

CAPSULE SUMMARY OF ACTIVE TASKS

July 1, 2004

UNITED STATES MEMBER STATE SUPPORT PROGRAM TO IAEA SAFEGUARDS

**DEPARTMENT OF ENERGY
DEPARTMENT OF STATE
NUCLEAR REGULATORY COMMISSION
DEPARTMENT OF DEFENSE**

**INTERNATIONAL SAFEGUARDS PROJECT OFFICE
BROOKHAVEN NATIONAL LABORATORY
UPTON, LONG ISLAND, NEW YORK 11973**

[Privacy and Security Notice](#)

Currently Active Tasks

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.116		Field Support Instruments and Techniques [USA A 931 / G. Bosler]	ORNL	\$163,068	\$154,534	There has been no activity reported for this quarter.
	A.116.47		LANL	\$1,916,100	\$1,765,362	A.116.26 - AWCC Cross Calibrations - There has been no activity reported for this quarter. A.116.47 - CdZnTe - There has been no activity reported for this quarter. A.116.68 - Assistance to the IAEA on Large Neutron Multiplicity Counter for KAMS - This task is on stand by. A.116.76 - KAMS Software Development - This task is on stand by.
	A.116.58		LLNL	\$143,000	\$137,870	High Purity Mechanically Cooled Ge Detector - LLNL has continued to work to effect a transfer of the HPGe detector to the IAEA for testing, since ISPO has determined that it is unable to take responsibility for the unit for the time it is in IAEA custody.
	A.116.83		LANL	\$288,000	\$168,550	Cascade Header Enrichment Monitor (CHEM) - LANL briefed the SSTS and ISPO on the status of this project at LANL during the summer contractor visit in June.
A.202		Separation of Plutonium Isotopes for the Production of High Purity Spike Reference Materials [USA A 909 / D. Donohue]	NBL	\$79,000	\$55,505	A final version of the US DOE-IAEA Memorandum of Understanding (MOU) on Pu 244 enrichment was submitted to the IAEA on May 18, 2004. The MOU was reviewed by the IAEA Department of Safeguards as acceptable and passed to the IAEA legal counsel for review. The US Department of State is pursuing formal acceptance of a Russian Federation response to a US request for safeguards assurances related to enrichment of US origin FP-33 plutonium oxide. Robert Cockerham (DOS/NP/MNA) is helping to complete this part of the project. The next Steering Committee Meeting is planned for the end of September 2004.
	A.202		ORNL	\$72,000	\$41,412	There has been no activity reported for this quarter.
			LANL	\$17,100	\$17,100	There has been no activity reported for this quarter.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.218		Controlled Potential Coulometry of 1 mg Pu with SRL Coulometer [USA A 1049 / P. Doherty]	NBL	\$75,000	\$70,781	Impurity/Interference Study - NBL reviewed the decay data in early April. The last set of analyses was completed. The statistical analysis of the data began in May. The draft final report was completed. The draft report was under review internally in June. NBL expects to complete the final report in September 2004.
			SRNL	\$294,406	\$235,371	SRS Coulometer Instrument Upgrade - SRNL visited SAL during the week of June 21 to address the performance of the SAL coulometer. Analysis of the coulometer electronics showed that the shift in the calibration factor was caused by drift in the output of one of the two Voltage-to-Frequency Converters (VFC) used in the Digital Integrator to convert electrolysis current (or coulombs) to digital counts. A trim pot (variable resistor) was the direct cause of the drift. The calibration factor is measured constantly when the system is not in use. Therefore, the changing calibration factor corrected properly for the VFC drift as designed, resulting in no affect on the measurement accuracy. SRS installed a Digital Integrator from SRS with new trim pots because the VFC drift was greater than specified. Calibration data obtained throughout the week showed excellent stability. All other instrument parameters were within specifications. SRS found the cell assembly in excellent condition. Continued and routine use of the coulometer by SAL and the implementation of SRS recommendations from November 2003 for control of cell parameters and electrode conditioning have been effective. The precision within small batches of standard aliquots demonstrated optimal performance by SAL. The improvements in electrode conditioning by SAL since November 2003 allow SRS and SAL to make minor refinements in the argon gas flow rate.
A.223	A.223.08	Technical Support to the Clean Laboratory [USA A 1081 / D. Donohue]	IAEA	\$0	\$0	
A.227		BN-350 Hot Cell Transfer Monitor [USA A 1103 / T. Pochet]	Aquila	\$184,500	\$186,249	There has been no activity reported for this quarter.
			LANL	\$663,700	\$663,113	There has been no activity reported for this quarter.
A.233		NDA Verification Techniques for BRN Enrichment Plant [USA A 1157 / E. Gryntakis]	LANL	\$18,000	\$10,200	
			ORNL	\$561,870	\$561,870	This task is on stand by.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.241		Development of Integrated Review Software for UMS				
		[USA A 1238 / M. Schanfein]	LANL	\$402,000	\$274,142	LANL met with Mark Schanfein (IAEA) in May and discussed LANL draft documents that contain definitions for the Import COM module interfaces and manager components. Mr. Schanfein is expected to request a slight change in the scope of the task to focus the development on the Import and Analysis COM library definitions and library prototypes. LANL continues to develop a detailed definition of Analysis COM libraries. LANL is updating the draft documents to include information on the components that have been developed and delivered to date. LANL expects to deliver the interface specification documents to the Agency in August 2004.
	A.241.01		LANL	\$168,870	\$0	Adoption of OPD Data into Generic IRS Software - The SSTS approved funding at its June meeting for LANL to develop a tool to accept operator provided declarations (OPD) in various formats into generic Integrated Review Software (IRS).
A.242		Evaluation of Miniature GRAND Electronic Unit				
		[USA A 1239 / G. Bosler]	LANL	\$246,100	\$246,100	
	A.242.02		LANL	\$220,000	\$189,589	MiniGRAND Commercialization - Pam Reass (LANL) is providing documentation and files, including bill of materials, schematics, and circuit board production drawings, to Aquila for commercialization of the MiniGRAND. Ms. Reass has been working with Aquila to have the MiniGRAND instrument production incorporated into the Aquila QA process. LANL anticipates a continued modest effort on this task to support verification of proper manufacturing and production of MiniGRANDs which meet performance specifications.
	A.242.06		LANL	\$492,000	\$464,030	MiniGRAND Microprocessor Board Upgrade - Much of the design of the MiniGRAND Microprocessor Board (MPD) is shared with that of the Auxiliary Communications Device (ACD), POTAS Task E.122.06. LANL focused on the development of diagnostic software to test the functionality of the ACD and MPB boards after they are assembled.
A.243		Enhanced Efficiency for Thermal Ionization of U and Pu				
		[USA A 1268 / M. Hedberg]	ORNL	\$958,000	\$945,555	ORNL continued working on the final report for this task.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.247	A.247.05	Support for the Development of the SG System at Rokkasho Reprocessing Plant [USA A 1351 / S. Johnson]	LANL	\$699,000	\$596,870	RRP Integration of Inspection Equipment - LANL participated in the tests of the Rokkasho Hulls Measurement System (RHMS) at RRP, which took place from June 2 to 9, 2004. The calibration data were recorded successfully on both production lines. LANL will prepare a report on the work which will contain the calibration factors that can be used for real waste measurements. LANL has nearly completed the tests on the Vitrified Canister Assay System (VCAS) preamplifiers. The new date for the installation of VCAS is the second quarter of 2005.
	A.247.06		LANL	\$988,000	\$926,878	RRP Software for NDA and Data Collection - LANL delivered the Software Design Document to the IAEA. ISPO requested LANL to stop work on this project on March 8, until the IAEA had time to review the Software Design Document. The IAEA is reviewing and discussing the continued role that LANL will play in the Rokkasho software development with LANL and ISPO.
	A.247.07		LANL	\$54,000	\$25,873	RRP Study of Dual C/S System for MOX Storage - LANL is drafting the final report for this task.
	A.247.09		LANL	\$114,000	\$114,031	RRP Project Coordination - This task covers the regular production of progress reports on Task A.247. Most subtasks appear to be running satisfactorily. An important development is the possible change of scope of the software task A.247.06. LANL is awaiting a proposal from the IAEA.
	A.247.10		LANL	\$1,700	\$1,600	RRP Monitoring of Shielded MOX Canisters - This subtask is on stand by, pending direction from the IAEA. Task funding was redirected for more immediate needs.
	A.247.11		LANL	\$5,600	\$8,100	Curium Balancing - This subtask is on stand by, pending direction from the IAEA. Task funding was redirected for more immediate needs.
	A.247.12		LANL	\$37,600	\$37,400	Conceptual Design of a Temporary Canister Verification System (TCVS) at RRP - LANL refined the design of TCVS. The final report was prepared, after the IAEA commented on the draft version. It will be issued shortly.
	A.247.13		IAEA	\$682,709	\$109,277	RRP Integrated Inspector Information System (I3S) - Cap Gemini Ernst & Young (CGE&Y) delivered all design documents and half of the software deliverables. The majority of software deliverables (including all critical functions) are planned for August. The project cycle time will extend by three weeks to accommodate increased complexity of the ASAS and additional functionality. CGE&Y has submitted a change request for the project scope, which will have a small impact on the project budget and schedule.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.248		Gate Monitor at LWRs Loaded with MOX Assemblies [JNT USA A 1356 / T. Pochet]	LANL	\$286,000	\$257,330	The redirected effort to conduct MCNP simulation of a single-detector gate monitor to determine direction-of-motion of spent fuel assemblies is proceeding.
A.249		Development of Data Review Software Based on Neural Networks [JNT D 1332 / G. Rengarajan]	LANL	\$0	\$0	This task is on stand by.
A.250	A.250.01	Enhanced ANM Capability for HKED Software at SAL [USA A 1369 / N. Doubek]	LANL	\$165,000	\$148,909	LANL completed the prototype X-ray Fluorescence Densitometry (XRFD) code in May. It was demonstrated at IAEA-SAL during the first week of June 2004. LANL and IAEA-SAL discussed the scope of work for a second phase of this project. LANL obtained approval to transfer ownership of a used x-ray tube from LANL to IAEA-SAL. Shipment of the x-ray tube is planned for the third quarter of 2004.
A.251		Expert - Instrumentation Systems [USA E 1372 / M. Aparo]	CFE	\$201,000	\$189,837	The expert James Halbig worked with interns on the Chernobyl Conditioning Facility (CF) Project to try to evaluate and detect any problems that might arise in the system. Dr. Halbig provided information on IAEA capabilities to the Shelter Safeguards team at meetings with OPC, the IAEA, the Facility personnel, and the US support team. On a site trip to Chernobyl, members visited the areas outside the damaged reactor hall where safeguards equipment may have to be installed. Details and estimates will be supplied to the Operations C and the US support team for scenarios under consideration. Dr. Halbig worked with interns to prepare for the LANL training of TIE staff on the software developed to collect and review the MiniGRAND Family data. Templates are being generalized to develop dataflow documentation for all unattended monitoring systems (UMS) MiniGRANDs and other based systems. LANL had fabricated the pre-JNFL production prototype of the ACD. Dr. Halbig checked the operation and the programmable logic on this board, and tested additional features. The board was fully functional for the needs of JNFL. Firmware was installed that demonstrated communications of this unit with a standard LON network. LANL is identifying a commercial supplier for production prototypes. Inspectors reestablished operation of the MIMS system RAID, which had malfunctioned at the BN-350. The state-of-health is operating properly. Data obtained from it are being used to assure that data will not be lost on this system before the August trip to replace computers and service MIMS cameras. The computer order for this project has been finalized. It will be delivered to LANL to perform set up and testing before shipping it to the BN-350 for installation.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.252	A.252.05	Field Support and Implementation [USA A 931 / G. Bosler]	LANL	\$60,000	\$49,048	Training Support for TRP - There has been no activity reported for this quarter.
	A.252.06		LANL	\$57,000	\$54,960	Monte Carlo Calculations for VVER - This task is closed, pending ISPO's receipt of the final report.
	A.252.08		BNL/NCT	\$55,000	\$13,682	Downblending at Ulba - There has been no activity reported for this quarter.
	A.252.09		ORNL	\$25,000	\$916	IQ3 Detector - There has been no activity reported for this quarter.
	A.252.10		BNL/NCT	\$75,000	\$45,771	Neutron Camera - The neutron camera was bench tested in preparation for shipment to INEEL. An aluminum mounting plate was machined to support a small optical camera at the geometric center to provide alignment information. The equipment was shipped. An experiment with the LLNL team took place during the week of June 14th. Safety training, data taken from side views, and data taken from top views of upright tanks were scheduled.
			INEEL	\$24,008	\$0	INEEL supported LLNL and BNL for a one week measurement campaign at its cask farm.
			LLNL	\$81,000	\$18,749	Gamma Camera - LLNL planned and conducted a one week measurement campaign at the cask farm at INEEL. Images of different casks were obtained successfully with both the neutron and gamma-ray imagers. Images from the side and tops of some casks were collected. High-resolution spectral data were obtained with a Ge gamma-ray spectrometer. Preliminary analysis of the data was performed.
	A.252.12		KCP	\$88,625	\$0	KCP completed fabrication of the T-1 seals and shipped them to the IAEA. The IAEA will test and key the seals next quarter.
	A.252.13		IAEA	\$10,000	\$0	Precision Data Technologies (PDT) has been developing prototypes of the preamplifier under contract with the IAEA.
	A.252.14		LANL	\$146,000	\$8,300	LANL briefed the SSTS and ISPO on the status of the modification of the Fork Detector Measurement System and Radiation Review, during the summer contractor visit in June at LANL.
	A.252.15		LANL	\$48,000	\$37,600	There has been no activity reported for this quarter.
	A.252.16		LANL	\$41,000	\$2,100	There has been no activity reported for this quarter.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.253		Expert - Specifications of Data Collection and Evaluation Software for RRP (P4) [USA A 1398 / S. Johnson]	CFE	\$240,000	\$206,215	The expert Joseph Damico managed the I3S development contract. Multiple documentation deliverables were received and reviewed. Feedback was sent to the contractor. Several software deliverables were received and testing has begun. Two change requests were added to the contract. The USSP funded them with the Phase 2 support funds. SGIT enhanced the I3S team by providing testing support personnel for the I3S component and integration testing. SGIT and the I3S team configured the Vienna test system hardware for the delivered I3S components. Testing is proceeding on the test platform. The production hardware for RRP was installed in standard IAEA racks located in the SGTS labs. Tests were run to ensure the rack cooling was adequate. Plans and contracts for the I3S installation at RRP have been started. The hardware installation is planned for July 2004. Mr. Damico worked with SGTS personnel to troubleshoot and fix problems found with the Sign and Forward (S&F) component during the last trip to RRP. He proposed and led a study of NDA review options for the I3S. As a result, the JNFL project decided to pursue a new design and implementation effort to meet its NDA review requirements. Mr. Damico supported SGOA by evaluating Operator Process Declarations (OPDs) for JOYO and mapping representative OPD information into the I3S OPD XML schema.
A.254		Double-Spike Simulation Study for TIMS Measurements [USA A 1405 / D. Donohue]	LLNL	\$148,000	\$146,959	LLNL submitted its report of the double-spike simulation study to the IAEA. The IAEA has reviewed the report with LLNL.
A.256		Evaluation Software for HKED Spectral Analysis for the Joint IAEA/JSGO On Site Analytical Laboratory at the Rokkasho Reprocessing Plant [USA A 1420 / G. Duhamel]	LANL	\$160,000	\$139,760	LANL installed the hardware-free version of LANL HKED software (LANL HKED 2004 LT) at IAEA-SAL, during the first week of June 2004. The software was installed on a laptop computer that is designated for eventual use by inspectors at the Rokkasho Reprocessing Plant On-Site Laboratory. It was exported to SAL via a LANL software export license. Norbert Doubek (IAEA-SAL) and Herbert Ottmar (ITU Karlsruhe) performed an acceptance test on the software, which included the analysis of actual input solution spectra. The software passed the acceptance test, and was demonstrated to Yusuke Kuno (IAEA-SAL). Some cosmetic changes to the user interface and report formats were requested by SAL, which will be made during the third quarter of 2004.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.257		Consultant - Chemical Separation Techniques for Environmental Samples [USA A 1432 / Y. Kuno]	Clemson	\$153,000	\$17,770	James Navratil has been at the SAL Clean Laboratory since April to improve the plutonium separation method by lowering the detection limit of the thermal ionization mass spectrometer. Amanda Padgett (a Clemson graduate student) assisted Dr. Navratil at the SAL Clean Laboratory for three weeks. Techniques are being developed at Clemson to reduce the procedure time and waste generation. Dr. Navratil began other separations tasks to improve measurement sensitivity and efficiency.
			IAEA	\$35,000	\$29,471	Travel funds for James Navratil and Amanda Padgett (a Clemson graduate student) to visit the IAEA were provided through this subtask.
A.258		Detection System for In Situ Measurements of Neutron Signatures from Spent Fuel Storage Containers [USA A 1434 / Y. Lee]	LANL	\$180,000	\$41,500	LANL is making calculations on the determination of the energy spectrum of neutron and gamma-ray radiations exiting a loaded Castor-V21 storage
A.259		Expert - Development of New Seals [USA E 1452 /]	CFE	\$100,000	\$81,874	The expert Hal Udem received training on existing fiber optic sealing systems. This was helpful in setting requirements, particularly for the new metal seal where the need to monitor tampering is a key criterion. Dr. Udem completed a first order look at the requirements for new metal and adhesive seals. The results were documented in a briefing delivered on April 30. Dr. Udem initiated an investigation based on the publication entitled: "How Much Security is Enough?" by Kevin Soo Hoo (Stanford). The paper will be the focus of a seminar, to be delivered sometime between July and September. The Soo Hoo paper examines quantitative methods for optimizing decision making, when requirements are in conflict.
A.260		Evaluation of Equipment Needs for Future Analytical Services of Safeguards Analytical Laboratory [USA F 1454 /]	KBR	\$67,000	\$52,941	John Cappis (KBR) attended the April 8 SSTS meeting in support of Steve Goldberg (NBL).
			NBL	\$33,000	\$32,121	Steve Goldberg (NBL) attended the US Support Program Annual Review Meeting at the IAEA and presented the "Final Report of the Review Committee for SP-1 Task 03/TCS-001: An Independent Evaluation of the Safeguards Analytical Laboratory." Dr. Goldberg met with Department of Safeguards and the Director of SGTS to provide briefs, discuss issues, and answer questions regarding the report. Jon Neuhoff (NBL) reviewed FY 2004 plans and the financial status of the project.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
A.261		Antineutrino Meeting [USA JNT A 1465 / G. Bosler]	ISPO	\$0	\$0	This task is on stand by.
			LANL	\$13,000	\$14,300	This task is on stand by, pending a revision of SP-1 after the experts meeting at the IAEA.
			LLNL	\$23,000	\$1,955	This task is on stand by, pending a revision of SP-1 after the experts meeting at the IAEA.
A.262		Coordinated Experts' Meeting on Noble Gas Monitoring and Sampling [/]	PNNL	\$5,000	\$146	There has been no activity reported for this quarter.
A.263		Traceability of DA Measurements - Provision of NBL Certified Reference Materials [/]	NBL	\$103,000	\$0	The SSTS approved funding at its June 22 meeting for NBL to provide the IAEA with certified reference materials, which are used for the calibration and control of SAL's primary measurement methods and instruments.
A.264		Analytic Quality Control - Participation of SAL in NBL SME Programme [/]	NBL	\$25,000	\$0	The SSTS approved funding at its June 22 meeting for the IAEA SAL laboratory to participate in the NBL Safeguards Measurement Evaluation (SML) Program for one year. The program is designed to track measurement quality over time.
A.265		Environmental Sampling Evaluation Support [/]	ORNL	\$107,000	\$0	The SSTS approved funding at its June 22 meeting for Diane Fischer to provide the IAEA with environmental sampling support for the development of a data interpretation protocol for enrichment facilities and to assist in the review and completion of the Environmental Sampling Safeguards Technical Report (STR).
B.080		Training Workshop in Design Information Review for the Entire Life Cycle of Research Reactors [USA B 984 / P. Rodriguez]	BNL/SAC	\$305,000	\$244,650	This task is on stand by, pending a request from the IAEA for another workshop.
	B.080.01		ORNL	\$0	\$0	
			ISPO	\$76,062	\$90,200	This task is on stand by.
B.082		Safeguards Training Course: Enrichment Technology [USA B 1001 / D. Liles]	ORNL	\$247,332	\$247,332	ORNL has submitted a proposal to update the course and is awaiting comments from the IAEA.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
B.084		Revision of Introductory Course on Agency SG (ICAS) [USA B 1106 / J. Vidaurre-Henry]	BNL/ENT	\$15,144	\$15,144	
			Sonalysts	\$429,000	\$429,000	This task is on stand by.
			Sonalysts	\$26,000	\$18,600	
B.089	B.089.05	Safeguards Equipment Technician Training Specialist [USA B 1255 / J. Barroso]	Sonalysts	\$7,044	\$7,044	Training Module for VIFM - This task is on stand by.
	B.089.06		Sonalysts	\$26,937	\$0	Safeguards Technician Training Specialist - This task is on stand by.
B.090		Workshop on Quality Assurance Techniques [JNT B 1277 / D. Neal]	SAM	\$412,000	\$319,698	There has been no activity reported for this quarter.
	B.090.01		SAM	\$84,000	\$56,313	A three day DMAIC (or themed) workshop was delivered in Vienna by Mike Flynn and Charles Aubrey during the week of May 10, 2004, after review and reconstruction of materials. A five day general Quality Management Workshop is scheduled from November 1 to 5, 2004, in Vienna. This session will complete the current contractual obligation. The IAEA accepted the final draft of the Quality Management Leadership training materials. The Workshop is scheduled from October 27 to 29, 2004, in Vienna. This session will complete the current contractual obligation.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
B.091		Training on Remote Monitoring and Unattended Monitoring [USA B 1337 / V. Ryjikov]	ISPO	\$58,293	\$58,293	
			SNL	\$232,927	\$232,927	Work on this task is complete. The final report for the Sandia portion of the July 2003 IAEA Training Course on Unattended and Remote Monitoring has been delayed due to conflicts with other projects. George Baldwin and Al Queirolo have discussed this report. Mr. Baldwin has established a firm delivery date of July 16, 2004. The report will be delivered directly to Al Queirolo.
	B.091.01		LANL	\$332,000	\$330,200	This task is complete.
	B.091.03		LANL	\$92,500	\$0	The SSTS approved funding at its June 22 meeting for LANL and Sonalysts to develop a pilot Radiation and Review Software Training
			Sonalysts	\$28,500	\$0	The SSTS approved funding at its June 22 meeting for LANL and Sonalysts to develop a pilot Radiation and Review Software Training

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
B.093	B.093.01	IAEA Participation in U.S. Sponsored Training Courses [USA B 0086 / J. Vidaurre-Henry]	LANL	\$1,042,822	\$1,041,774	
	B.093.05		LANL	\$219,000	\$277,400	The approved scope of work has been completed. This subtask is on stand by.
	B.093.06		LANL	\$429,700	\$276,600	The next NDA Course for New IAEA Inspectors was to be held from August 9 to 19, 2004. It has been postponed.
	B.093.07		LANL	\$47,000	\$44,100	LANL provided support to the IAEA in conducting the Introductory Course on Agency Safeguards (ICAS) training in Vienna during the first two weeks of May. This training is given to all new IAEA inspectors. The support provided by LANL was in the area of plutonium and uranium verification using neutron techniques. The training consisted of both classroom and laboratory based exercises. This task was completed successfully.
			SRNL	\$47,000	\$45,065	Dr. Saleem Salaymeh of the Savannah River Technology Center traveled to Vienna to assist the IAEA Department of Safeguards in teaching a course on Agency Safeguards, from April 5 to 20, 2004, at the IAEA. It consisted of twenty-five hours of lecture time and forty-five hours of hands-on exercises. The course covered the principles of Non-Destructive Assay (NDA) and the operation of specific instruments and associated data processing equipment used by the Agency's Safeguards Department. Specific measurement applications were discussed to provide the safeguards inspectors with the necessary information and skills to use the equipment and procedures more effectively. Fourteen students attended.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
B.094		Neutron Pulse Simulator for Training and Testing [USA B 1401 / V. Ryjikov]	LANL	\$388,000	\$390,801	The Neutron Pulse Simulator (NPS) is nearing completion. LANL finished and tested the final version of the Printed Circuit Board (PCB). The FPGA design has been completed and tested. Multiple PCBs have been fabricated and tested. The Pulse Pair PCB is being fabricated. Procedures for setting up the internal computers have been written and tested. The interface software is near completion. The necessary firmware was loaded onto the on-board memory. LANL installed a completed board in the NPS chassis. Preliminary tests have been completed successfully. The NPS Chassis have been machined, painted, and silk-screened. The assembly drawings for the chassis are complete and need review and authorization signatures. The internal 12V to 5V DC-to-DC converter was replaced with a 5V external power supply. Considerable effort was put into troubleshooting the 12V to 5V DC-to-DC converter with no success. Experts at Maxim Semiconductor helped troubleshoot the system without being able to determine the cause of the problem. The change from 12V input to 5V input was the best solution. Several software modules have been added to the suite that runs on the PC104 computer internal to the NPS, including support for bursts of pulses, periodic and random sequences, pulse pair generation, and diagnostics. This software has been tested with the exception of pulse pair generation. A preliminary version of the user interface software that runs on an external computer has been completed. This version does not include communications with the NPS and is strictly for working out user interface issues.
B.095		Feasibility Study on Inspector Certification [USA B 1407 / S. Bobadila Mucino]	Sonalysts	\$67,000	\$76,523	This task is on stand by.
B.096		Workshop on Additional Protocol Activities [USA B 1415 / A. Osipov]	BNL/NCT	\$45,000	\$34,126	This task is on stand by, pending IAEA input.
B.097		Expert - Senior Instrumentation Specialist - Training in NDA Equipment and Procedures [USA B 1418 / J. Vidaurre Henry]	BNL	\$6,000	\$0	The IAEA selected Stephanie McElhaney for this CFE position. As of August 20, it was determined that she could not accept the position. ISPO is working with the IAEA to identify other options. The task is on stand by.
B.098		Enhanced Observational Skills [USA B 1446 / D. Liles]	Sonalysts	\$230,000	\$147,650	Sonalysts revised the training course on Enhanced Observational Skills for presentation to students of the Introductory Course on Agency Safeguards (ICAS). The course material was reduced from a 5-day to a 2-day format. Fifteen copies of the student guide were printed, collated, and bound. Michael Stein and Sonja Haber presented training on observational skills to the students of ICAS number 51 at the VIC in May 2004. The effectiveness of the course content, sequence, activities, materials, and presentation was assessed and improvements for incorporating the material into the final version of the course materials were identified.
B.099		Physical Inventory Taking Computer Based Training [USA B 1464 / D. Liles]	IAEA	\$175,000	\$6,907	A work plan has been developed and is under review.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
B.100		Expert - Support for State Systems of Accounting for and Control of Nuclear Materials (SSACs) [USA B 1469 /]	CFE	\$50,000	\$22,181	The expert Dawn Liles is working with Sonalysts to finalize the refresher and the initial version of the Observation Skills course. The course was modified to focus on the preparation, conduct, and reporting of observation, which will be discussed in the upcoming headquarters portion of the Country Officer course. Ms. Liles has conducted a comprehensive review of the SSAC syllabus. She has identified a model curriculum and exercises to address an International Training Course for SSACs. An action plan has been developed to address the areas for improvement and the need for additional information. A training program plan of the three types of member states training will be produced, based on objectives with lesson plans (to ensure consistent delivery of training), model syllabi, model exercises, and a list of potential instructors. Ms. Liles is working with the Euratom Support Programme on the development of a CBT for refresher training on environmental sampling.
C.097	C.097.01	Feasibility of LWR Fuel Irradiation Histories Verification [USA A 1072 / J. Arenas Carrasco]	LANL	\$455,200	\$454,536	There has been no activity reported for this quarter. LANL is waiting for feedback from the IAEA on delivered software.
C.102		Development of Safeguards for Final Disposal of Spent Fuel in Geological Repositories - SAGOR Phase II [JNT C 1204 / A. Diaz-Mosquera]	ISPO	\$5,389	\$5,389	A SAGOR meeting was held in Germany from June 14 to 18, 2004. Robert Cockerham and Bruce Moran represented the US.
			LANL	\$58,600	\$58,600	There has been no activity reported for this quarter.
			SNL	\$17,947	\$17,947	There has been no activity reported for this quarter.
C.105		Expert - Development of the Safeguards System for Rokkasho Reprocessing Plant (Ehinger) [USA C 1257 / S. Johnson]	CFE	\$634,000	\$587,557	The expert Michael Ehinger continued to support the IAEA's JNFL Project. The SMMS Type 1 units installed at the RRP have been running unattended for eight months and are performing well. The installed systems have been interfaced to the IAEA data collection system at the RRP. Data is being collected for transport back to Vienna for analysis software development and testing. The test unit remaining in Vienna is being used to support development of maintenance procedures and to test software for the remaining two systems not yet operable at the RRP. The final systems will be installed and operable at the end of this quarter for data collection at the anticipated start of the uranium runs at the facility. Mr. Ehinger is monitoring a contract for development of software for evaluation of all solution monitoring data. Acceptance tests of the first release were conducted and are being used as training for setting up the software for the RRP.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
C.106		Expansion of the Physical Model [USA C 1279 / Z. Liu]	BNLCONT R	\$28,000	\$15,706	There has been no activity reported for this quarter.
			INEEL	\$11,900	\$11,379	There has been no activity reported for this quarter.
			ISPO	\$11,000	\$13,423	There has been no activity reported for this quarter.
			LLNL	\$12,000	\$10,930	There has been no activity reported for this quarter.
			ORNL	\$149,123	\$101,738	The SSTS approved funding at its June 22 meeting for two ORNL staff members to participate in a meeting with UK and Japanese counterparts for review of an updated volume of the Physical Model dealing with enrichment. The meeting will be held in Tokyo, in August.
C.108		Expert - SG Research Analyst and Documentation Specialist (J. Anderer) [USA C 1303 / D. Neal]	CFE	\$373,000	\$339,091	The expert Jeanne Anderer continues to work with the QMS team. She helped finalize the training lecture material and practical exercises for the 8th QMS Workshop, which was held from May 10 to 14, 2004. The workshop focused on one subject: the continuous improvement for the process of environmental sampling and results analysis. Each of the sixteen participants represented an active process player. It was recommended that future workshops adopt the themed approach for other key safeguards processes. Ms. Anderer continued working on the application of the CPI methodology (DMAIC) to the Safeguards State Evaluation process. Ms. Anderer's current contract expires on August 31, 2004. The IAEA has made a request for a two month extension.
C.110		Development and Test of an Integrated Safeguards Scheme for Transfers to Dry Storage at CANDU Reactors [JNT C 1388 / J. Doo]	LANL	\$17,000	\$9,300	The approved scope of work is complete. The task is on stand by.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
C.111		Safeguards System for Chernobyl Unit 4 [JNT E 1445 / O. Zatsepin]	BNL/NCT	\$219,000	\$144,847	Brian Boyer (BNL) prepared documents for the IAEA and Chernobyl Nuclear Power Plant (ChNPP) entitled: "USSP Team Analysis of the Termination of IAEA Safeguards on Shelter Nuclear Material" and "USSP Team Analysis of Sampling of Shelter Nuclear Material." The first described possible approaches for the Agency to terminate safeguards on nuclear material at the ChNPP Unit 4 Shelter. The second reported nuclear material sampling strategies for the ChNPP and the IAEA at the ChNPP Unit 4 Shelter. Mr. Boyer traveled to Kiev with Colin Carroll (Sonalysts), from May 11 to 14, 2004, to attend meetings with ChNPP, the IAEA, and the IAEA Technical Cooperation UKR/4/010 and UKR/4/011 committees, to discuss fuel containing materials characterization studies, design information questions, and radioactive waste safeguards issues, and to investigate the state of access points to the Shelter, as well as the Shelter status itself. Mr. Boyer and Mr. Carroll traveled to Vienna, from May 17 to 21, to continue working with the Safeguards Department to design the safeguards approach and unattended monitoring concepts, as well as to provide safeguards information assistance to IAEA staff working on Technical Cooperation UKR/4/010 and UKR/4/011 radioactive waste disposal issues.
			PNNL	\$187,287	\$64,404	PNNL reviewed documentation of the draft safeguards approach for Chernobyl Unit 4.
			Sonalysts	\$198,000	\$87,296	Sonalysts, BNL, the IAEA, and ChNPP worked at the Chernobyl NPP to review the Shelter sampling plan, the Facility Design Information Questionnaire (DIQ), the Agency's proposed Unattended Monitoring System design, the Characterization of Nuclear Material, and the SIP construction status. The Shelter was visited to evaluate the coverage required for an unattended monitoring system and possible locations for siting equipment. The team met with Russian and Ukrainian experts to discuss technical issues related to characterizing the material and coordinating sampling in the Shelter. Sonalysts and BNL reviewed the draft Safeguards Approach and Chernobyl Shelter Unattended Monitoring System (CSUMS) User Requirements document with Agency managers in May. Sonalysts incorporated the managers' comments and prepared the documents for Agency approval. Future activities were discussed, including preliminary budget estimates for installing the CSUMS and for working meetings for the next six months. Sonalysts and BNL met with representatives from the Agency's Department of Technical Cooperation to discuss matters related to the Decommissioning and Radioactive Waste Removal working groups (TC UKR/4/010 and UKR/3/011) that were started one week earlier in Chernobyl. They will continue to share information with each other, pending approval from the Department of Safeguards and the Ukrainian State Authorities.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
C.112		Consultant - Development Support for Integrated Safeguards [USA C 1451 / R. Hurt]	IAEA	\$60,000	\$41,246	James Larrimore consulted at the IAEA from May 7 to June 3. He drafted a report to the 2004 General Conference on resolution GC(47)/RES/11 entitled: "Strengthening the Effectiveness and Improving the Efficiency of the Safeguards System and Application of the Model Additional Protocol." Mr. Larrimore addressed safeguards approaches and guidelines for remote monitoring data review, the approval and change procedure for the integrated safeguards approach for a State, the handling of anomalies in traditional safeguards and in safeguards under the additional protocol, and the roles of the Operations divisions and the Information Review Committee in the State evaluation process and in follow-up actions.
C.113		Development of Techniques to Estimate the Separative Capacity of R&D Isotopes [/]	BNL/NCT	\$25,000	\$0	
			IAEA	\$0	\$0	
			LANL	\$40,000	\$0	The SSTS approved funding at its June meeting for LLNL, LANL, ORNL, and BNL to develop guidelines to estimate the separative capacity of R & D isotope separation facilities. Dick Comerford (DOE) and Cyndee Annese (DOE) have offered to work with the team.
			LLNL	\$55,000	\$0	Mona Dreicer (LLNL) is coordinating the efforts of the laboratory participants for this task.
			ORNL	\$40,000	\$0	
D.122	D.122.01	Systems Engineering Process for SGIT [USA D 1158 / G. Cherif]	CGE&Y	\$251,000	\$89,522	The roadmap for the project has been established. Cap Gemini upgraded the quality manual of SGIT. BIT and the developers in SGIT reviewed the draft and provided feedback to Cap Gemini. A technical group is being established in each section, which will allow the team to scope the process improvement effort.
	D.122.02		BIT	\$70,000	\$21,593	There has been no activity reported for this quarter.
D.127	D.127.12	Improve the Security of Safeguards Network and Communication Information [USA D 1243 / R. Muller]	Aquila	\$161,600	\$144,389	Ethernet Conversion - Graeme Richards completed the migration of safeguards workstations and related network infrastructure to Ethernet. This included transitioning existing computers and the associated network from Token Ring to Ethernet, installing new network interface cards in existing systems, upgrading outlets in all offices, and testing the system. Mr. Richards completed his contract on June 30, 2004. This subtask is complete.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
D.136		Expert - Open Source Information Collection - Terrence Dunn [USA D 1335 / M. Nicholas]	CFE	\$426,000	\$412,230	The expert Terrence Dunn assumed his new duties as Divisional Information Security Policy Officer. He advised the Safeguards Departmental Information Security Officer on the development and implementation of information security policies. Mr. Dunn examined a large number of reported problems and deficiencies related to information and physical security, and proposed or implemented solutions. He fields numerous questions daily on proper information security procedures. Mr. Dunn serves as departmental representative to the Agency-wide Information Security Policy Steering Group (ISPSG). He designed a security regime for a Safeguards regional office. Mr. Dunn participated in the development of a departmental business continuity/disaster recovery plan. He provided policy guidance for information technology (IT) security systems and practices. Mr. Dunn participated in the development of a security regime for the secure handling of the anticipated Agency-wide email encryption system. He identified several technical vulnerabilities and recommended patches. Mr. Dunn provided management oversight for an IT security architecture project for the department. He assessed vendors for the provision of information security and IT security services.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
D.137	D.137.01	Consultants - Assistance on Information Collection and Information Systems [USA D 1126 / M. Nicholas]	ISPO	\$73,840	\$48,023	Allen Locke - Mr. Locke submitted a report to SGIT management entitled: "A Strategic Plan for the Information Analysis Unit." The approved scope of work is complete.
	D.137.02		LLNL	\$45,000	\$51,424	Mary Beth Ward - There has been no activity reported for this quarter.
	D.137.03		LANL	\$91,000	\$63,800	Jeff Bedell - There has been no activity reported for this quarter.
	D.137.04		LANL	\$213,000	\$107,008	Arvid Lundy - Dr. Lundy completed a two week consultancy with IAEA/SGIT on April 23rd. He continued to apply information from scientific literature searches to safeguards country evaluations. Useful indicators were found in both traditional scientific databases and in open web sources. Dr. Lundy planned another two week consultancy for July 12 to 23.
	D.137.06		PNNL	\$118,000	\$98,455	Ned Wogman - The consultant completed two weeks of consulting in late May in support of SGIT's open source information projects.
	D.137.07		SNL	\$99,757	\$78,150	Joyce van Berkel - The purpose of this task is to provide assistance to the Department of Safeguards for specialized information analysis, including support of the SGIT/IIS contribution to state evaluations, improving the SGIT procedures for state evaluations, and performing specific state evaluations as requested. Ms. van Berkel is scheduled to consult for two weeks in September. The consultant is coordinating directly with the IAEA regarding the scope and schedule of the support she will be providing during 2004. During the SSTS visit to SNL on July 1, 2004, there was a discussion of additional support that may be required later this calendar
	D.137.08		LLNL	\$101,000	\$38,459	George Anzelon - There has been no activity reported for this quarter.
	D.137.09		LLNL	\$39,168	\$617	Bill Domke - There has been no activity reported for this quarter. Dr. Domke is scheduled to consult in August 2004.
	D.137.10		LANL	\$34,000	\$2,000	Don Sandstrom - There has been no activity reported for this quarter.
	D.137.11		LLNL	\$30,000	\$30,085	Roger Miller - There has been no activity reported for this quarter. Dr. Miller is scheduled to consult in August 2004.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
D.138	D.138.01	Open Source Information Collection [USA D 1381 / T. Dunn]	MIIS	\$407,000	\$320,139	MIIS Internships - Three interns from the Monterey Institute for International Studies (Jacob Blackford, Jonathan Essner, and Nadya Logutova) assisted the IAEA with information collection. They completed their assignments in June.
	D.138.02		LLNL	\$66,000	\$53,018	There has been no activity reported for this quarter.
	D.138.03		IAEA	\$39,000	\$0	K2 Enterprise System - The SSTS approved funding in June for a special services contract between the IAEA and Eduardo Fujii (former MIIS employee) to assist in the implementation of the K2 Enterprise System, which is an information search and organization tool.
D.139		Development of Relational Database Management System for Protocol Information [USA D 1336 / G. Chtcherbinin]	PNNL	\$357,000	\$357,000	This task is on stand by.
D.140		Training Course on Analytical Skills Development [USA B 1392 / D. Liles]	ISPO	\$0	\$0	This task is on stand by.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
D.141	D.141.02	Internship Program [USA D 1396 / R. Gaetano]	BNL	\$531,000	\$606,648	Six interns continued working on their assignments in SGTS and SGIT. Daniel Vega and Angela Thornton completed their assignments at the end of May. Lance Kim, Konstantin Antonovsky, and Paul Agron completed their assignments during June. Kindel Collins will complete her assignment in July. Greg Gerrein was converted to a consultant for the JNFL Project in March and is working under Subtask D.141.06.
			LANL	\$4,000	\$2,500	Angela Thornton will present her paper on the BN-350 Mirror System at the INMM Annual Meeting in July, while on an internship assignment with LANL this summer.
	D.141.03		IAEA	\$48,300	\$47,683	The consultant Courtney Patterson implemented Level 1, 2, and 3 quality controls for Modules 7, 8, and 9 of the web based Computerized Inspection Report (CIR-WEB). He continued refining the CIR's quality control (QC) component and its framework. Mr. Patterson finalized the implementation of a utility to edit CIR-WEB's XML rules. He trained his replacement on the QC component implementation. Mr. Patterson completed his contract in mid June. This subtask is complete.
	D.141.04		BNL	\$803,634	\$132,792	The SSTS approved funding at its June 22 meeting to cover the remaining costs of the internship program for this year's thirteen interns and BNL's administrative costs. Jonathan Essner began his internship in January, 2004, under contract between the IAEA and the Monterey Institute for International Studies (MIIS). The SSTS approved funding by phone poll in June for Mr. Essner's internship to be administered by BNL beginning July 1.
	D.141.05		IAEA	\$0	\$0	CIOSP Development Support - The SSTS approved funding by phone poll for former intern Christopher Dalton to work for one year in Vienna on the development of Version 2 of the Common Inspection On-Site Software Package (CIOSP).
	D.141.06		IAEA	\$51,000	\$24,946	Greg Gerrein continues to support software development for the IAEA JNFL Project Team as a consultant to the IAEA.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
D.142		Expert - Senior Safeguards Information Analyst [USA D 1403 / J. Leppingwell]	IAEA	\$315,000	\$308,158	The expert Richard Wallace continued to conduct searches and review open source technical literature for several countries. He contributed analysis of their nuclear capabilities to the state evaluation process. Dr. Wallace drafted State Evaluation Reports. He provided open source research, result evaluation, and rapid generation of special summary reports, in support of Operations and the DDG. Dr. Wallace continued evaluating technical information and its consistency with open source information for Additional Protocol declarations. He collected and evaluated background material to guide inspectors on short notice complementary access inspections in several countries. Dr. Wallace participated in refining the content, structure, and interface for the electronic repository, proposing a methodology for identifying states of highest priority with regard to proliferation concern. He continued to provide technical information to assist in the compilation of data for the illicit trafficking database. Dr. Wallace provided information on industrial uses for different isotopes and on properties of specific isotopes. He attended training on Visual Links analysis software.
D.146		Quality Control Verification Software for Member States Nuclear Material Accounting Reports to the Agency [USA D 1429 / I. Vlad]	SAIC	\$135,000	\$122,269	AWST released Quality Control Verification Software (QCVS) Release 2 in January 2004. The IAEA decided to postpone the user Acceptance Test until April, and requested correction of software bugs and some enhancements. QCVS release 3 was issued in April. The IAEA and the contractor decided to again postpone the user Acceptance Testing to support additional changes to the QCVS code and configuration to ensure the acceptance test would be successful. The tests will be conducted in July and August.
D.148		Expert - Special Technology Coordinator [USA D 1443 /]	CFE	\$115,000	\$91,151	The expert John Hilliard continued work to create a project team to implement Verity's K2 tool for the interrogation of open sources. He repeated work on the rapid satellite imagery acquisition system and collected proposals from various vendors. Mr. Hilliard continued identification of data mining tools, working closely with INVO Staff. He began researching a possible system for the provision of open source satellite imagery and state-declared information to inspectors in the field. Discussions continued with the Agency concerning the development of a basic awareness course/session on open source and satellite imagery capabilities. Mr. Hilliard is the SGIT coordinator to work with INVO for the development of the Technical Cooperation Review System. He participated in departmental meetings regarding system failure of SGIT computers, as SGIT representative to an Emergency Response Group. Mr. Hilliard evaluated VIPAR demonstration software for possible use in SGIT as a visualization tool and provided assistance in the coordination of a workshop to be held in New York City in October 2004.
D.149	D.149.01	Specialist Training for IAEA's Imagery Analysts [USA B 1442 / F. Claude]	IAEA	\$13,000	\$8,501	SDI and GIS Training - A second IAEA staff member will attend training in 2004.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
D.150		Expert - Systems Analyst [USA D 1460 /]	CFE	\$95,000	\$87,276	The expert Scott Miller is working with others on generating the requirements for the Complimentary Access Tracking System (CATS) and the high priority Design Information Management System (DIMS). Mr. Miller will be providing software development expertise to the continued enhancements and maintenance of the Additional Protocol/Complementary Access System and the SAGSI website.
D.151		IAEA Safeguards Information System Re-engineering Project [USA D 1461 / L. Costantini]	TBD	\$0	\$0	This task will provide a vehicle for POTAS funded support to the ISIS Reengineering Project. Non-POTAS support is tracked under Task SP.62. There are no activities funded under this task at present.
D.152		Software, Hardware and Database Provision for Satellite Imagery Analysis Support [/]	IAEA	\$100,000	\$0	Space Imaging is working with the IAEA to finalize the system requirements for Satellite Imagery Analysis Laboratory upgrade. The IAEA plans to release the specifications in September.
E.114		IAEA Evaluation of Sandia Two-Way Radio Frequency Seals for Inspection Use [USA E 1205 / M. Goldfarb]	ISPO	\$0	\$0	
	E.114.03		SRNL	\$12,617	\$1,000	This task is on stand by.
			SNL	\$144,027	\$144,027	There has been no activity reported for this quarter.
E.116		SVSC Trial Production [USA E 1235 / M. Goldfarb]	Aquila	\$76,000	\$77,918	
			BNLCONT R	\$103,000	\$102,959	This task is on stand by.
			SNL	\$4,189	\$4,189	
E.119		Upgrading of GARS Review Software and Software Factory Support [USA E 1249 / J. Whichello]	IAEA	\$335,000	\$330,000	Aquila has completed GARS 7.00 and is waiting for IAEA feedback before releasing it.
	E.119.01		Aquila	\$110,000	\$0	The SSTS approved funding at its June 22 meeting for the IAEA to renew its direct services contract with Aquila to provide rapid response for software upgrades to the General Advanced Review Software (GARS) and other related products.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
E.121		Development of Authentication Measures for DSNC at DUPIC Facility [USA E 1267 / K. Czock]	LANL	\$162,000	\$146,900	There has been no activity reported for this quarter.
E.122		URM Systems Standardization and Support [USA E 1274 / K. Ferstl]	LANL	\$180,000	\$150,000	There has been no activity reported for this quarter.
	E.122.02		LANL	\$70,000	\$40,939	Radiation Review for VIFM - LANL will deliver a pre-release version of Radiation Review to the IAEA in June, which contains the capability for processing VIFM data.
	E.122.03		LANL	\$140,000	\$16,778	Performance Review Software - LANL completed the Performance Review requirements specification and sent it to the IAEA for comment at the end of March. The task was discussed when the IAEA visited LANL in March and May. The IAEA would like to modify the task focus so that State-of-Health files can be integrated into the remote monitoring system at the IAEA. This will be discussed with the IAEA in June. The task scope is still being negotiated by the IAEA and LANL.
	E.122.04		LANL	\$226,000	\$201,682	MIC Generic Module - LANL continued development of software components for the MICGM, including communication components and functional infrastructure. The MICGM development platform was upgraded from Windows 2000 to Windows XP in May.
	E.122.06		LANL	\$489,000	\$336,500	Auxiliary Communications Device (ACD) - Mike Browne (LANL) gave the SSTS and ISPO an update on the development of the ACD during the summer contractor visit to LANL in June.
	E.122.07		LANL	\$38,000	\$23,200	Technology Update of LANL Review Software for SSTS - Shirley Klosterbuer (LANL) briefed the SSTS and ISPO at LANL in June about her visit to the IAEA to train SGTS-TIE staff in the operation and new features of the Radiation Review Software.
	E.122.08		LANL	\$157,000	\$0	UMS Software Modifications - There has been no activity reported for this quarter.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
E.125	E.125.02	Remote Monitoring and Unattended Digital Surveillance Systems [USA E 1330 / M. Aparo]	IAEA	\$153,574	\$153,574	
	E.125.12		IAEA	\$121,000		\$0 GemView Software Upgrade - The IAEA issued a contract to Aquila in April. Aquila began the software development. They have worked closely with LANL to ensure compatibility with the software that they are
	E.125.13		LANL	\$58,000		\$3,600 Optional Imaging Sensor Development Support - Kelly Michel (LANL) demonstrated the use of iPIX to the SSTS and ISPO in June at LANL. iPIX is a wide-angle, high resolution, imaging system, which Ms. Michel is evaluating for IAEA applications.
E.126		Expert - Safeguards Equipment Systems Information Security (Tolk) [USA E 1339 / M. Aparo]	CFE	\$398,000	\$397,681	The expert Keith Tolk continued to work on data security, including key management, security of joint use equipment, and the development of a standardized approach for mailbox systems for operators' declarations. Mr. Tolk continued to support the planned implementation of safeguards at the Rokkasho Reprocessing Plant (RRP) in the area of data security. He traveled to RRP to attend a working group meeting and to install firewall hardware at the facility.
E.127		Expert - Remote Monitored Surveillance Systems Development and Implementation Coordination (Regula) [USA E 1350 / M. Aparo]	CFE	\$289,000	\$263,623	The expert James Regula traveled to Japan to install the first surveillance system using VPN over ADSL. He went to South Korea and upgraded fourteen LWR facilities to VPN over ADSL. Mr. Regula traveled to Metsamor, Armenia, to finish the upgrade of a non-standard SDIS installation. Proper SDIS cable was installed. Existing ALIS cameras were replaced by four new DCM 14 cameras. Mr. Regula wrote a procedure for configuring DMOS systems for remote monitoring, a data sharing proposal for future remote monitoring systems in Japan, and a formal review of the DMOS/Remote Monitoring Field Test at Pickering Dry Storage, Canada. He continues to work with VIFM systems to design efficient and secure remote transmission methods and to write State of Health programs to auto-analyze incoming VIFM logs. Mr. Regula tested and approved new VACOSS seal software for the authentication of seals polled by the VacPoll service.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
E.130	E.130.01	Integrated Safeguard System for SF Conditioning Facility (Part 2/3 of Chernobyl Transfer and Conditioning Campaign) [USA E 1361 / G. Ingrao]	LANL	\$1,305,000	\$1,185,004	Pre-release versions of the software are ready for testing. Aquila has supplied the first version of the viewer software for the new DVR. All software developed under this task is generic and can be applied to any facility. LANL plans to finish all portions of the Chernobyl software (with the exception of the new DVR) with the delivery of Baseline 1 software to the IAEA in the fall of 2004. A complete requirements specification for the project has been generated in conjunction with the proposal for additional work to be done for this generic software.
			Sonalysts	\$331,227	\$322,818	Colin Carroll (Sonalysts) met with Valerij Bytchkov, Max Aparo, and Giovanni Ingrao (IAEA) in Vienna to review the status of the Chernobyl UM/MMCT projects. The IAEA accepted the MMCT Design Book submitted by SNL and Aquila Technologies with minor modifications. The IAEA requested that the USSP support the fabrication of two additional MMCT systems, which will be installed at Chernobyl in 2005. Mr. Carroll developed a Chernobyl IMCF/MMCT equipment management database, which will be used by the Agency to monitor and track equipment purchased for the Chernobyl IMCF/MMCT. Mr. Carroll and Alex Kovar (IAEA) inventoried the Chernobyl IMCF/MMCT equipment. Mr. Carroll drafted an Agency procedure requiring Agency individuals to obtain the authorization of SGOC before removing any equipment from the Chernobyl project for use in other projects. Framatome reported that they are close to submitting their revised Conditioning Facility designs for approval to Ukraine, G-8 representatives, and the EBRD. The Agency will evaluate the impact of the design changes on the Chernobyl IMCF.
E.131	E.131.04	Testing/Evaluation Programme for Unattended Monitoring and Surveillance System's Computer Software Operating System [USA E 1370 / G. Rengarajan]	LANL	\$86,900	\$34,500	MIC/Windows XP Certification - Peggy Moore (LANL) briefed the SSTS and ISPO on the status of the testing of the Multi-Instrument Collect (MIC) Software on the Microsoft Windows XP operating system, during the summer contractor visit to LANL in June.
E.132		Expert - Digital Image Surveillance and Remote Monitoring Implementation Engineer [USA E 1371 / M. Aparo]	CFE	\$325,700	\$278,098	Lee ReFalo concluded his assignment under this task in April. This task is complete. Mr. ReFalo will continue working with the IAEA under Task

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
E.133		2002 Factory Support for DIS [USA E 1108 / V. Popescu]	Aquila	\$814,000	\$463,573	
	E.133.01		Aquila	\$155,000	\$219,770	Kent Brown and Anthony Gonzales continued to provide factory support for the IAEA's existing Digital Imaging Surveillance systems. Mr. Brown continued writing procurement specifications for SGTS-TIE management. The Agency-wide distribution of GARS 6.50 was initiated and is in progress. Mr. Brown continued to update and run acceptance tests on flash card media for DCM 14 use. Preliminary work has begun on reducing the time necessary for safeguards data review over the LAN in HQ Vienna. Mr. Brown traveled to Armenia to upgrade an SDIS system and to the Ukraine to perform an SDIS installation. Anthony Gonzalez continued testing and upgrading DIS equipment for field use. Mr. Gonzalez is providing liaison support with the factory for DCM 14 upgrades. He created procedures for inspector field replacement of DCM 14 backup batteries and will participate in the implementation of the replacement program. Mr. Gonzalez assisted in the authorization documentation and testing of the new digital camera head for DCM 14-based systems and the RDIS.
E.134		Mobile Safeguard System for SF Transportation from Chernobyl NPP to Conditioning Facility [USA E 1375 / G. Ingrao]	IAEA	\$60,000	\$0	
	E.134.01		SNL	\$710,000	\$735,136	There was no activity scheduled for this quarter.
	E.134.02		LANL	\$257,000	\$194,695	LANL continued to test the duplicate MMCT system to reproduce problems experienced in Chernobyl. The preparation of test plans and documentation for the systems is on-going.
	E.134.03		Aquila	\$64,250	\$64,088	The approved scope of work for Aquila is complete. ISPO received a request from the IAEA for an upgrade to the two existing MMCT systems. Aquila is preparing a proposal that will be addressed by the SSTS in
E.135	E.135.01	Safeguards Systems for Chernobyl SF Long Term Dry Storage (Part 3/3 of Chernobyl Transfer and Conditioning Campaign) [USA E 1376 / G. Ingrao]	LANL	\$42,000	\$3,923	There has been no activity reported for this quarter.
E.136		Standardized Component Testing and Certification Service [USA E 1402 / K. Ferstl]	ORNL	\$130,000	\$130,000	This task is on stand by.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
E.137		Next Generation Camera Module and Server-Based Surveillance Systems [USA JNT E 1437 / J. Whichello]	Sonalysts	\$85,000	\$115,493	
	E.137.01		Sonalysts	\$107,500	\$0	Colin Carroll (Sonalysts) worked with Julian Whichello (IAEA) to evaluate bids submitted by commercial companies to support the development of the Next Generation Surveillance System (NGSS). The Agency issued an open solicitation to the commercial surveillance equipment industry in March 2004 for Expressions of Interest to develop the NGSS. The Agency received twenty-one responses. The Agency evaluated the responses using criteria related to a company's experience developing surveillance systems, its staff's qualifications, and its experience working with the Agency. The Agency selected nine companies who were invited to bid on the NGSS development task. Six withdrew formally. Three submitted bids to develop the NGSS. Sonalysts and the Department of Safeguards Section for Installed Equipment developed a bid evaluation procedure to facilitate the objective evaluation of the NGSS bids. Agency representatives and Mr. Carroll met in Vienna in June to evaluate the three NGSS bids. The bid evaluation team evaluated each bid systematically, as described in the bid evaluation procedure. They selected a winner of the NGSS bid. Their recommendation will be presented for approval to the ECC in July 2004. The Agency will evaluate options for funding the NGSS development effort.
E.138		Expert - Engineer Support for UMS Unit in TIE [USA E 1462 / M. Aparo]	CFE	\$158,000	\$48,067	The expert Bernard Wishard performed a site survey for an unattended reactor power monitor (ATPM) in Egypt. Mr. Wishard installed a core discharge monitor (VIFC). He completed a site survey for a digital multi-optical surveillance system (DMOS) in Argentina and assisted in the installation of a DMOS in Kazakhstan. Mr. Wishard wrote an assessment of a Russian vendor's proposal for an intrusive unattended enrichment monitor. He wrote a paper describing the various approaches the Agency used in the monitoring of UF6 gas at enrichment facilities. Mr. Wishard has been assigned to be the technical lead in developing the approach for the next generation of non-intrusive, unattended uranium enrichment/flow monitors for rarified UF6 gas at centrifuge facilities.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
E.139		Expert - Digital Image Surveillance, Unattended Monitoring System Integration and Remote Monitoring Systems Engineer [USA E 1463 / M. Aparo]	CFE	\$40,000	\$26,874	The expert Lee ReFalo traveled to Lithuania INPP in March, 2004, for completion of the VPN connection to Vienna. All eighteen cameras and four GRAND3 systems' data were transferred to Vienna. Mr. ReFalo completed the PFPF, RMS system upgrade, including reloading software on the AMSRs, replacement of the ILONs, replacement of the AMSR cabinet, replacement of the data collection/transfer computers with a new computer, addition of the modified DCM14 trigger inputs for the PCAS systems, and installation of a new VPN connection for data transfer to TRO (via Vienna). New tamper indicating conduit was installed from each of the PFPF DMOS systems to the RMS cabinet for Ethernet connections, so that the DMOS logs are collected in Vienna. It is anticipated that the new Vienna - PFPF VPN connection will be used for remote monitoring of both DMOS systems in the future. Mr. ReFalo completed an initial vulnerability review of the FAST camera system. Problems found will be discussed with EURATOM in early June. Mr. ReFalo supported the development of a combination phone line and Netscreen VPN connection to maintain the Netscreen certified VPN link (Ethernet only) across phone lines in support of VIFM data transfer. He completed a paper on data integration and remote monitoring for the 8th World Multiconference on Systemics, Cybernetics, and Informatics (SCI 2004).
E.140		Enhancement of Cobra Fibre Optic Seal System [/]	IAEA	\$143,000	\$0	This new task is to modify the design of the Cobra's sealing system and to upgrade the seal reader for automated, on-site verification and the use of a technology more resistant to component obsolescence issues. Funding for Phase 1 on the Aquila proposal to upgrade the Cobra Fiber Optic Seal System was approved by the SSTS. This phase consists of finalizing the design document to the satisfaction of the IAEA. The IAEA submitted an RFP and Aquila submitted a response. No contract has been awarded to date.
F.027	F.027.06	Consultants - Quality Assurance [USA C 1017 / D. Neal]	IAEA	\$291,200	\$218,506	The IAEA requested funding for additional training courses for Gassim Cherif. The SSTS will address the request in August.
F.032		Consultant - Services Safeguards Issues (R. Hooper) [USA C 1134 / J. Cooley]	IAEA	\$454,000	\$417,401	The consultant Richard Hooper conducted a seminar on strengthened safeguards during the week of May 10 in Vienna. He began work on a compendium of presentation material from which the Secretariat staff can draw for training programs, outreach seminars, and legislative assistance workshops. This work will be a collaboration with John Rames (IAEA).
F.036		Fixed Term Assistant - Procurement Services [/]	IAEA	\$60,000	\$0	The CFE Phil Beuparlant will begin his assignment in the Section for Procurement Services on July 1, 2004.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
S.020		Assistance to IAEA by U.S. Experts [USA X 941 / J. Cooley]	ISPO	\$507,000	\$494,748	This task was used to provide travel funding for consultants to the IAEA by various US government officials and experts. This task is on stand by.
S.026		The Design and Development of an Orientation Course for U.S. CFEs and IAEA Staff [USA X 943 /]	ISPO	\$395,487	\$395,487	ISPO participated with the BNL Office of Education Programs in May in an orientation of interns taking assignments at the IAEA under Subtask D.141.04.
S.036		Integrated Safeguards Consultations [USA X 1315 / L. Gourgon]	BNL/NCT	\$799,245	\$781,132	There has been no activity reported for this quarter.
			ISPO	\$32,349	\$32,349	There has been no activity reported for this quarter.
			LLNL	\$9,500	\$12,300	There has been no activity reported for this quarter.
			ORNL	\$33,875	\$33,875	There has been no activity reported for this quarter. The approved scope of work is complete.
			PNNL	\$25,000	\$24,505	There has been no activity reported for this quarter.
			SNL	\$9,895	\$9,895	There has been no activity reported for this quarter.
S.037		ISPO Recruitment Program [USA X 942 /]	ISPO	\$276,422	\$276,521	Donna Occhiogrosso visited the IAEA in June to meet with Catherine Monzel to discuss recruitment strategy, the new Personal History Form, the online application system, and the design of a brochure about IAEA employee benefits for recruiting US citizens. She met with Kirstie Hansen to discuss adding a link to BNL's internship recruitment website and text referring to a US based contact for the IAEA's job opportunities page. Ms. Hansen is the webmaster for content on the IAEA website.
S.049		IAEA Travel for US Support Program Tasks [USA X 1306 / A. Hamilton]	IAEA	\$1,209,524	\$992,373	This task provides funding to the IAEA for task-related travel. The SSTS responds to quarterly travel projections prepared by the IAEA's Support Program Administration.
S.051		USVC Funding in 2000 for SG Equipment [USA X 1428 / B. Bartsiotas]	ISPO	\$5,376,448	\$5,399,677	This task was established to track the expenditure of funding provided in the 2000 US Voluntary Contribution for the procurement of Safeguards Equipment.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
S.053		Non-Proliferation and Disarmament (NDF) Funding for SG Equipment [USA X 1342 / B. Bartsiotas]	ISPO	\$3,106,000	\$2,998,930	This task was established to track the expenditure of funding provided through the Nonproliferation and Disarmament Fund (NDF) in 2000. The NDF approved funding in 2000 for the procurement by the IAEA of geospatial laboratory and digital image surveillance equipment.
S.057		USVC Funding in 2001 for SG Equipment [USA X 1393 / B. Bartsiotas]	No Contractor	\$10,178,000	\$7,194,093	This task was established to track the IAEA's expenditure of funding provided in the 2001 US Voluntary Contribution for the procurement of safeguards equipment. Procurement of Solution Monitoring Systems for the Rokkasho Reprocessing Plant (RRP) - The NAC shipped the computer, the uninterruptible power supply, and the keyboard/monitor rails to the RRP. They provided support for the configuration of the system in Vienna and during the IAEA trip to Japan at the end of June. The project will be complete during the third quarter of 2004, when the appropriate certificate is executed and payment of the final invoice by the IAEA is received and when the IAEA reaches internal agreement regarding final acceptance of the solution monitoring systems.
S.060		Contracts Labor Charge [/]	ISPO	\$111,707	\$105,885	This task provides funding for the labor charges that are incurred by the BNL Procurement and Property Management Division while executing contracts and purchase orders for USSP tasks.
S.061		2002 U.S. Voluntary Contribution for Safeguards Equipment [/ B. Bartsiotas]	IAEA	\$6,634,576	\$4,839,661	This task was established to track the expenditure of the 2002 US Voluntary Contribution for Safeguards Equipment.
S.062		ISIS Reengineering [USA D 1430 / A. Reynaud]	IAEA	\$5,307,229	\$358,741	This task was established to track US Voluntary Contributions to the ISIS Reengineering Project. The IAEA is reviewing bids for the IAEA effort.
	S.062.01		IAEA	\$375,231	\$165,050	NPT Accounting Software - Cap Gemini rolled out the first two of three planned prototypes successfully. IAEA began user tests. The IAEA's feed-back on the software prototypes demonstrated that the system's specification and design will conform to the IAEA's requirements. The first tests with member state data indicated that there are gaps with the documented business rules. Additional clarification was needed due to the complexity of the business rules documentation. A significant change request covering a number of functional additions is still under discussion. The final project deadline is at the beginning of September 2004.
S.065		NDF 2002	IAEA	\$4,155,000	\$731,683	This task was established to track the expenditure of funding provided through the Nonproliferation and Disarmament Fund (NDF) in 2002. The NDF approved funding for high priority NDA and surveillance equipment.

TaskID	Subtas	Title [Agency# / Task Officer]	Org	Total	Total Spent	Comments
S.066		2003 USVC for Safeguards Equipment [/]	IAEA	\$7,700,000	\$451,683	This task was established to track the IAEA's expenditure of funding provided in the 2003 US Voluntary Contribution for the procurement of safeguards equipment.
S.068		Information and Communication Technology Conference [/]	Sonalysts	\$85,000	\$0	Colin Carroll (Sonalysts) met with John Hilliard (IAEA) to develop a Plan of Action and Milestones for the upcoming SGIT workshop scheduled for Fall 2004. Mr. Carroll and Mr. Hilliard agreed that the SGIT workshop would focus on Import/Export issues and Inspector Tools of the Future. The Director (SGIT) supports this decision. Colin Carroll and Donald Estes (Sonalysts) will conduct a one week working period at the Agency in July 2004 to plan the workshop agenda, to design and develop workshop activities, and to prepare background information packages, which will be provided to workshop participants.
S.069		2004 USVC for Safeguards Equipment [/]	IAEA	\$4,359,600	\$0	This task was established to track the IAEA's expenditure of funding provided in the 2004 US voluntary contribution for the procurement of safeguards equipment. At its June 22 meeting the SSTS reviewed a list of high priority items needed by the IAEA and approved the use of this funding for selected items.
S.070		Support to the IAEA's Office of Internal Oversight for an Evaluation of the Effectiveness of Member State Support Programs Within the Safeguards Department [/]	Sonalysts	\$39,566	\$0	This task was approved at the August 3 SSTS meeting.
W.001		Work For Others [/]	LANL	(\$9,307)	(\$19,177)	LANL received an exemption from the application of DOE Work for Others fees charged against POTAS tasks. Fees were reimbursed retroactively to May 2002. These funds were redirected to new tasks at LANL. This task is complete.
W.002		Work For Others Sandia [/]	SNL	\$0	\$0	SNL received an exemption from the application of DOE Work for Others fees to POTAS tasks. Fees were reimbursed retroactively to May 2002. These funds were redirected to new tasks at SNL. This task is complete.
W.003		Work for Others [/]	ORNL	\$38,283	\$334	ORNL received an exemption from the application of DOE Work for Others fees to POTAS tasks. Fees were reimbursed retroactively to May 2002. These funds will be redirected to new tasks at ORNL.