 5 May 2004.

TAMU

During this quarterly period the following positions opened and were advertised:

Imaging Specialist

Marine Computer Specialist

Administrative Assistant

Budget Analyst – TAMRF

The following positions were filled or frozen during this quarterly period:

Supervisor of Science Support (M. Malone): 23 February 2004

Senior Project Administrator (D. Houpt): 15 March 2004

Supervisor of Analytical Services (P. Blum): 1 March 2004

Research Specialist: Frozen

The following positions were opened during previous reporting periods and remained open at the end of this quarterly period:

Staff Scientist

Supervisor of Operational Support

APPENDIX D: CONFERENCE AND MEETING SCHEDULE

SSP 1	11–13 February 2004	Tokyo, Japan
ILP 1	22–23 February 2004	Houston, Texas
SPC 2	23–26 March 2004	Washington, D.C.

APPENDIX E: TRAVEL

Institution	Personnel	Purpose	Location/Dates
JOI	F. Rack	IODP JA Managers Meeting	College Station, TX/5–11 February 2004
JOI	F. Rack	IMI/IO Meeting	Edinburgh, UK/ 23–27 February 2004
JOI	F. Rack	IODP JA Managers Meeting	College Station, TX/29 March–2 April 2004
JOI	J. Fox, J. Baldauf, R. McPherson	Meeting with JOI Alliance and NSF	Washington, DC/3–5 February 2004
LDEO	D. Goldberg	JA Managers Meeting	College Station, TX/6–8 February 2004
LDEO	D. Goldberg	IO Meeting	Edinburgh, UK/25–26 February 2004
LDEO	D. Goldberg	IMI/IO Meeting	Edinburgh, UK/27–28 February 2004
LDEO	D. Goldberg	SPC Meeting	Washington, DC/23 March 2004
LDEO	D. Goldberg, M. Reagan, G. Myers, G. Iturrino	JA Managers Meeting	Washington, DC/24–25 March 2004
LDEO	G. Myers	MREFC Meeting	Washington, DC/4 February 2004
LDEO	G. Iturrino	Phase 2 Planning Meeting	College Station, TX /20 February 2004
LDEO	G. Myers, G. Iturrino	JA Platform Team Meeting	College Station, TX /29–31 March 2004
LDEO	G. Iturrino	Expedition 1 Precruise Meeting	College Station, TX /7 March 2004
TAMU	R. Dixon, K. Grigar, D. Schroeder	Inspect equipment, Maurer Technology	Houston, TX/6 January 2004
TAMU	J. Eastlund	JAVA Class Training	Chicago, IL/12–16 January 2004
TAMU	S. Housley	LabView Training	Austin, TX/15 January 2004
TAMU	Robert Wheatley	Dionex Meeting	Houston, TX/ 20 January 2004
TAMU	R. Dixon	C&M Machine Shop	Navasota, TX/2 February 2004
TAMU	T. Pettigrew	TAM International Meeting	Houston, TX/3 February 2004
TAMU	R. Dixon, D. Schroeder	Oceaneering Meeting	Houston, TX/5 February 2004
TAMU	R. McPherson	Meeting with JOI/Contracts Workshop	Washington, DC/8–10 February 2004
TAMU	J. Eastlund	LabView Training	Houston, TX/8–13 February 2004
TAMU	J. Baldauf	IODP Environmental Assessment for Phase 1 Meeting	Washington, DC/17–19 February 2004
TAMU	R. Dixon, D. Schroeder, T. Pettigrew	TAM International Design Review	Houston, TX/18 February 2004
TAMU	Ann Klaus	IMI/IODP Education Meeting	Austin, TX/20–23 February 2004
TAMU	Jeff Fox, Jack Baldauf	IO Meeting	Edinburgh, UK/24–29 February 2004
TAMU	T. Pettigrew, R. Dixon, J. Shu	CORK II Dives	San Jose, Costa Rica/24 February–8 March 2004
TAMU	J. Suhonen, C. Bennight	LabView Training	Austin, TX/29 February–5 March 2004
TAMU	K. Grigar, D. Schroeder	Vendor visit, Schlumberger Test Facility	Sugar Land, TX/8 March 2004
TAMU	L. Schulze	Training	Las Vegas, NV/9–12 March 2004
TAMU	Y. Yao, D. Kannoju	Oracle PLISQL Training	Houston, TX/12–16 March 2004
TAMU	J. Eastlund	Oracle db Management Training	New York, NY/15–19 March 2004
TAMU	J. Baldauf, Ann Klaus	SPC Meeting	Washington, DC/23–26 March 2004
TAMU	D. DeShetter	Training	Washington, DC/29 March–1 April 2004
TAMU	K. Grigar	Drilling With Casing Seminar	Houston, TX/29–31 March 2004

APPENDIX F: DATA REQUESTS

No activity.

APPENDIX G: SAMPLE REQUESTS

No activity.

APPENDIX H: PUBLIC AFFAIRS

Articles about IODP published during this time:

Boyd, R., 2004. Scientists Plan Extensive Sampling of Ocean Beds [Online]. Available from World Wide Web:

<http://www.realcities.com/mld/krwashington/news/columnists/robert_s_boyd/8097764.htm>.

Galus, C., 2004. Les Geologues vont tenter d'extraire les archives de la courte terrestre. *Le Monde*, 10 January 2004.

Miller, K.G., Sugarman, P.J., Browning, J.V., Kominz, M.A., Olsson, R.K., Feigenson, M.D., and Hernandez, J.C., 2004. Upper Cretaceous sequences and sea-level history, New Jersey Coastal Plain. *Geol. Soc. Am. Bull.*, 116:368–393.

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APPENDIX I: PUBLICATIONS

No activity.

APPENDIX J: WEB

TAMRF/TAMU

SITE USE STATISTICS

The IODP-USIO Science Services, TAMU, Web site went online with limited content late in Q1. Web statistics were first collected in January 2004. There were 2242, 4597, and 8994 visitors in January, February, and March 2004, respectively. This trend shows a 300% increase in activity between the beginning and end of Q2 alone. Web activity is expected to rise rapidly as the site's content and public's involvement in IODP-USIO activities increases.

NEW TAMU CONTENT

Information for participants:

Responsibilities of scientists: http://iodp.tamu.edu/participants/scientist_jobs.html

Ship library: http://iodp.tamu.edu/participants/ship_library.html

Precruise info and sailing checklist: <http://iodp.tamu.edu/participants/checklist.html>

Science Operations

Contact information: http://iodp.tamu.edu/scienceops/contact_s.html

Port call shipping information: <http://iodp.tamu.edu/scienceops/portcall.html>

Tools & Labs

Labs: <http://iodp.tamu.edu/labs/>

Shipboard science labs: <http://iodp.tamu.edu/labs/index.html>

Shore-based science labs: <http://iodp.tamu.edu/labs/shore.html>

Lab support: <http://iodp.tamu.edu/labs/support.html>

Lab software manuals: <http://iodp.tamu.edu/labs/software.html>

Lab chemicals: <http://iodp.tamu.edu/labs/chemicals.html>

Tools: <http://iodp.tamu.edu/tools/>

Tool types: <http://iodp.tamu.edu/tools/index.html>

Technical information: <http://iodp.tamu.edu/tools/specs.html>

Long-term observatories: <http://iodp.tamu.edu/tools/observatories.html>

Data & Samples

Core data: <http://iodp.tamu.edu/database/>

Database overview: <http://iodp.tamu.edu/janusweb/general/dbtable.cgi>

Data queries: <http://iodp.tamu.edu/janusweb/general/dbtable.cgi>

Data types: <http://iodp.tamu.edu/database/datatypes.html>

Projects: <http://iodp.tamu.edu/database/projects.html>

Core images: <http://iodp.tamu.edu/database/coreimages.html>

Core samples: <http://iodp.tamu.edu/curation/>

Sample request form: <http://iodp.tamu.edu/curation/samples.html>

Sample types: <http://iodp.tamu.edu/curation/sampletypes.html>

Core repositories: <http://iodp.tamu.edu/curation/repositories.html>

GCR: <http://iodp.tamu.edu/curation/gcr/index.html>

WCR: <http://iodp.tamu.edu/curation/wcr.html>

Micropaleontological Reference Centers: <http://iodp.tamu.edu/curation/mrc.html>

EDUCATION

Teacher at Sea Initiative: <http://iodp.tamu.edu/education/teacheratsea.html>

MEETINGS & TRAVEL

Travel: <http://iodp.tamu.edu/travel/travel.html> (policy and new forms added)

INFORMATION FOR EMPLOYEES

Human Resources: <http://iodp.tamu.edu/employees/humanres.html> (evaluation forms)

Information Technology: <http://iodp.tamu.edu/employees/infotech.html> (Web Policy)

Administration: <http://iodp.tamu.edu/employees/admin.html> (procurement info)

CALENDAR

Monthly calendar with IODP and IODP-USIO Science Services, TAMU, events:

<http://iodp.tamu.edu/calendar/>

PEOPLE

E-mail scripts and photos were added to staff directories.

APPENDIX K: CORE REPOSITORY CONSOLIDATION

The Deep Sea Drilling Project (DSDP)/ODP Core Repository Consolidation Plan was reviewed and approved by the Science Planning Committee (SPC), and forwarded on to the Science Planning and Policy Oversight Committee (SPPOC) for approval.

APPENDIX L: MAJOR RESEARCH EQUIPMENT AND FACILITIES CONSTRUCTION (MREFC) ACCOUNT SCIENTIFIC OCEAN DRILLING VESSEL (SODV) PROJECT

MREFC SODV PROJECT MONTHLY REPORT—MARCH 2004

The JOI Alliance Platform Team consists of F. Rack (JOI); J. Baldauf, T. Davies, and B. Jonasson (IODP-USIO Science Services, TAMU); and G. Iturrino and G. Myers (IODP-USIO Science Services, LDEO).

During the reporting period (17 February–31 March 2004), the JOI Alliance Platform Team prepared for tasks that need to be accomplished in April–June 2004. These activities are summarized below. The major accomplishments were the delivery of the Project Execution Plan (PEP) to NSF on 17 February 2004, the delivery of numerous responses to the JOI Alliance for the market survey and invitation to tender (ITT) requests for information that were issued in December 2003, and the continuation of planning for the development of design documents to support interactions with the science community and NSF regarding onboard science capabilities and habitability specifications for the U.S. scientific ocean drilling vessel (U.S. SODV).

MREFC/PEP UPDATE

The JOI Alliance PEP for the MREFC U.S. SODV was submitted to NSF for review on 17 February 2004.

The JOI Alliance MREFC–U.S. SODV Web site was established on 19 March 2004 (www.joialliance.org). The JOI Alliance conducted a general review of other MREFC Web sites; during April–June 2004, the JOI Alliance will enhance its U.S. SODV Web site by including additional information about the scientific rationale for the U.S. SODV activity.

Evaluation of the market survey results began on 29 March 2004; evaluation of the ITT results was expected to begin on 5 April 2004.

The funding profile for the U.S. SODV acquisition and conversion project was estimated to be approximately \$40 million in FY05 and \$60 million in FY06. A total of 10% of these funds is identified as contingency funds. The FY06 NSF budget request should be known in February 2005, with the actual funded level identified by August.

The IODP-USIO Phase 2 vessel will be identified as the U.S. SODV project.

The JOI Alliance Platform Team will ensure that NSF MREFC terminology is used in all documents completed for this project.

An estimated 2 months will be required for outfitting the USIO Phase 2 vessel after the shipyard conversion process and 4–6 months for sea trials. Target locations for sea trials will need to be identified.

MARKET SURVEY STRATEGY

The review process for the market survey and the ITT was integrated to eliminate duplication of effort and cost efficiency. The request for proposals (RFP) was finalized for issuance.

The statement of work (SOW) deliverables for the integrated external review were reviewed and modified as follows:

- General cost trade-off vs. science priorities:
 - Evaluate and assess operational and equipment capital cost trade-off vs. scientific priorities.
 - Provide an integrated evaluation of operational system and subsystem requirements that employ cost vs. scientific benefit assessment principles.
 - Develop a summary by vendor of all individual items of drilling equipment quoted, along with the specific cost and delivery schedule for these items.
- Specific cost trade-off vs. science priorities:
 - Evaluate and assess vendor recommendations for the following:
 - Derrick and substructure package.
 - Heave compensation of the coring winch, subsea television system winch, and wireline logging winch.
 - Handling equipment under the substructure, including guide horn for integration with drilling operation.
 - Mechanized core-barrel handling system on the rig floor; core barrel stabbing guide.
 - Rig instrumentation.
 - Driller's control cabin.
 - Dual elevator system.
- Three drill string options:
 - Evaluate and document vendor assessment of the design and operational impact of each of the three drill string options:
 - Optimum drill string configuration.
 - Vendor's derrick and drill pipe handling package; including capability to accommodate the core barrel sinker bars and overshot latch mechanisms.
 - Vendor recommendations for drill pipe handling, racking, lay down, and storage.
 - Vendor's recommended changes to the coring winch and coring wireline.
- Top hole drilling package:
 - Evaluate and assess the vendor's recommendations for handling a top hole drilling package (dual gradient system) as part of the derrick package upgrade.

ITT STATUS

Responses to the ITT were received. Review of these documents began will provide a comparison of contractors, cost elements, capability, and state of technology and value.

LDEO LOGGING RFP STATUS

The logging market survey was reviewed and signed by IODP-USIO Science Services, LDEO. The document will be placed on the MREFC Web site as soon as possible. This document will be used as the starting point to write the logging RFP.

The logging subcontract should incorporate the explosive contract between TAMRF and the ship contractor.

CONFIDENTIALITY AGREEMENT

Confidentiality agreements were completed prior to distribution of the ITT and market survey responses. Agreements were established between TAMRF and Columbia University IODP-USIO Science Service, LDEO, personnel are incorporated under this agreement) and TAMRF and JOI (JOI personnel are covered under this agreement). IODP-USIO Science Services, TAMU, employees are covered under an existing agreement between TAMRF and TAMU.

All individuals having access to the market survey and/or the ITT document(s) are required to sign a letter indicating that they will abide by their institution's confidentiality policy.

LABORATORY DESIGN

Peter Blum and Bill Mills (IODP-USIO Science Service, TAMU) updated the SODV briefing book. The purpose of the book is to

- Create an implementation plan for the U.S. SODV onboard science capability.
- Explain the IODP-USIO Phase 2 vessel's functionality to the IODP community.
- Solicit input from the IODP community.
- Define boundary conditions for the U.S. SODV RFP.
- Provide baseline specifications for a detailed design document.

The draft table of contents for the briefing book consists of the following:

- Introduction: relate IODP community planning documents to the U.S. SODV functional specifications.
- Coring, logging, and borehole installations—probably equivalent to parts of the RFP contents.
- Shipboard laboratories.
- Analytical capabilities.
- Building specifications.
- Habitability: living quarters, entertainment facilities, galley, and physical fitness facilities.

The scope of the shipboard analytical capabilities needs to present large volume of information in a user-friendly structure and style. Currently this section is structured on functionality with each laboratory section divided into the following:

- Overview: general function in a nutshell; outline major changes from the IODP-USIO Phase 1 vessel to the IODP-USIO Phase 2 vessel; this section will mention laboratory location(s) and staff requirements.
- IODP-USIO Phase 1 vessel capabilities: a bulleted list of all measurement systems with comments as needed.
- IODP-USIO Phase 2 vessel enhancements: a bulleted list of all measurement systems or equipment that need to be upgraded/replaced or added.

The science laboratories include chemistry, core sampling, geophysical analysis, imaging, microbiology, microscopy, paleomagnetism, paleontology, petrophysics, stratigraphy, underway geophysics, visual core description, and X-ray diffraction.

The science support laboratories include bulk powder and bead preparation, computing support, core handling and curation, database and programming support, education and outreach, electrical support, office support, science and laboratory management, stores support, and thin section support.

The scope of the U.S. SODV Science Facilities Design Guidelines is to ensure the quality of design and construction of state-of-the-art facilities. The initial target audience is the internal JOI Alliance planning group and the science community. The primary target audience includes ship owners and marine architects/engineers.

The facilities guidelines are based on the 2001 design policy and guidelines developed with the help of documentation from the Office of Research Facilities (ORF), Division of Policy and Program Assessment, Office of Research Services, Division of Safety and Division of Public Safety, and Institutes and Centers of the National Institutes of Health. This information was modified to reflect IODP's unique needs with the inclusion of applicable regulations from TAMU's Environment, Health, and Safety Department (state of Texas) and the International Maritime Organization (United Nations).

The facilities document will consist of goals and objectives, general area descriptions, functional design considerations, architectural and engineering design criteria, an equipment list, construction drawings, and a construction timetable.

The design objectives of the facilities document include health and safety (exposure to hazardous materials in laboratories, exposure to hazardous materials in recovered cores, repetitive lifting tasks, and protection from extreme weather conditions), quality of life/habitability (healthy environment and ambient noise and vibration) efficient workspace (core and sample flow, work patterns, workplace environment), flexibility and adaptability (expandable infrastructure resources and movable interior walls) and design groups. Spaces are organized into design groups because their interrelated functions require close physical proximity to each other.

The introduction, laboratory, and habitability sections will be drafted by early May. The document will be circulated throughout the JOI Alliance for comments.

NSF AND COMMUNITY STAKEHOLDER INTERACTIONS

The following strategy was developed to ensure NSF and community involvement in the interaction of the U.S. SODV for Phase 2:

Element 1: Invite IODP-MI to coordinate an IODP SAS process to provide comments on the design document(s) for the onboard science capability of the U.S. SODV. The vision here is that the design document(s) would be forwarded to the appropriate SAS panels for review; comments will be submitted to IODP-MI, which would integrate these comments into a single SAS assessment provided to the JOI Alliance.

Element 2: Invite selected members of the science community to review and provide comments on the ITT responses submitted by contractors, in conjunction with the JOI Alliance Platform Team, in order to prepare the U.S. SODV RFP. Participants in this activity will be required to sign a confidentiality agreement.

Element 3: Invite selected individuals from USSAC and/or SciMP to serve as community representatives on each of the design teams tasked with planning the onboard science capability for the U.S. SODV.

Element 4: Introduce the scientific community to the MREFC Web site and encourage the use of this site as a way to become informed about U.S. IODP Phase 2 activities. The USIO will also provide updates to stakeholders via community list servers, if and when appropriate.

Element 5: Conduct, as appropriate, “town meetings” and/or provide updates at appropriate SAS or USSAC panel meetings to ensure community awareness about the U.S. SODV planning process and to gather community input on issues. Town meetings will take place at Geological Society of America and American Geophysical Union meetings.

Element 6: Invite the USSAC chair or delegate to serve as a nonvoting member on the U.S. SODV selection team. Individuals on this team will be required to sign a confidentiality agreement.

The Platform Team met via conference call and in person to review MREFC documents, discuss the progress of technical planning, and strategize for formal ITT, market survey, and eventual RFP review and evaluation. ITT responses were distributed among JOI Alliance institutions. A Web-based review procedure is being developed.

APPENDIX M: IODP-USIO QUARTERLY REPORT DISTRIBUTION LIST

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