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RCT-PXP-006

Revision 0

Project Execution Plan for the SuperHENC Refurbishment Project

EFFECTIVE DATE: 07/17/2006

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1.0 PROJECT OVERVIEW

The SuperHENC is a self contained Non Destructive Assay (NDA) Unit within a prefabricated structure that can be transported over the highways. The unit was excessed from the Rocky Flats Environmental Technology Site (RFETS), transfer documentation transferring the unit to Washington TRU Solutions (WTS) completed, and the unit transported to Albuquerque for storage in April 2005.

Due to the harsh environment at the RFETS, the determination was made to perform a refurbishment of the unit.

The original Purchase Order (PO) for the refurbishment, PO 404259, was issued to [redacted] in April 2005.

The work detailed in the original Statement of Work (SOW) associated with the PO is largely complete. Several issues have risen regarding the execution of the SuperHENC refurbishment project. These issues have been addressed in a Corrective Action Report (CAR), CAR-CCP-0001-06, and detailed in a root cause analysis report performed by WTS personnel dated April 12, 2006.

The purpose of this Project Execution Plan (PXP) is to complete the SuperHENC Refurbishment Project in accordance with all applicable Department of Energy (DOE), WTS, and Central Characterization Project (CCP) Quality Assurance (QA), Procurement, and Configuration Management requirements and deliver the SuperHENC to the Idaho National Laboratory (INL) on or before July 31, 2006.

[redacted] was put under a Stop Work Order on March 22, 2006 pending submission and approval of all pre-work deliverables identified under PO 404259. This was accomplished, and the Stop Work Order was lifted on May 23, 2006. In the interim, the final change order, Change Order #4, to PO 404259 that captured the additional work performed by [redacted] as identified in the above mentioned CAR and root cause analysis, was issued on June 8, 2006.

The scope of work left to complete consists of receiving and approving the deliverables identified in Change Order #4 to PO 404249, performing the Factory Acceptance Test (FAT), and delivering the unit to INL .

2.0 CONTRACT OVERVIEW

The services to be provided are detailed in Table 2, SuperHENC Refurbishment Project Completion Schedule. Generally these services include the refurbishment of defective and worn components, installation of a dry pipe sprinkler system, and the conversion of the gamma subsystem from a two detector system to a single detector system. A FAT must also be satisfactorily performed.

2.1 Project Scope Tasks and Deliverables

2.1.1 Project Tasks

[A] Table 1, Project Tasks, lists the tasks that were in the original SOW associated with PO 404259 and which ones are in the SOW for PRCN #4, as well as the current status for all of the tasks.

Table 1. Project Tasks

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
1	4.15 The supplier shall provide and install NDA 2000 (gamma/neutron integration) software on both the gamma and neutron computers	X			Not performed, task removed
2	4.15 The supplier shall provide and install PC-FRAM software on the gamma computer. All software development activities shall be performed and provided by the [redacted] facility that will remain active on the WTS QSL. The supplier shall obtain written approval of WTS CCP QA for any deviation from this requirement.	X			Not performed, task removed
3	4.10 The supplier shall close old attachment holes on the rails and install new ones.		X		Complete
4	4.11 The supplier shall place small jacks between trailer and loading platform so that the loading bridge aligns with the SuperHENC cavity		X		Complete
5	4.12 The supplier shall refurbish the platform guides.		X		Complete
6	4.21 The supplier shall refurbish or replace Cf-252 clamps and cart fittings.		X		Complete
7	4.31 The supplier shall replace the bolts and fasteners that failed during disassembly with stainless steel bolts and fasteners.		X		Complete (No load bearing bolts were replaced, used 18-8 ¼"-20 of various lengths)
8	4.32 The supplier shall refurbish the positioning plates for drums on the gamma turntable.		X		Complete
9	4.33 The supplier shall refurbish the jacks that hold the drawbridge (loading platform) in place and the connections on the drawbridge.		X		Complete
10	4.34 The supplier shall replace corroded dock assembly, including hardware and structure.		X		Complete
11	4.35 The supplier shall rework the new cavity shafts and cavity floor to align to original LANL cart.		X		Complete
12	4.36 The supplier shall refurbish the turntable SWB alignment guides.		x		Complete

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
13	4.37 The supplier shall purchase and install the inside dock jacks.		x		Complete
14	4.38 The supplier shall replace the shielding cables to the motors to prevent noise in the gamma system		x		Complete
15	4.39 The supplier shall replace corroded or suspect hardware.		x		Complete
16	4.40 The supplier shall convert the Gamma sub-system from a two detector design to a single detector design.		x		Complete
17	4.1/4.2 The supplier shall add electrical service entry device to the front of the trailer.		x		Complete
18	4.1/4.3 The supplier shall check the equipment ground, if modified, and document and perform a grounding electrode test, ensuring that the ohms are <3/10 of an ohm across the entire system. The grounding electrode test shall be documented and submitted to WTS CCP in accordance with Section 6.0.		x		Complete
19	4.2/4.4 The supplier shall refurbish entire control room.	X			Complete
20	4.3/4.5 The supplier shall purchase a spare Compumotor controller.	X			Complete
21	4.3/4.6 The supplier shall document and perform a functional test of the motor controller to ensure that the door fully opens and closes; should be exercised several times in a row to ensure that the motor stops and starts as required; and ensure that any interlocks work as required. The supplier shall ensure that the continuous and/or intermediate service on the doors shall match the service rating of the motor. The functional test plan and results shall be submitted to WTS in accordance with Section 6.0.	X	X		Not performed Part of FAT

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
22	4.3/4.7 Upon completion of electrical work a walkdown inspection, which includes a visual inspection, of the electrical systems shall be performed prior to acceptance of the SuperHENC. The inspection shall be performed in accordance with NFPA 70 requirements and the results shall be documented and submitted to WTS CCP in accordance with Section 6.0. The inspector qualifications shall be documented and submitted to WTS in accordance with Section 6.0.	X	X		Not complete
23	4.3/4.8 The supplier shall perform a functional test of the entire electrical system to ensure correct operation.	X	X		Complete
24	4.4/4.9 The supplier shall replace the Thompson rails on the cart and in the SuperHENC cavity.	X	X		Complete
25	4.5/4.13 The supplier shall replace SuperHENC cart bump switch	X	X		Complete
26	4.7/4.15 The supplier shall purchase as a spare a SuperHENC SuperFET board.	X	X		On Order
27	4.8/4.18 Additionally, the supplier shall ensure that a portable, multipurpose (ABC) fire extinguisher is provided inside the control room and at each exit.	X	X		Complete
28	4.10/4.20 The supplier shall procure a Californium (Cf) 252 source with a motion handle and shall submit to WTS the procurement documentation on this source to WTS CCP in accordance with Section 6.0.	X	X		On Order
29	4.13/4.14 The supplier shall refurbish the Neutron Detector Packages.	X	X		Complete
30	Original SOW stated: "4.6 The supplier shall replace the SuperHENC cart pallet and shall ensure the rollers are upgraded. In the new SOW this has been changed to "4.14 The supplier shall refurbish the SuperHENC cart pallet and shall ensure the back rollers are upgraded with dual rollers."	X	X	X	Complete

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
31	Changes to the fire suppression requirements: The original requirement stated: "4.8 The supplier shall upgrade Fire Alarm and Suppression System to meet current code requirements" The new requirements states: "4.16 The supplier shall supply and install Fire Alarm and Suppression system to meet current NFPA code requirements. This fire protection system shall be a dry sprinkler system" The following requirement was removed: "4.8 The Fire Protection system shall be an FM200 system, a clean agent system, and shall meet the requirements NFPA 2001. This system shall be a manually activated system."	X	X	X	Dry Pipe Sprinkler System installed.
32	The original requirement stated: "4.8 The supplier shall perform an Initial Installation Acceptance Test of the system in accordance with NFPA 2001, Section 6.7. The supplier shall provide documentation of this Initial Installation Acceptance Test. The new requirement states: "4.17 The supplier shall satisfactorily perform an Initial Installation Acceptance Test of the system in accordance with NFPA 13 and NFPA 72. The supplier shall provide documentation of this Initial Installation Acceptance Test."	X	X	X	Complete
33	The original requirement stated: "4.9 The supplier shall add Gamma collimation to existing Gamma detectors. The supplier shall ensure the materials for collimation shall be gamma absorbent. The supplier shall submit a certified material test report for the material(s) used for the collimation in accordance with Section 6.0." The new requirement states: "4.19 The supplier shall add Gamma collimation to existing Gamma detectors. The supplier shall submit a Material Safety Data Sheet (MSDS) for the material(s) used for the collimation in accordance with Section 6.0."	X	X	X	Complete

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
34	The original requirement stated: "4.11 The supplier shall replace the existing SuperHENC AMSR150 (Advance Multiplicity Shift Register)." The new requirement states: "4.22 The supplier shall verify the functionality of the two existing SuperHENC AMSR150 (Advance Multiplicity Shift Register)."	X	X	X	Complete Complete by 6-01-06
35	The original requirement stated: "4.12 The supplier shall provide and install a new D-Spec unit to replace the broken one." The new requirement states: "4.23 The supplier shall provide and install a new D-Spec Junior unit to match the new single detector design."	X	X	X	Complete
36	The original requirement stated: "4.14 The supplier shall provide 1 new gamma computer and 1 new neutron computer. Both PCs shall be equipped with Ethernet hub, USB hub and wireless keyboard and mouse, and each PC shall be accompanied by an LCD monitor and a printer. NDA 2000 shall be installed on both computers and PC-FRAM shall be installed on the gamma computer." The new requirement states: "4.25 The supplier shall provide 1 new gamma computer and 1 new neutron computer. Both PCs shall be equipped with Ethernet hub, USB hub, keyboard and mouse, a shared printer Each PC shall be accompanied by an LCD monitor. SuperHENC.exe v. 1.0.3 (LANL's software based on INCC) shall be installed on both computers; and PC-FRAM v. 4.3, Maestro v. 6.0.5, and NGI v. 1.1 shall be installed on the gamma computer."	X	X	X	Complete

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
37	The original requirement stated: "4.15 All software development activities shall be performed and provided by the [redacted] facility that will remain active on the WTS QSL. The supplier shall obtain written approval of WTS CCP QA for any deviation from this requirement." The new requirement states: "4.26 All software development activities shall be performed and provided by the BIL Solutions, Inc. facility that will remain active on the WTS QSL. The supplier shall obtain written approval of WTS CCP QA for any deviation from this requirement."	X	X	X	Need update Complete on same date as gamma/neutron software deliverable
38	The original requirement stated: "4.16 Upon completion of the upgrade to the hardware (see items 11-14) and software (15-16), the supplier shall perform a factory calibration test of the SuperHENC's hardware and software to measure the efficiency of the system. The supplier shall notify the STR of the factory acceptance test date at least 5 days prior to performance of the test. The supplier shall document the calibration plan and results and submit them to WTS in accordance with Section 6.0." The new requirement states: "4.27Upon completion of the upgrade to the hardware (see items 11-14) and software (14-15), the supplier shall perform a factory acceptance test of the SuperHENC's hardware and software to measure the efficiency of the system. The supplier shall notify the STR of the factory acceptance test date at least 5 days prior to performance of the test. The supplier shall document the factory acceptance test plan and results and submit them to WTS in accordance with Section 6.0."	X	X	X	FAT scheduled for 6/22/06

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
39	The original requirement stated: "4.17 The supplier shall replace existing jack stands and ensure the stands have a minimum load capacity of greater than or equal to 4000lbs. The supplier shall also install turnbuckle/tie down capability on the trailer." The new requirement states: "4.28 The supplier shall refurbish existing jack stands and ensure the stands have a minimum load capacity of greater than or equal to 4000lbs. The supplier shall also install turnbuckle/tie down capability on the trailer."	X	X	X	Complete

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
40	The original requirement stated: "4.18 The supplier shall inspect the trailer to ensure that it is not degraded. Load bearing or structural welds shall be visually inspected. NDE shall be performed on load bearing or structural welds if the welds are broken or degraded. NDE shall be performed in accordance with SNTC-1A or other approved standards. If NDE is required, any personnel who will perform NDE shall be a minimum of Level II, certified to the companies program and qualification documentation shall be submitted to WTS for review and approval in accordance with Section 6.0 prior to performance of NDE activities. The following will be inspected and repaired as needed: Evaluate the airlines to ensure they are tight and operational Evaluate the seals to ensure correct operation Evaluate the tires to ensure correct operation Evaluate the wheel bearings, etc. to ensure they are in good condition Evaluate the fluid" The new requirement states: "4.29 The supplier shall inspect the trailer to ensure that it is not degraded. Load bearing or structural welds shall be visually inspected. NDE in the form of liquid penetrant shall be performed on load bearing or structural welds if the welds are broken or degraded. NDE shall be performed in accordance with SNTC-1A or other approved standards. If NDE is required, any personnel who will perform NDE shall be a minimum of Level II certified in the discipline used as well as certified to the company's program. Qualification documentation shall be submitted to WTS for review and approval in accordance with Section 6.0 prior to performance of NDE activities." "4.30 The following will be inspected and repaired as needed: Evaluate the airlines to ensure they are tight and operational Evaluate the seals to ensure correct operation Evaluate the tires to ensure correct operation Evaluate the wheel bearings, etc. to ensure they are in good condition Evaluate the brake fluid"	X	X	X	Inspections complete, no NDE required.

Task	Description	In Original SOW	In New SOW	Modified Between SOW's	Work Status
41	The original requirement stated: "4.19 The supplier shall As-built the SuperHENC and trailer and will include electrical schematics, wiring diagrams, load bearing and structural welds, and the As-built documentation shall be submitted to WTS in accordance with Section 6.0" The new requirement states: "4.40 Upon delivery, the supplier shall submit to WTS CCP a complete set of up to date design drawings, in both ACAD and Adobe Acrobat format, including the electrical and mechanical diagrams and load bearing/structural welds."	X	X	X	No As-builts received. Work on revised drawings will be received at a later date.

3.0

Figure 1. Primary Project Participants

4.0 PROJECT ADMINISTRATION

In order to drive the project to successful completion, the Project Manager, working with CCP support personnel, Procurement, and QA will coordinate the technical and administrative oversight of the project, using subject matter experts (SMEs) from the WIPP site and elsewhere when required.

The Project Manager will:

- Serve as lead interface between the supplier and Procurement, QA, and other reviewing and approving entities.
- Ensure project resources and planning;
- Lead AR/VR (Approval Request/Variation Request) reviews and work closely with Procurement to maintain subcontract documentation and records;
- Formally maintain control of project scope, schedule, and costs;
- Coordinate and resolve issues for the project.;
- Ensure configuration management requirements are met.

5.0 PROJECT BUDGET AND SCHEDULE

5.1 Budget

The PO history with associated dollar amounts is detailed in Table 2, PO404259 Change History, below.

Table 2. PO404259 Change History

Purchase Order or Change Notice	Date	Total PO Amount	
Original Purchase Order	4/28/05	[redacted]	MCS performing inspection of SuperHENC to produce cost estimate of refurbishment.
Change Notice #1	9/26/05	[redacted]	Change notice authorizing work.
Stop Work Order	3/22/06	N/A	Stop Work Order issued to MCS until all pre-work deliverables were submitted.
Change Notice #2	4/12/06	[redacted]	Change notice authorizing additional work found while refurbishing unit. **Canceled**
Stop Work Order Lifted	4/27/06	N/A	Stop Work Order Lifted due to all pre-work deliverables identified under PO404259 being submitted and approved.
Change Notice #3	5/2/06	[redacted]	Change notice to quantify more clearly the additional work scope found when refurbishing the unit and to add the requirement for the generation of up to date mechanical and electrical prints. The project costs were also adjusted by [redacted] **Canceled**
Change Notice #4	6/8/06	[redacted]	Includes changes in Change Order #3 and adds [redacted] to purchase requisition change notice (PRCN) #3's [redacted] to account for additional labor required for making complete set of up to date design drawings, removed shipment of unit from scope of work.

5.2 Schedule

5.2.1 Figure 2, SuperHENC Refurbishment Project Completion Schedule, is the completion schedule for the remaining items to be completed in the SuperHENC Refurbishment Project.

5.2.2 The work is basically complete with the submission of the required deliverables, acceptance testing, and shipment remaining.

5.2.3 The schedule begins when the Stop Work Order was lifted on April 27, 2006.

Activity	4/27/06	5/1/06	6/5/06	6/12/06	6/22/06	6/26/06	7/3/06	7/10/06	7/19/06	7/24/06	7/31/06	8/7/06	8/14/06	8/21/06
[redacted] – complete remaining work scope items.														
[redacted] – submit required deliverables required for acceptance testing.														
Factory Acceptance Test scheduled for 6/22/06 (assuming all pre FAT deliverables have been submitted and approved.)														
[redacted] – complete walkdown of unit to gather information needed for the creation of the up to date mechanical and electrical prints.														
Shipment to INL														
[redacted] – complete the creation of up to date prints and any remaining contract close out items.														

Figure 2. SuperHENC Refurbishment Project Completion Schedule

5.3 Deliverables

5.3.1 Table 3, Deliverables, lists the deliverables that were in the original SOW associated with PO 404259, and which ones are in the SOW for PRCN #4, as well as the current status.

Table 3. Deliverables

When Required	Revised SOW	In Original SOW	In New SOW	Modified between SOW's	Approval Date
Prior to start of work.	Documentation of fire protection system installer qualification to ANSUL or equivalent training	X	X		5-11-06
Prior to start of work.	Documentation stating that all parts used in the fire protection system are approved by a national recognized testing laboratory such as UL and FM.	X	X	X	5-22-06
Prior to start of work.	Inspection personnel qualifications	X	X		Not Needed
Prior to start of work.	NDE personnel qualifications, if applicable	X	X		Not Needed
Prior to Factory Acceptance Test	Factory Acceptance Test Plan	X	X	X	Submitted, in approval process.
Prior to Factory Acceptance	Certificates of Analysis for the source(s) used during the Factory Acceptance Test	X	X	X	
Prior to Acceptance	Certificate of Conformance for the SuperHENC and Trailer, in accordance with Section 5.0	X	X		
Prior to Acceptance	Documentation of Safety Program		X		
Prior to Acceptance	MSDS for materials used for the collimation	X	X		6/13/06
Prior to Acceptance	Weld procedure, if applicable		X		
Prior to Acceptance	Welder qualifications, if applicable		X		
Prior to Acceptance	Functionality report for the two (2) AMSR150's		X		Submitted, in approval process.
Prior to Acceptance	Provide a complete set of drawings which reflects the current configuration. including electrical schematics, wiring diagrams, and load bearing/structural welds	X	X	X	
Prior to Acceptance	Installation instructions	X	X		5-22-06
Prior to Acceptance	Parts lists	X	X		

Table 3. Deliverables (Continued)

When Required	Revised SOW	In Original SOW	In New SOW	Modified between SOW's	Approval Date
Prior to Acceptance	Electrical System Inspection results	X	X		
Prior to Acceptance	Factory Acceptance Test Report which includes results for the grounding electrode test; functional test of motor controller; functional test of electrical system; efficiency calibration test	X	X	X	Submitted, in approval process.
Prior to Acceptance	Fire Protection System Acceptance Test	X	X		5-22-06
Prior to Acceptance	Procurement documentation for Californium 252 source	X	X		
Prior to Acceptance	Two copies of SuperHENC.exe v. 1.0.3 (LANL's software based on INCC) user documentation		X		
Prior to Acceptance	Two copies of PC-FRAM software user documentation	X	X		
Prior to Acceptance	Two copies of NGI v. 1.1 software user documentation		X		
Prior to Acceptance	Two copies of Maestro v 6.0.5 software user documentation		X		
Prior to Acceptance	Two O&M manuals for the Fire Protection System	X	X		
Upon Delivery	Commercial Vehicle Safety Alliance (CVSA) Level I inspection report		X		
Upon Delivery	Bill of Lading		X		

6.0 PROJECT RESOURCES

Project resources consist of the personnel detailed in Section 3.0 Project Organization.

7.0 UNIQUE PROJECT CONSIDERATIONS

This PXP is not meant to address the procedural and programmatic issues detailed in the Root Cause Analysis, dated April 12, 2006, and CAR-CCP-0001-06. Its purpose is to drive the project to completion while adhering to all applicable standards and procedures.

As identified in the Root Cause Analysis, dated 4/12/06, MCS was not a Qualified Supplier per WP13-QA3012, *Supplier Evaluation/Qualification*. A qualified supplier's list (QSL) request was initiated on March 30, 2006, however MCS's QA Program was such that they were not able to become a Qualified Supplier.

Therefore Change Notice #4 states "This procurement is being placed with MCS to facilitate cost accounting however, the actual work will be performed by BIL Solutions under their WTS approved quality program."

WTS has committed to DOE that the SuperHENC will be in place at INL by July 31, 2006.

8.0 ENGINEERING AND DESIGN

CCP and WIPP site resources as well as subcontracted services, if required, will be utilized for all engineering and QA reviews.

9.0 PROCUREMENT AND MATERIALS MANAGEMENT

Procurement and management of materials is within the scope of [redacted]

10.0 PROJECT CONTROLS

The project control system seeks to be responsive to internal management requirements and provide WIPP participants with increased cost and schedule performance visibility of the accomplishment of project objectives. In addition to providing a formal integrated schedule and resource plan, the management control system provides analysis of planned versus actual performance and early detection or prediction of problems that require management attention.

In summary, the WIPP Project Control System provides for:

- Organization: Contractual efforts are established and responsibilities assigned for the work.

- Planning and Budgeting: Work is formally planned, scheduled, budgeted and authorized.

  Accounting: Costs of work and material are accumulated.

  Analysis: Planned and actual performance is compared and variances analyzed.

- Revisions and Access to Data: Estimates of final costs are developed along with methods to incorporate baseline changes in these estimates.

- Risk Management: Describes the WIPP risk identification, assessment, mitigation, and monitoring process.

The Carlsbad Field Office (CBFO), Office of Business is responsible for interpreting the requirements of this document as they apply to a particular program situation, and for maintaining and updating this document, including coordinating changes with other project participants when appropriate.

The CBFO Baseline is actually comprised of three baselines that integrate the schedule, cost, and performance measures for the site. These baselines are as follows:

- Schedule Baseline: The Integrated Project Schedule is the primary controlled schedule from which schedule performance is measured. It is used to status and update summary level schedules. Only changes authorized through the Baseline Change Control process are incorporated into the schedule baseline.

- Cost Baseline: Contract funding levels, contained in the fiscal year program guidance letter from CBFO plus approved changes, are allocated to Cost Account Plans (CAPs), developed at Level 5 of the WBS, to form the cost baseline.

- Performance Measurement Baseline (PMB): The PMB is the time phased budget plan against which cost and schedule performance are measured. The resource loaded schedule activities contained in the Complex Wide Integration Tool (CWIT) form the basis of the PMB.

This PXP addresses the detailed project scope and schedule for the SuperHENC Refurbishment Project. Formal processes are established and documented in this PXP for communications, configuration control, and issues management. The PXP will be controlled by the designated Project Manager to ensure that revisions are processed and approved by appropriate parties; that distribution is maintained, and that associated changes are maintained for record purposes.

11.0 PROJECT QUALITY PLAN

All work shall be performed under the BIL's QA Program. In the event that full compliance with any requirement is in question, WTS may opt to implement that requirement through increased involvement through "dedicated quality" under the auspices of the WTS QA Program.

The Subcontractor shall, upon WTS request, submit quality program documentation that includes, but is not limited to, the Subcontractor's QA Manual, QA procedures, internal audit reports, etc. The Subcontractor shall grant WTS, or its designee, rights of access to Subcontractor's facilities and records for inspection or audit.

QA requirements, including the QA Program, Engineering Design Program, Inspection Requirements, Personnel Qualification, Quality Clauses, and Documentation Requirements shall be the primary basis for submittals and deliverables. Quality Clauses applicable to the test program are delineated in the SOW.

12.0 CONSTRUCTION

Most of the work is refurbishment and repair of existing hardware.

13.0 COMMISSIONING AND START-UP

The Supplier shall plan, implement, and maintain a QA program as specified in the SOW. In addition, the QA specifications identified with this SOW apply to the Supplier's QA program. This program is subject to a pre-contract award survey and subsequent QA audits by WTS applicable to the test program in this SOW.

Per the SOW, prior to WTS authorization to proceed on implementation of the FAT, the detailed FAT Plan shall be approved by WTS.

The Supplier shall require, in writing, subcontractors of all tiers to comply with all applicable quality program/system requirements. The quality system and control of "Special Processes" of the Supplier and subcontractors of all tiers shall be subject to audit by WTS to the extent practicable at all times and places.

The Supplier shall tender for acceptance only those item(s), supplies, or services that have been inspected and tested in accordance with its quality program/system and have been found to conform to contract requirements. When post-installation testing is identified as a method of acceptance, then post-installation test requirements and acceptance documentation shall be identified and agreed upon by the purchaser and supplier.

14.0 ENVIRONMENT, SAFETY, AND HEALTH

Achieving successful project completion demands implementation and integration of safe work performance, environmental stewardship, and quality into the management and performance of project work. The primary objective is to deliver the project work scope with no safety incidences or injuries. The successful integration of these compliance elements is vital for successful project completion.

To help ensure project performance and compliance, training of personnel in their specific project requirements and responsibilities is required in accordance with the following safety principles:

14.1 Integrated Safety Management System

The DOE Integrated Safety Management System (ISMS) is an integrated approach to ensure that work is planned, analyzed, reviewed, approved, and executed in a safe manner and that safety is continuously improved through worker feedback.

Five core functions of ISMS form the basis for working safety: 1) define the scope of work, 2) identify and analyze the hazards, 3) identify and implement controls, 4) do the work, and 5) provide feedback throughout the process.

14.2 Environmental Compliance

The Project will comply with governing regulations, agreements, and orders under the contract applicable to the test facility. At a minimum, project activities will be evaluated for consistency with Resource Conservation and Recovery Act (RCRA) and compliance with applicable water, air, waste, and natural resources requirements.

15.0 RISK MANAGEMENT PLAN

WTS managers involved in project execution participate in the identification and assessment of program risks. They review program documents, evaluate lessons learned, and use brainstorming and their own experience to identify risks. Project risks are identified in the following areas:

- Cost and Schedule
- Technical
- Programmatic (Obtaining and utilizing resources outside the control of the program manager)
- Support
- Safety
- Regulatory/Permitting
- Site Specific (Including alternative site locations)

Once risks are identified, WTS categorizes the identified risks by probability and severity (consequences) of each event. After risks have been identified and categorized, a risk management approach and mitigation actions are developed for each High and Medium risk. For Low risk elements not judged to require documented mitigation actions, WTS Managers assure that they are controlled through the normal management functions and work processes. All risks and mitigation actions are identified in the CBFO Risk Management Plan, which is updated annually.

In order to determine the effectiveness of the Risk Management Plan, the areas of Medium and High risks are monitored and statused during monthly program meetings with CBFO. In addition, periodic reassessments of programs are performed to determine if new areas of risk need to be identified and assessed.

16.0 PROJECT CLOSEOUT

The SuperHENC Refurbishment Project is scheduled to be closed out in mid 2006. The SOW includes all closeout activities.

17.0 PROJECT PROCEDURES

Per the SOW, an Installation Procedure and a FAT Plan are to be supplied by the Supplier.

The supplier shall also deliver all Supplier Data Packages (SDP) as required by the SOW. The content and form of the package are specified in the SOW. The size of the data package may range from a few pages consisting of a certification of conformation and nonconformance reports (NCRs) to a large volume of documentation including such things as inspection reports, test reports (including NDE reports), manufacturing and inspection travelers, checklists, performance data, installation procedures, operating procedures, maintenance procedures, as-built drawings, and specifications. Such documentation shall be suitable for scanning with electronic media.

WTS requires the submittal of SDPs for a number of reasons other than the need for QA documentation of the order. The package is retained and used to (1) revise drawings and specifications, (2) provide a history file in case of an unexpected failure, and (3) provide as-built data for future reference as required by our customers, which may be verified by audit. It is essential that SDPs be complete, accurate, legible, and submitted in a timely manner as required by the SOW.