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| 1 | 1 | Cog. Mgr. R. J. Murkowski | <i>[Signature]</i> | 10/10/96 | 45-61 | 1 | 1 | R. W. Root, Jr. | <i>[Signature]</i> | 10/10/96 | 45-61 |
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Hanford Tanks Initiative Technology Demonstration and Waste Retrieval Acquisition Strategy

D. C. Ramsower

SGN Eurisys Services Corp., Richland, WA 99352

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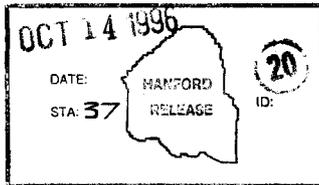
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Abstract: This document describes the alternative technology acquisition and waste retrieval acquisition strategy for the Hanford Tanks Initiative (HTI).

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**HANFORD TANKS INITIATIVE
TECHNOLOGY DEMONSTRATION
AND WASTE RETRIEVAL
ACQUISITION STRATEGY**

October 1996

D. C. Ramsower
SGN Eurisys Services Corp.
Richland, Washington

Prepared for
U.S. Department of Energy
Richland, Washington

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EXECUTIVE SUMMARY

This document describes the alternate technology demonstrations and waste retrieval acquisition strategy for the Hanford Tanks Initiative (HTI).

Several HTI working group meetings were held to evaluate and select the procurement strategy and marketing approach for the alternate technology demonstrations and waste retrieval portions of the HTI project. The results of the sessions were the identification of the preferred approaches to procurement, contract type/funding, the procurement schedule, and a general definition of the seller's scope for the waste retrieval effort.

The alternate technology demonstrations will be driven by the need to acquire data on several alternative retrieval systems' performances and to identify and resolve issues associated with fielding the systems on Hanford Site tanks. The acquisition of alternate technology demonstrations will use traditional fixed-price contracting methods to obtain publicly releasable reports containing data on retrieval system performance needed for future competitive solicitations, while protecting proprietary information.

The waste retrieval acquisition strategy will use a performance-based specification to ultimately contract with commercial vendors to assemble, deliver, install, operate, and demobilize a waste retrieval system using retrieval technologies of their choice with Project

Hanford Management Contract forces doing the "balance of plant" design and using traditional contracting methods for balance of plant construction.

The preferred waste retrieval contracting method is multiple phase/multiple award contract(s) for the testing of systems on a firm fixed-price basis with down selection to one contractor for waste retrieval from a tank on an incentive-fee basis. The HTI will utilize a progressive procurement process to facilitate the orderly award and administration of multiple contracts based on common specification requirements. The process will entail a single solicitation by a request for proposal structured for multiple awards on all phases of the project. The basis of selection will be the best value to the government as evaluated in response to the request for proposal and evaluation criteria. The down selection to one contractor will be based on the performance of the off-tank testing of the proposed systems. Each successive project phase will be a contract option that may or not be exercised at HTI's discretion. Any cost-based contracts will include the application of performance-fee incentives. Cost-sharing agreements may be considered.

Project procurement risks, mitigation strategies, and miscellaneous information are also detailed in this document.

CONTENTS

1.0 INTRODUCTION 1

 1.1 BACKGROUND 1

 1.2 HANFORD TANKS INITIATIVE OBJECTIVES 1

 1.3 ACQUISITION OBJECTIVES 2

 1.4 PROJECT ELEMENTS 2

 1.5 COMPETITION POLICY 2

2.0 MARKETING AND PROCUREMENT STRATEGY 5

 2.1 APPROACH 5

 2.2 EVALUATION TEAM 5

 2.3 MARKETING STRATEGIES 5

 2.4 PROCUREMENT STRATEGIES 6

 2.5 SELLER SCOPE, INTERFACES, AND REQUIREMENTS 7

 2.6 PROCUREMENT STEPS AND DURATIONS 7

3.0 CONTRACTOR SOURCE SELECTION 9

 3.1 MAJOR SITE CONTRACTORS 9

 3.2 OTHER MAJOR CONTRACTORS 9

 3.3 OTHER ANTICIPATED CONTRACTORS AND PARTICIPANTS 9

4.0 REPORTING REQUIREMENTS 11

5.0 FUNDING PLAN 11

6.0 AWARD SCHEDULE 11

7.0 CONTRACT INCENTIVES 12

8.0 EQUIPMENT AND SUPPLIES 12

9.0 ANTICIPATED ORGANIZATIONAL CONFLICT OF INTEREST 12

10.0 PATENTS AND DATA 13

11.0 RISK ASSESSMENT 13

12.0 REFERENCES 14

APPENDIXES

A - EXCERPTS FROM BACKGROUND INFORMATION A-1
B - NOTES FROM SOLICITATION STRATEGY MEETING 7/22/96 B-1
C - SCHEDULE C-1

LIST OF TERMS

| | |
|---------------------|---|
| ACTR | Acquire Commercial Technology for Retrieval |
| DOE | U.S. Department of Energy |
| DST | Double-shell tank |
| GFI | Government-Furnished Information |
| HTI | Hanford Tanks Initiative |
| NEPA | <i>National Environmental Policy Act of 1969</i> |
| PHMC | Project Hanford Management Contractor |
| PNNL | Pacific Northwest National Laboratory |
| RFP | Request for Proposal |
| RL | U.S. Department of Energy-Richland Operations Office |
| SST | Single-shell tank |
| Tri-Party Agreement | <i>Hanford Federal Facility Agreement and Consent Order</i> |
| TWRS | Tank Waste Remediation System |

HANFORD TANKS INITIATIVE TECHNOLOGY DEMONSTRATION AND WASTE RETRIEVAL ACQUISITION STRATEGY

1.0 INTRODUCTION

This document describes how the Hanford Tanks Initiative (HTI) single-shell tank (SST) waste retrieval acquisition strategy was developed and provides the framework and guidelines for implementing the strategy. The U.S. Department of Energy (DOE) has delegated the procurement activities for the HTI to a multi-contractor project team under the management of the U.S. Department of Energy, Richland Operations Office (RL).

1.1 BACKGROUND

Waste retrieval from SSTs is an important part of the Tank Waste Remediation System (TWRS) strategy for long-term storage. This strategy consists of retrieving and transferring the waste from SSTs to double-shell tanks (DSTs) for temporary holding, pending processing for final treatment. Demonstration of SST retrieval technology is currently required by the *Hanford Federal Facility Agreement and Consent Order* (Ecology et al. 1994) (Tri-Party Agreement) Milestone M-45-03-T01, "Complete SST Waste Retrieval Demonstration of Tank 241-C-106."

1.2 HANFORD TANKS INITIATIVE OBJECTIVES

The HTI is in the initial planning stages and combines the efforts of the Office of Science and Technology, EM-50, and the Office of Waste Management, EM-30, to reduce programmatic uncertainties and risks associated with determining retrieval performance requirements (closure requirements), to demonstrate technologies applicable to the retrieval of difficult-to-remove hard heel waste or waste from leaking tanks, and to demonstrate systems that measure compliance with retrieval performance criteria. The HTI waste retrieval objective is to demonstrate technology in a duration that supports (1) the TWRS retrieval strategy and resolution of the TWRS retrieval baseline issues; (2) Tri-Party Agreement schedules and milestones; (3) the *National Environmental Policy Act of 1969* (NEPA) process for tank farm closure decisions; and (4) preparation of retrieval system performance specifications for Phase II privatization.

1.3 ACQUISITION OBJECTIVES

The HTI acquisition objectives are to provide testing data, technologies, equipment, and services for the retrieval portion of the project in a timely, cost-effective manner using performance-based contracting; to provide opportunities for the integration of commercial industry sources with the applicable technologies from the National Labs; and have commercial industry provide the integrated retrieval solutions and services in order to minimize Phase II privatization retrieval risks.

1.4 PROJECT ELEMENTS

The HTI Project is divided into three major elements: (1) the characterization and determination of the closure criteria for tank 241-AX-104, (2) the demonstration of alternative waste retrieval technologies, and (3) waste retrieval from tank 241-C-106 or alternate tank. This document addresses only the acquisition plan for the last two.

The acquisition process for the alternate waste retrieval technology demonstrations and waste retrieval portions of the HTI project have been planned in three steps as described in Appendix A. The first step is the identification of major issues through the use of integrated system simulations, analyses, and tests. This work is currently underway as a part of the Acquire Commercial Technology for Retrieval (ACTR) work scope. It is focused on the technical integration of the primary retrieval functions associated with three dislodging system "tracks" sorted by deployment method as identified in the ACTR program.

The second step will be demonstrations and testing of complete retrieval systems for resolution of any remaining technical and business issues identified by the ACTR integrated testing in the first step, and will complete the demonstration of the alternative technologies portion of HTI.

The alternate technology demonstration work will serve as a major body of knowledge to support the third step, the "hot" deployment of a retrieval system to be provided and operated by a commercial vendor for waste retrieval from tank 241-C-106. The retrieval system is expected to consist of an in-tank waste dislodging, mobilization and conveyance system; a conditioning system; a deployment system; a control system; and supporting systems. The balance of the system is expected to consist of the site modifications, utility and tank modifications, and waste transfer lines provided by Hanford.

1.5 COMPETITION POLICY

The project will use performance-specifications-based competitive bid and negotiation methods for the procurement. A performance-based specification is one that defines system functions and requirements with specific performance parameters that must be met by

components or the system provided by the seller in order to be compensated for the work. The seller is free to propose and use technologies that meet the functions, requirements and the performance parameters. The contract is designed to provide payment to the seller only when the system proposed demonstrates that it meets the performance objectives.

The ACTR program established, and HTI will maintain, a company and laboratory database as a primary source of information on prospective supplier's technical qualifications, equipment capabilities, radioactive/hazardous waste management experience, and other pertinent information. This database consists of those firms responding to the original ACTR call for expressions of interest in 1995 and other information available in the project files related to National Lab and other government funded technology development efforts.

To ensure competitive acquisitions, HTI will make a wide distribution of information through the use of the Hanford Internet Home Page and other official means. Test results from the alternate retrieval technology demonstrations and other relevant information on government funded retrieval equipment development work in a Government-Furnished Information (GFI) package will be available to all interested suppliers. In addition, a draft statement of work will be available for review by all interested suppliers to provide comments and clarify any ambiguities before the request for proposal (RFP) is officially issued. A reasonable amount of time will be allowed for submittal of proposals and these will be handled in a manner that provides fair and equal treatment for all prospective sellers.

Foreign capability to service the nuclear industry and provide nuclear-grade equipment and material has significantly matured. Therefore, foreign procurement could result from the planned procurement actions if it offers the best technology and the project costs, and/or schedule can be maintained. The HTI will reserve the right to reject all offers and resolicit, if in the best interests of the government, or if all offers exceed the cost estimates.

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2.0 MARKETING AND PROCUREMENT STRATEGY

2.1 APPROACH

Several HTI team working sessions were held to discuss and determine both the marketing strategy for the project, and to evaluate and select the preferred procurement strategy option, given the multi-faceted objectives of the project.

2.2 EVALUATION TEAM

The HTI team that determined the procurement strategy consisted of an interdisciplinary mix of Westinghouse Hanford SST Projects, Programs, and Procurement representatives; Pacific Northwest National Laboratory (PNNL) and Tank Focus Area representatives; and representatives from MAC Technical Services Company, and Infomatics Corporation representing DOE-RL.

2.3 MARKETING STRATEGIES

Imbedded within the acquisition process is a marketing approach that establishes and ensures project credibility with industry so that technically sound bids are obtained and the National Labs are afforded the opportunity to supply emerging technologies through industrial partnerships. Marketing for the HTI project is defined as:

A systematic approach to identify external markets, to understand and communicate Lab technologies, relevant SST tank attributes, and SST retrieval needs, with the intent to advertise the HTI project. This effort seeks to establish HTI credibility with industry, and will be successful if proposals to HTI contracting opportunities are received with credible approaches for SST waste retrieval.

The GFI package is being developed for use in communicating to industry the National Lab technologies, tank characteristics, and testing results from both ACTR and HTI. Work on an initial package was initiated in fiscal year 1996, with reports and other information developed by the ACTR program. The main body of the GFI package will be completed in fiscal year 1997 with the completion of the additional testing in the ACTR program and the HTI alternate retrieval technology demonstrations. The initial GFI package and brief description of HTI is posted on the Hanford Internet Home Page, accessed through the ACTR and HTI home pages, and has established an initial HTI presence in the commercial marketplace. As additional testing and tank information is developed, updates to the GFI information package will be posted.

Additionally, a traveling display has been developed for use at various industrial trade shows and conferences to reinforce the marketing and credibility of HTI and the National Labs to industry.

2.4 PROCUREMENT STRATEGIES

The waste retrieval procurement strategy is broadly defined as the acquisition of the process architecture, based on meeting the requirements of a performance-based specification. This includes the procurement scope management, contracting process, contracting methodology, and funding mechanisms.

The waste retrieval procurement strategy alternatives were developed under the premise that a Performance-Based specification would be developed, and that a competitive process can be used to award a contract to two or more vendors for design, fabrication, and off-tank testing of proposed systems, and the installation and operation of a production system on an SST. Appendix B is the compilation of notes from the retrieval solicitation strategy selection meeting, and schematically shows the basic competitive contracting processes, with pros and cons, which were determined to be applicable to this project.

The HTI strategy team did not conduct a detailed evaluation/ranking exercise on the contracting options beyond that summarized in Appendix A, Table 1. The preferred contracting option was Option C, the progressive procurement process consisting of a single solicitation with multiple award for cold testing and down selection to one "best qualified source" vendor. This strategy provides the best opportunity for vendors to be competitive, creative, and innovative in their proposals, and allows for more system concepts to be developed and studied within a given funding level. More risk is transferred to the vendors than the standard contracting methods and it allows for continuity of design, equipment procurement, system fabrication, and operation. It clearly places system performance and schedule responsibility with the vendors.

Down selection to the best overall qualified source will be based on evaluation of each vendors off-tank system test performance. A second vendor will also be identified for an additional tank retrieval, at a later date, as funding and tank space become available.

This procurement strategy allows HTI to meet the retrieval objectives of the project earlier than four years, and preserves the option of demonstrating additional waste retrieval from an alternate tank, if required or desired.

2.5 SELLER SCOPE, INTERFACES, AND REQUIREMENTS

The seller's functions, requirements, and interfaces will be determined as a part of the Project's systems engineering process that is on-going. They will be described in the Test Plan documents and the Project Design Description that are being prepared. The detailed performance-based specification will clearly identify the seller's scope, regulatory performance, and interface requirements and desired end state for the tank.

The preferred seller's scope is to have a commercial seller provide a complete retrieval service using a system that interfaces with the "balance of plant" and fully accomplishes the requirements of the performance specifications. The choice of technology may include, but is not required to include, those developed within the National Labs and Universities. This strategy assumes that the balance of plant design will be completed by the Project Hanford Management Contractor (PHMC) engineering staff and that conventional fixed-price contracting will be used for the balance of plant fabrication and construction.

2.6 PROCUREMENT STEPS AND DURATIONS

Appendix C is a schedule showing the procurement process flow of activities starting with the alternate demonstration tests, continuing with the proposal and award cycle for retrieval, and ending with completion of the waste retrieval efforts and demobilization from the site. This schedule identifies the procurement functions and average duration of each major activity required to place a contract and the timing of the down select process.

A progressive procurement process will be utilized for this procurement action. The process will entail a single solicitation with the potential of multiple awards. It will facilitate the orderly award and administration of multiple purchase orders awarded against the common performance-based specification requirements and deliverables and will provide a methodology for the down selection of vendors to continue participation in the project.

The initial order will be solicited through the RFP process and sellers chosen by a Source Selection Board based on evaluation of the seller's proposal. The basis of selection will be an evaluation of responses to the RFP against specific evaluation criteria. The evaluation criteria categories will be technical, managerial and price and a point system will be utilized that reflects the weighting of each evaluation criterion to determine the ranking of the seller's response to the RFP. The sellers will not have knowledge of the points assigned to each criteria, but will know in general terms the hierarchical ranking of the criteria.

The down selection will be determined through an evaluation of the seller's performance against technical, managerial, and cost deliverables. It is expected that progressively fewer awards will be made and only a single seller will be chosen for the on-tank retrieval effort. Each successive down selection may or may not be exercised.

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3.0 CONTRACTOR SOURCE SELECTION

3.1 MAJOR SITE CONTRACTORS

It is expected that the following PHMC and their respective "Enterprise Companies" may be involved in procurement and source selection for HTI: Fluor Daniel Hanford, Inc., Lockheed Martin Hanford Corporation, Numatec Hanford Corporation, and Duke Engineering and Services Hanford, Inc.

3.2 OTHER MAJOR CONTRACTORS

The vendors for delivery and operation of the waste retrieval system will be selected utilizing approved acquisition processes and source selection following the guidance of both DOE and the primary PHMC contractor.

3.3 OTHER ANTICIPATED CONTRACTORS AND PARTICIPANTS

The project personnel will interact with personnel from the PNNL, the Idaho National Engineering Laboratory, Sandia National Laboratory, and Oak Ridge National Laboratory. These DOE sites may provide technology, design, testing, fabrication, and construction information as subcontractors to vendors providing retrieval systems for HTI. Direct support to HTI may also be obtained in the form of engineering analysis, documentation transfer, design review, and training, where a conflict of interest does not exist. Personnel from other DOE sites will not participate in either the Source Evaluation Boards or subsequent activities that determine contract awards.

Other on-site contractors will be requested to perform selected task-specific activities for the Project under Request for Services agreements or with work orders clearly defining the scope of services and deliverables.

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4.0 REPORTING REQUIREMENTS

The project reporting requirements will be guided by current directives. Each of the major participants' plans and status report requirements will be specified as required. Management plans and management control system descriptions will be required for award and revised as required. Earned value-based cost-performance reports will be required. All remaining plans and reports will be required on an as-needed basis.

5.0 FUNDING PLAN

This project is jointly funded by EM-30 and EM-50. One of the funding goals is to provide at least 50 percent of the EM-50 funds to industry. Phased funding to support the project schedule is being requested in the budget submissions to the U.S. Department of Energy-Headquarters. Budget authority and budget outlay requirements increase significantly starting in fiscal year 1997 to maintain project design and procurement momentum. It is planned to utilize expense funding throughout the life of the project.

6.0 AWARD SCHEDULE

Appendix C is a portion of the Project Schedule that gives the approximate contract award schedule for the phases of the contract. Currently, the schedule for the award for the alternate technology demonstrations is January 20, 1997. The RFP for retrieval demonstrations is scheduled for release on August 8, 1997, and award of contracts to multiple vendors is scheduled for January 2, 1998. Retrieval off-tank (cold) testing with down selection to one vendor for on-tank (hot) retrieval is scheduled for completion by November 30, 1998. The on-tank retrieval demonstration is scheduled to be completed by September 10, 1999, with 241-C-106 ready for tank closure.

7.0 CONTRACT INCENTIVES

The project intends to minimize the risks to the government for any cost-reimbursement-type contracts with the application of performance-fee incentives. The incentives will be based on meeting or beating cost and schedule targets while meeting pre-determined performance requirements. Cost-sharing-type contracts for the early phases of the project may be considered if proposed by sellers and are to the advantage of the government. Additional contract incentives may be considered for fixed-price contracts if project risk continues to be high for the government.

8.0 EQUIPMENT AND SUPPLIES

Equipment and supplies will be acquired in accordance with the HTI project plans and procurement policies and procedures as approved by RL.

9.0 ANTICIPATED ORGANIZATIONAL CONFLICT OF INTEREST

The multi-contractor PHMC contract presents the opportunity for potential and perceived conflicts of interest. Strategies will be developed with the PHMC procurement departments and legal council to preclude or mitigate any real conflicts.

The DOE, through the EM-50 offices, has funded research through the National Labs and private industry in certain technical areas, to further knowledge in remotely-controlled robotics, waste dislodging, and waste conveyance. The HTI will ensure that relevant information is provided to mitigate potential conflicts of interest created by private firms partnering and submitting proposals that utilize information gained at government expense to the exclusion of other sellers. This situation may require review by legal counsel to develop strategies which will preclude any potential conflict.

Concerning information and inventions developed under cooperative research projects (Cooperative Research and Development Agreements), recent legislation, the *National Technology Transfer and Improvement Act of 1996*, provides guidance in this area and has reduced the uncertainty over intellectual property rights while ensuring that government interests are protected.

10.0 PATENTS AND DATA

The government will have unrestricted rights on any patents and data developed on this project except "background patents" owned or controlled by the seller.

11.0 RISK ASSESSMENT

The following are the major risks for the project and the proposed risk mitigation actions:

1. Risk: Sellers not interested in proposing on the "down select process."

Mitigation: Determine the negative response early with vendor review of the draft RFP. Use prebid briefing to gauge acceptance of adjusted strategy. No schedule impact if discovered early in project.

2. Risk: Sellers propose but teams are not technically acceptable when responses to RFP are evaluated.

Mitigation: Cancel RFP and re-issue with more explicit requirements for team acceptability in terms of technical and managerial qualifications. This would have schedule impacts that would be assessed at the time.

3. Risk: Sellers submit proposals but they contain too many exceptions/caveats and information voids.

Mitigation: Conduct technical discussions with the teams deemed to be in the "competitive range" and request a "best and final proposal" for final selection. All significant exceptions to the RFP must be eliminated or otherwise satisfied prior to proceeding with an award. This would not have significant schedule impact if the discussions are conducted in a timely manner.

4. Risk: Seller's proposals vary greatly in cost for the first phase and it is not possible to reconcile the cost differences.

Mitigation: Cancel RFP and re-issue with more explicit requirements for acceptability in terms of technical requirements and cost expectations. This would have schedule impacts that would be assessed at the time.

12.0 REFERENCES

Ecology, EPA, and DOE, 1994, *Hanford Federal Facility Agreement and Consent Order*, as amended, Washington State Department of Ecology, U.S. Environmental Protection Agency, and the U.S. Department of Energy, Olympia, Washington.

National Environmental Policy Act of 1969, 42 USC 4321 et seq.

The National Technology Transfer and Improvement Act of 1996, Public Law 104-113, Washington, D.C.

APPENDIX A

**EXCERPTS FROM
BACKGROUND INFORMATION**

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APPENDIX A

EXCERPTS FROM BACKGROUND INFORMATION

**Single-Shell Tank Waste Retrieval
Integrated Testing in support of the
Acquire Commercial Technology for Retrieval (ACTR) program**

Excerpts from the background information in RFP # WA15194-SJ,
dated July 25, 1996

The following information was excerpted from that supplied as supplementary information to the Integrated Testing Statement of Work.

1. Objective

The objective of this work is to resolve technical and interface issues that could prevent the use of commercially available or adaptable tank waste retrieval systems on the Hanford Site underground waste storage tanks, and to obtain performance data by testing these systems on Hanford waste simulants.

2. Background

a. Programmatic Background

Retrieval of radioactive wastes from Single-Shell Tanks (SSTs) is being addressed through ongoing and planned projects at the Hanford Site. One project involves Tank C-106, which has stored radioactive waste since 1947. In the 1960s, it received about 132,000 gallons of high-heat waste, requiring the addition of 6,000 gallons of cooling water each month to prevent overheating. Most of the C-106 waste is to be removed by hydraulic sluicing in 1997. Sluicing is not expected to retrieve all the waste; some sludge will likely remain in inaccessible areas, and there may be a hard waste heel, resistant to efficient sluicing, remaining on the floor.

The Acquire Commercial Technology for Retrieval (ACTR) program began in 1995 to seek and evaluate commercial technologies that could be used for waste retrieval, including stubborn wastes in leaking tanks. The goal of this effort is to identify suites of retrieval solutions that could be applied to the 149 Hanford SSTs, with industry integrating these solutions and potentially providing a waste removal service.

ACTR has been in dialogue with firms in the U.S. and Europe since July 1995, receiving and reviewing information regarding their technologies and waste retrieval solutions. The purpose of this is twofold:

First, it allows the Buyer to understand the capabilities of industry and its technologies and approach to Remediation of the underground storage tanks.

Second, it allows industry to understand the technical and business issues associated with tank cleanup.

Test results and studies are available to all firms that have an interest in performing Remediation work. While proprietary information is protected, each test is summarized in a stand-alone report.

As a first step, ACTR identified missing and necessary information regarding the performance of dislodging and conveyance equipment with seven tank waste simulants, and then commissioned industry to perform a series of tests to resolve these issues. That initial phase of work has concluded, with industry's completion of technology feasibility evaluations and assessments and component tests of dislodging, conveyance, and some deployment technologies.

ACTR is now beginning a second step: integrated systems testing, seeking to resolve key issues that could prevent suites of technologies from being deployed in tank. These integrated tests must be designed to resolve these issues, and to obtain performance data on the operation of typical retrieval components.

At the completion of the second step, subsequent efforts will focus on addressing issues, and resolving risks related to specific waste retrieval projects at the Hanford Site. This testing effort will begin to focus on the objectives of the newly-formed HTI, through a stepwise process.

DOE recently established the HTI to address key challenges associated with retrieving waste from the Hanford Site SSTs. These challenges relate to the capability to remove waste and to the degree of waste removal required for tank closure. The objective of HTI is to minimize cost and schedule risk associated with uncertain waste retrieval capability and criteria for closure. This will be accomplished through demonstrating technology and processes for retrieving waste from tank 241-C-106 or alternate tank if it is not available and negotiating retrieval performance objectives with the State of Washington Department of Ecology and other stakeholders to prepare a tank for potential closure.

The following steps describe testing to date, from the ACTR efforts through HTI:

1. ACTR Component Proof-of-Principle Tests

Status: This work is currently complete and test reports have been received. The results of this work will be available in summary form on the Hanford Internet Home Page after they are received. In the same time frame, relevant concurrent work performed by the DOE National Laboratories will also be referenced on the ACTR home page (see <http://www.hanford.gov/twrs/actr/actr.htm>).

2. ACTR Integrated Tests

Status: This work will focus on the technical integration of primary independent (dislodge, mobilize, convey) and primary dependent (access, deploy) functions associated with three "tracks," as described below. The testing will provide some measure of the concepts' performance, and will address issues that could prevent use of the proposed retrieval system. Hardware testing of primary elements is a requirement; however, analysis, scale testing, and engineering modeling may supplement the hardware testing, where budget limitations prevent full scale testing.

During this testing, Sellers and the Buyer will discuss high level information regarding interfaces and contracting, to assist the Buyer in planning later steps in the retrieval process.

Participation in previous steps is neither a barrier to nor a requirement for consideration in this step; a broad range of Sellers may be sought for this work. This work is to be completed in the Fall of 1996; multiple awards are expected.

3. HTI: Retrieval Technology Cold Demonstrations in support of the Hanford Tanks Initiative

This is an option to the ACTR Integrated testing Statement of Work (attached) that is expected to be exercised in late 1996 or early 1997.

This work will resolve remaining significant technical issues and complete the business dialogue.

Participation in previous steps is neither a barrier to nor a requirement for consideration in this step; a broad range of Sellers will be sought for this work. This work is expected to be complete in the Spring of 1997; multiple awards are planned.

4. Deployment of equipment and services to retrieve waste from an SST in support of the HTI (hot deployment).

The RFP and order placement are anticipated early Fall of calendar year 1997.

APPENDIX B

**NOTES FROM SOLICITATION
STRATEGY MEETING 7/22/96**

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APPENDIX B

NOTES FROM SOLICITATION STRATEGY MEETING 7/22/96

Program Objectives:

Provide Retrieval Technology Demonstration and Deliver:

Tank ready for closure

Data to support NEPA/Closure Decision

Cost to retrieve, operating and capital

Retrieval rates and schedule implications

Dose impacts (public & workers)

Retrieval removal efficiency (extent of waste removed)

Social impacts (jobs, infrastructure needs, air releases, etc.)

Data to support Business Objectives

Risk Reduction

Develop Industry Capability

Lab/Industry Teaming

Meet Cost & Schedule

Alternate Tech Demos

Broad range of technologies

Broad range of tank wastes forms

Retrieval Contract

Cold demos

Hot demos

Table B-1. The Basic Competitive Contracting Processes.

| Solicitation strategy | Option descriptions | Sub options | Comments |
|---|--|---|--|
| A. Single solicitation, single award (CPFF) | 1 vendor (Integrator) cold/hot demo ^a 1 tank | 1. One vendor integrator, multiple technologies (subcontractors) 2. One vendor, one technology, poor cost/benefit ratio | Provides minimum data to meet Program Objectives. |
| | 1 vendor (integrator) cold/hot demo 2 tanks | 1. One vendor integrator using multiple technologies (subcontractors) | Additional tank and infrastructure \$ required. Additional DST space required? Maybe better cost/benefit. Provides additional data for B in Program Objectives |
| B. Single solicitation, multiple award (CPFF) | 2 Vendors cold/hot demo 1 tank In series | 1. Half tank for each vendor (vertical) 2. Half tank for each vendor (horizontal) 3. 1st Vendor volume/time and 2nd. vendor final clean out 4. 1st vendor bulk retrieval, 2nd heel clean out | Current planning basis High ALARA risk Significant schedule risk Performance measures unclear and difficult to determine |
| | 2 vendors cold/hot demo 1 tank In parallel (at same time) | 1. Half tank for each vendor 2. Cooperative retrieval agreement w/ M&I as integrator | Significant cost risk. For 1, fluid waste type makes impractical. For 2, this is ORNL strategy. Monitor outcome this fall. Requires significant M&I coordination and management resources. |
| | 2 vendors cold/hot demo 2 tanks | 1. One vendor, multiple subs (technologies), vendor Integrator on each tank 2. Each vendor goes in both tanks, 1st is bulk removal, 2nd final clean out 3. Each vendor cleans to a specific limit in first tank, then switch tanks and finishes | Additional tank and infrastructure \$ required. Additional DST space required? Probably will not meet cost and possibly schedule objectives |

Table B-1. The Basic Competitive Contracting Processes.

| | | | |
|--|---|--|---|
| <p>C. Single solicitation with Multiple awards for cold demos. (FFP)^b</p> <p>with</p> <p>Down select for Hot demo (IF)^c</p> <p>Preferred approached by meeting consensus</p> | <p>Multiple vendors (2 minimum), multiple technologies, multiple waste types</p> <p>2 vendors:</p> <p>a. one vendor for hot demo - HTI tank</p> <p>b. one vendor for hot demo - post HTI tank</p> | <p>HTI tank = C-106 Post HTI tank = A -102</p> | <p>Some elements of Program Objectives B, C D & E met during cold testing.</p> <p>Best opportunity for demonstration of technologies and building competitive vendor base for future work.</p> <p>Most contracting flexibility, but evaluation criteria are more important.</p> <p>All program objectives met with first vendor and potentially shorter than 4 year schedule.</p> <p>Additional funds for post HTI tank.</p> <p>Requires additional \$ infrastructure for first tank.</p> <p>Which DST for A - 102?</p> <p>C-106 retrieval must be completed by 2002.</p> |
|--|---|--|---|

^aCold demo means after Alternate Technology "cold" testing phase of HTI.

^bFFP = firm fixed-price contract

^cIF = incentive fee contract, either fixed-price incentive fee if scope can be adequately defined or cost plus incentive if scope is unclear.

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APPENDIX C

SCHEDULE

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Figure C-1. Schedule.

| ID | Task Name | Start | Finish | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
|----|---|----------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1 | HANFORD TANKS INITIATIVE | 1/20/97 | 9/10/99 | | | | | | | | | | | | | |
| 2 | Project Implementation | 1/20/97 | 9/10/99 | | | | | | | | | | | | | |
| 3 | Alternata Retrieval Technology Demonstrations | 1/20/97 | 7/21/97 | | | | | | | | | | | | | |
| 4 | Award Alternative Demonstrations | 1/20/97 | 1/20/97 | | | | | | | | | | | | | |
| 5 | Test & Evaluations | 1/20/97 | 7/18/97 | | | | | | | | | | | | | |
| 6 | Issue GFI report | 7/21/97 | 7/21/97 | | | | | | | | | | | | | |
| 7 | 106 C Retrieval Demonstration | 2/10/97 | 9/10/99 | | | | | | | | | | | | | |
| 8 | Prepare Retrieval Performance Spec | 2/10/97 | 7/09/97 | | | | | | | | | | | | | |
| 10 | Bid and Award | 7/09/97 | 1/2/98 | | | | | | | | | | | | | |
| 11 | Prepare RFP | 7/09/97 | 8/09/97 | | | | | | | | | | | | | |
| 12 | Issue RFP | 8/09/97 | 8/09/97 | | | | | | | | | | | | | |
| 13 | Vendors prepare proposals | 8/11/97 | 10/10/97 | | | | | | | | | | | | | |
| 14 | Evaluate proposals | 10/13/97 | 11/7/97 | | | | | | | | | | | | | |
| 15 | Vendors prepare best & final | 11/10/97 | 1/25/98 | | | | | | | | | | | | | |
| 16 | Evaluate best & final | 1/25/97 | 1/25/98 | | | | | | | | | | | | | |
| 17 | Award contract | 1/2/98 | 1/2/98 | | | | | | | | | | | | | |
| 18 | Vendors 1 & 2 | 1/6/98 | 1/20/98 | | | | | | | | | | | | | |
| 19 | Design & Equipment Fab | 1/5/98 | 8/7/98 | | | | | | | | | | | | | |
| 20 | Cold tests & Evaluation | 8/10/98 | 1/27/99 | | | | | | | | | | | | | |
| 21 | Select retrieval vendor 1 | 1/20/98 | 1/20/98 | | | | | | | | | | | | | |
| 22 | Site Mods & Upgrades | 1/6/98 | 1/10/98 | | | | | | | | | | | | | |
| 33 | Vendor 1 Installation & Retrieval | 1/20/98 | 9/10/99 | | | | | | | | | | | | | |
| 34 | Install system | 1/20/98 | 1/20/99 | | | | | | | | | | | | | |
| 36 | ATP/TPORR vendor 1 | 2/1/99 | 6/21/99 | | | | | | | | | | | | | |
| 39 | Approval to start retrieval | 6/21/99 | 6/21/99 | | | | | | | | | | | | | |
| 40 | Perform retrieval vendor 1 | 6/24/99 | 8/13/99 | | | | | | | | | | | | | |
| 42 | Demobilization vendor 1 | 8/16/99 | 9/10/99 | | | | | | | | | | | | | |
| 44 | Vendor 2 Installation - TBD | 1/13/00 | 1/13/00 | | | | | | | | | | | | | |

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