

**Technical Integration Environmental Management
Focus Areas
Final Report**

October 2001

Work Performed under Contract DE-AC21-96MC33241

**For
U.S. Department of Energy
National Energy Technology Laboratory
3610 Collins Ferry Road
Morgantown, WV 26507-0880**

**By
WPI (formerly Waste Policy Institute)
2000 Kraft Drive, Suite 2000
Blacksburg, Virginia 24060**

Executive Summary

WPI, formerly Waste Policy Institute, was awarded the subject contract in July of 1996. Subsequent to the award of the contract, offices were established across the country to support the Focus Areas as follows:

Subsurface Contaminants Focus Area Support

Location: Aiken, South Carolina serving DOE Savannah River

Tanks Focus Area Support

Location: Richland, Washington serving DOE Richland

Mixed Waste Focus Area Support

Location: Idaho Falls, Idaho serving DOE Idaho Falls

Decontamination and Decommissioning Focus Area Support

Location: Morgantown, West Virginia serving DOE Morgantown

The contract was defined as follows:

Program Planning and Analysis

- Financial and Technical Review--TTPs and Financial Reporting
- Technical Needs and Technology Opportunities Assessment
- Performance Metrics Development
- Project Management Systems & Decision Tools
- Environmental Regulatory Analysis

Program Execution

- Problem Definition/Prioritization-Risk Assessment, Customer Needs, Cost of Compliance
- Independent Technical Assessments--Feasibility and Merit, Cost/Benefit, Life Cycle Costs, Market Needs, System & Experimental Design, Private Sector Technology Applicability
- Program/Project Assessment--Strategic & Implementation Planning, Management Plans, Budget Documents, Assist Field Technology Demos, Develop Financial Mgmt. Data Systems; Analyze Program Performance, Analyze Program Portfolios
- Technical/Program Integration--Stakeholder/Regulatory Involvement, Review TD Across FA/CP for Synergy/Duplication, Special Issue Studies

Program Information Management

- Assist with Periodic Program Performance Assessment
- Annual Reporting & Peer Reviews
- Economic Impacts of Commercialization
- Coordinate TD Program Documentation-Technology Fact Sheets, Monthly ---
Technical Reports, Programmatic Documentation, Special Reports and Briefings

Communication & Data Transmission

- Facilitate Conferencing & Electronic Data

In the years following its inception, the contract expanded to include work in support of the Environmental Management Science Program and Accelerated Site Technology Deployment. The support for these areas was provided primarily from the Idaho Falls, Idaho offices of WPI.

Numerous other short-term tasks were awarded and successfully concluded during the life of the contract from July of 1996 through September 2001. Complete descriptions of the additional tasks are included in the Results and Discussion section of this report.

Disclaimer

This report was prepared as an account of work sponsored by the United States Government. Neither the United States Government nor any agency thereof, nor the United States Department of Energy, nor any of their employees, nor any of their contractors, subcontractors, or their employees makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights.

Abstract

This contract involved a team of companies led by WPI (formerly the Waste Policy Institute). In addition to WPI, the team included four subcontractors – TRW (formerly BDM Federal), SAIC, Energetics, and the University of North Dakota Energy and Environmental Research Center (EERC). The team of companies functioned as a “seamless team” assembled to support the Environmental Management Program Focus Areas. Staff resources were applied in the following offices: Richland, Washington, Idaho Falls, Idaho, Morgantown, West Virginia, Grand Forks, North Dakota, Aiken, South Carolina, Gaithersburg, Maryland, and Blacksburg, Virginia. These locations represented a mixture of site support offices at the field focus area locations and central staff to support across the focus areas. The management of this dispersed resource base relied on electronic communication links to allow the team to function as a “virtual office” to address tasks with the best qualified staff matched to the task assignments.

A variety of tasks were assigned and successfully completed throughout the life of the contract that involved program planning and analysis, program execution, program information management and communication and data transmission.

Table of Contents

Executive Summary-----	2
Disclaimer-----	3
Abstract-----	5
Table of Contents-----	6
Introduction-----	9
Results and Discussion-----	10
Contract Year 1/Government Fiscal Years 96 and 97-----	10
Task 1/97 – Technical Integration Environmental Management Focus Areas (Contract Transition)----	10
Task 2/97 – Baseline Program for Mixed Waste Focus Area-----	11
Task 3/97- Baseline Support for the Subsurface Contaminants Focus Area-----	11
Task 4/97- Baseline Support for the Decontamination and Decommissioning Focus Area-----	12
Task 5/97 – Baseline Support for the Tanks Focus Area-----	14
Task 6/97 – Contract Management and Reporting-----	14
Task 7/97 – Market Readiness Assessment-----	16
Task 8/97 – Technical and Program Support to Large-Scale D&D Demonstration Projects (LSDPs)	16
Task 9/97 – Technical Assessment of DDFA Programs and Support of the DDFA Technology	16
Development Investment Opportunities-----	
Task 10/97 – Program Support in DDFA Program Documentation and Project Accomplishments-----	17
Task 11/97 – Risk/Legislative/Regulatory Support-----	17
Task 12/97 – System Engineering/Systems Analysis -----	18
Task 13/97 – Program Execution Support for Technology Development – Subsurface Contaminants Focus Area-----	18
Task 14/97 – In-Program Technical Support Tanks Focus Area-----	19
Task 15/97 – Special Studies Tanks Focus Area-----	19
Task 16/97 – Tanks Waste Technology Activities Database-----	19
Task 17/97 – Program Management Support for Tanks Focus Area-----	19
Task 18/97 – Program Planning and Budget Analysis Support for Technology Development-----	20
Task 19/97 – Administrative Support on D&D Center of Excellence Program Documentation and Project Management -----	20
Task 20/97 – Program Planning, Coordination and Evaluation Integration-----	20
Task 21/97 – Industry and University Programs Integration-----	21

Contract Year 2/Government Fiscal Year 98 -----	23
Task 1/98 – Integration Support -----	23
Task 2/98 – Baseline Program for Mixed Waste Focus Area-----	23
Task 3/98 – Baseline Program for Subsurface Contaminants Focus Area-----	23
Task 4/98 – Baseline Program for Decontamination and Decommissioning Focus Area -----	24
Task 5/98 – Baseline Program for Tanks Focus Area -----	24
Task 6/98 – Contract Management and Reporting -----	24
Task 7/98 – Environmental Management Science Program-----	24
Task 8/98 – Industry and University Programs -----	25
Task 9/98 – Accelerated Site Technology Deployment-----	26
Contract Year 3/Government Fiscal Year 99 -----	27
Task 2/99 – Baseline Program for the Mixed Waste Focus Area-----	27
Task 3/99 – Baseline Program for the Subsurface Contaminants Focus Area -----	27
Task 5/99 – Baseline Program for the Tanks Focus Area-----	27
Task 6/99 – Crosscut Support -----	27
Sub-task 6.1/99 – OST Work Package Ranking System Support-----	28
Sub-task 6.2/99 – Technology Achievements Study-----	28
Sub-task 6.3/99 – Transportation Study-----	28
Sub-task 6.4/99 – Radford Arsenal Community Relations Program -----	29
Sub-task 6.5/99 – Mountaintop Removal/Valley Fill Mining Technology-----	29
Sub-task 6.6/99 – EPA Training -----	29
Task 7/99 – Environmental Management Science Program -----	29
Task 9/99 – Accelerated Site Technology Deployment-----	30
Task 10/99 – Global Climate Change Support -----	30
Task 11/99 – Arctic Military Environmental Cooperation -----	30
Task 12/99 – EPA Global Climate Change Support -----	31
Contract Year 4/Government Fiscal Year 00 -----	33
Task 2/00 – Baseline Program for Mixed Waste Focus Area -----	33
Sub-task 2.2 – Mixed Waste Thermal Treatment-----	33
Task 3/00 – Baseline Program for Subsurface Contaminants Focus Area-----	33
Task 5/00 – Baseline Program for Tanks Focus Area-----	33
Task 6/00 – Crosscut Support-----	34
Sub-task 6.4/00 – Radford Arsenal Support-----	34
Sub-task 6.5/00 – Mountaintop Removal/Valley Fill Mining Technology/Symposium Support -----	34
Sub-task 6.6/00 – EPA Training-----	35

Sub-task 6.7/00 – Contract Management and Reporting-----	35
Sub-task 6.8/00 – DOE HLW Waste Matrix-----	35
Task 7/00 – Environmental Management Science Program -----	36
Task 9/00 – Accelerated Site Technology Deployment -----	36
Task 10/00 – Global Climate Change Support-----	36
Task 11/00 – Arctic Military Environmental Cooperation (AMEC) -----	36
Contract Year 5/Government Fiscal Year 01-----	37
Task 2/01 – Baseline Program for Mixed Waste Focus Area-----	37
Task 3/01 – Baseline Program for Subsurface Contaminants Focus Area-----	37
Task 5/01 – Baseline Program for Tanks Focus Area -----	37
Task 6/01 – Crosscut Support -----	37
Subtask 6.1/01 – Markal-Macro Training and International Fossil Energy (IFE) Briefing Approach---	37
Subtask 6.5/01 – EPA Region III Support (formerly Symposium Support) -----	38
Subtask 6.6/01 – EPA Training -----	38
Subtask 6.8/01 – HLW Waste Matrix-----	38
Subtask 6.9/01 – Writing Workshops-----	38
Task 7/01 – Environmental Management Science Program -----	39
Task 9/01 – Accelerated Site Technology Deployment Support-----	39
Task 10/01 – Fossil Energy Knowledge Management-----	39
Task 11/01 – Arctic Military Environmental Cooperation -----	39
Conclusion -----	40

Introduction

This report is organized in chronological order beginning with the first contract year and the first task awarded. In addition to a description of the work performed under each task the periods of performance and beginning and final funding are also included.

Results and Discussion

Contract Year 1/Government Fiscal Years 96 and 97

Task 1/97 – Technical Integration Environmental Management Focus Areas (Contract Transition)

Period of Performance: August 1996 – October 1996

Task Value: \$90K

Task Order Number 1 was received on August 9, 1996, outlining the contract transition task to be performed. Elements included were: developing a management plan, training staff members, developing major subcontracts with team partners and conducting a kick-off meeting.

The draft management plan was delivered on September 18, 1996. The plan involved a team of companies led by WPI, a non-profit corporation affiliated with Virginia Tech. In addition to WPI, the team included four subcontractors: BDM Federal, SAIC, Energetics, and the University of North Dakota Energy and Environmental Research Center (EERC). These five companies would function as a “seamless team” assembled to support the Environmental Management Program Focus Areas. Staff resources that were applied were geographically dispersed in offices at Richland, Washington, Idaho Falls, Idaho, Morgantown, West Virginia, Grand Forks, North Dakota, Aiken, South Carolina, Gaithersburg, Maryland and Blacksburg, Virginia. These locations represented a mixture of site support offices at the field focus area locations and central staff to support across the focus areas. The management of this dispersed resource base would rely on electronic communication links to allow the team to function as a “virtual office” to address tasks with the best qualified staff matched to the task assignments. Key elements of the management plan submitted were: Management Planning, Control and Resources, Budgeting, Costs Control and Accounting, Planning and Scheduling, Environment, Safety and Health Management, Quality Assurance/Control, Crucial Information Dissemination Plan and Risk Management Plan.

The kick-off meeting was held on September 20, 1996. The morning session, held on-site at DOE – Morgantown involved team introductions and an explanation of the contract scope, level of effort, management approach and reporting. In addition to the WPI Team’s key personnel, federal staff representing DOE-Morgantown as well as all the other focus area sites being serviced by the contract attended the session. The afternoon session was held in the WPI Morgantown office. In order to minimize travel costs involved in training such a widely dispersed staff, WPI used the afternoon session to provide training to key personnel and they, in turn, trained staff in their respective offices. By October 15, 1996 documentation was provided certifying that all staff were trained and certified by the WPI program manager. Major subcontracts were in place with each of the four subcontractors by mid-September.

Task 2/97 – Baseline Program for Mixed Waste Focus Area

Period of Performance: September, 1996-September 1997

Initial Task Value: \$542K

Final Task Value: \$987K

Task 2 provided support to the Mixed Waste Focus Area (MWFA), with most of the work being executed in the WPI Idaho Falls office in the following broad areas: program planning and budget analysis, program execution, document program and project accomplishments and communications and data transmission.

WPI assisted in coordinating the financial and technical review of Technical Task Plans (TTPs), and approved funding program documentation including changes thereto, and provided technical analysis for financial status reports. Assistance was provided to the focus area in various short-term financial and technical reviews, studies, and analyses related to the technologies, systems, operating data, cost evaluations or comparisons, market penetration, etc., which were relevant to the EM Program. The WPI team conducted program and project assessments as assigned and provided technical reviews and prioritization of needs with respect to EM-50 and related EM program activities and directives (programmatic environmental impact statements, baseline environmental management reports, Congressional inquiries, risk studies, cost benefit analyses, performance measures and other Federal activities). WPI analyzed project and program management documents for technology development including plans, cost reports, schedules, earned value systems, environmental and safety requirements, design reports, and baseline management. The team summarized data in TTP Summary Sheets and disseminated as controlled documents to MWFA management team. Staff provided input to program management plans and guidance, technical activity data sheets, risk data sheets, and budget development documents.

WPI reviewed and assessed Technical Task Plans for both proposals and funded projects from a program/project management perspective and assisted in the development of financial management system databases and in financial data analysis. WPI assisted in setting up conferences, both face-to-face and remote videoconferences, workshops, and meetings. Assistance included making necessary personal contacts, room or equipment reservations, preparation of agendas and preliminary meeting materials, and distributing advance meeting materials prior to the conference. After a conference or workshop was held, the team prepared and distributed meeting notes, proceedings, or reports as appropriate.

Task 3/97- Baseline Support for the Subsurface Contaminants Focus Area

Period of Performance: September, 1996-September 1997

Initial Task Value: \$542K

Final Task Value: \$1767K

Task 3 provided support to the Subsurface Contaminants Focus Area (SCFA), with most of the work being executed in the WPI Aiken office in the following broad areas: program planning and budget analysis, program execution, document program and project accomplishments and communications and data transmission. WPI provided technical support for the coordination, preparation and review of Technical Task Plans, the identification and development of technology requirements and the development of technology development performance metrics. Technical support for the development and maintenance of SCFA program management systems and tools was provided. Staff assisted with environmental compliance support to the SCFA in order to proactively identify and mitigate potential problems, issues, and roadblocks to successful technology development and/or deployment. The SCFA program definition, self-assessment, strategy development, and activity prioritization were major support activities under this task. WPI provided technical support for independent, unbiased technical review of SCFA technologies and systems and for the assessment of SCFA program and projects. Tasking included actualizing efficiencies and cost reduction opportunities for SCFA internal and external interfaces. Technical support for the preparation of SCFA weekly, monthly, quarterly and special reports, summaries and analyses were provided. WPI provided an analysis of the economic impact of program commercialization activities and assisted with coordinating among the focus areas and crosscut programs. The team provided logistical and technical support for SCFA conferences, workshops, meetings and videoconferences, including preparation and distribution of meeting papers, notes and minutes.

Task 4/97- Baseline Support for the Decontamination and Decommissioning Focus Area

Period of Performance: September, 1996-September 1997

Initial Task Value: \$542K

Final Task Value: \$1483K

Task 4 provided support to the Decontamination and Decommissioning (DDFA), with most of the work being executed in the WPI Morgantown office in the following broad areas: program planning and budget analysis, program execution, document program and project accomplishments and communications and data transmission.

WPI assisted in coordinating financial and technical review of Technical Task Plans. WPI provided technical support for the coordination, preparation for and review of TTPs as well as the identification and development of technology requirements. WPI provided technical support for the development of technology development performance metrics and for the development and maintenance of DDFA program management systems and tools. WPI provided environmental compliance support to the DDFA in order to proactively identify and mitigate potential problems, issues, and roadblocks to successful technology development and/or deployment. The team provided technical support for the DDFA program definition, self-assessment, strategy development, and activity prioritization. WPI provided technical support for independent, unbiased technical review of DDFA technologies and systems and for the assessment of DDFA program and

projects. Staff provided technical support to actualize efficiencies and cost reduction opportunities for DDFA internal and external interfaces. The team maintained active liaison with appropriate elements of each ongoing Large Scale Demonstration Project (LSDP) and established liaison with each newly established LSDP, communicated the status of each project to the appropriate DOE project managers and the US Army Corps of Engineers-Huntington (CEORH) project managers. Staff participated in the LSDP activities as directed by the appropriate DOE and CEORH project managers. Activities included IC Team creation, establishment of the technology selection process, technology selection, providing information on EM-50 supported technologies, demonstration planning, demonstration execution, cost-benefit analysis, and demonstration documentation. WPI provided technical support, as authorized under this contract, to CEORH in execution of their duties as described in the interagency cooperative agreement between DOE and CEORH.

A DDFA Technology Development Investment Opportunities Assessment was prepared according to a project plan approved by the DDFA. Maintained active liaison with the Decontamination and Decommissioning (D&D) subcommittee of each Site Technology Coordinating Group (STCG) to stay abreast of site D&D problem areas and assist in the identification of potential technological solutions. WPI maintained active liaison with EM-40 D&D activities to stay abreast of D&D program and D&D problem identification and with the site D&D Managers and the National Decommissioning Committee Meetings. This task required travel to designated meeting locations as directed by the DDFA Lead. WPI conducted special studies for issues related to the DDFA as directed. WPI performed detailed assessments of D&D technologies and potential D&D technology projects as directed by the DDFA, to determine technical progress, mortgage and risk reduction potential, and applicability to D&D problem areas identified by the opportunity assessment. WPI met with technology vendors, as directed, to assess technology development progress or make recommendations to enhance development efforts. Assisted in creating and coordinating the implementation of peer review panels for DDFA technology reviews. Provided technical support in the review of technical proposals for DOE technology development solicitations for inclusion in the DDFA program. Provided assistance in hosting program reviews. WPI facilitated communication and integration among DOE, the Industry Panel, the Oversight Board, and participating universities. WPI provided technical support for the preparation of DDFA weekly, monthly, quarterly and special reports, summaries and analyses. WPI provided technical support for the analysis of the economic impact of program commercialization activities.

WPI provided technical support for the reporting of the economic impact of program commercialization activities. The team prepared a monthly highlights report including each of the DDFA supported technology projects including projects funded by crosscutting programs CMST, ESP, Robotics and Industry Program. The report was compiled using information from the project Principal Investigators or Technical Project Officers and was distributed using the prescribed distribution list and via the Internet homepage. WPI provided logistical and technical support for DDFA conferences, workshops, meetings and videoconferences. WPI provided logistical and technical

support for the preparation and distribution of meeting papers, notes and minutes. WPI provided technical and logistical support for the preparation and distribution of DDFA data.

Task 5/97- Baseline Support for the Tanks Focus Area

Period of Performance: September, 1996-September 1997

Initial Task Value: \$542K

Final Task Value: \$1456K

Task 5 provided support to the Tanks Focus (TFA), with most of the work being executed in the WPI Richland office in the following broad areas: program planning and budget analysis, program execution, document program and project accomplishments and communications and data transmission.

The WPI Team assisted the Focus Area Management in coordinating the financial and technical review of TTPs and approved funding documentation, including changes thereto, and provided technical and financial analysis for financial status reporting. WPI reviewed and analyzed site activities for integration between the TFA and site-specific EM-30/40 technology development activities and recommended inserting new technologies to enhance site specific performance. Staff provided technical support for the development and maintenance of TFA program management systems and decision analysis tools including maintaining a database to store focus area information and the schedule of activities for the year. WPI provided environmental compliance support to the TFA to proactively identify and mitigate potential problems, issues, and roadblocks to successful technology development and deployment.

The WPI Team provided technical support for the TFA program definition, identified and evaluated risks to the public, conducted assessments and identified needs of EM-30/40 as related to EM-50, and assessed the cost of complying with environmental, stakeholder, and public concerns. The WPI Team provided technical assessment and unbiased expert technical review of TFA program and project activities. Staff provided technical support for the assessment of TFA program and project activities including work scope, plans, cost, schedule, earned value, safety requirements, and baseline management information.

Assistance was provided for the preparation of TFA weekly, monthly, quarterly and special reports, summaries and analyses, as well as, the analysis of the economic impact of program commercialization activities. The WPI Team provided logistical and technical support for TFA conferences, workshops, meetings and videoconferences and for the distribution of meeting papers, notes and minutes.

Task 6/97 – Contract Management and Reporting

Period of Performance: September, 1996-September 1997

Task Value: \$384K

Task 6 was established to provide contract oversight and reporting for the contract as a whole. The WPI Program Management office was established in Morgantown, West Virginia. Specific assignments covered under this task included: conducting regular weekly conference calls with the management team to coordinate work assignments, reviewing contract status and performance, discussing contract issues, and implementing corrective actions. The Senior Program Manager visited each site during the task period to conduct on-site performance evaluations with the Focus Area staff at each location. A self-assessment was completed at the end of the task period.

WPI developed task plans in response to each task assignment that contained technical plans describing tasks, deliverables, and milestones, and labor resources, schedule and costs to complete each task in the same format and level of detail required in the Baseline Management Plan.

WPI provided monthly reporting as required in the contract including:

Status Report comprised of narrative that assessed the status of work being performed under the contract, highlights of the changes to objectives, technical approach, task variances from baselines in excess of stipulated thresholds, causative factors, and actions taken or proposed to resolve them, as well as factors with potential for causing significant variances in the future.

Summary Report containing a concise top-level (Focus Area Level) summary of schedule, labor, and cost performance against the baseline task plans. Data was presented graphically and in a tabular format that permitted rapid visual comparison of the schedule, labor, and cost data. Labor and cost variances were shown on a monthly and cumulative basis.

Labor Management Report that indicated the status of labor resources utilization for comparison with task plans including actual labor expended for the reporting and prior periods.

Cost Management Report summarizing the cost status of the contract for comparison with task plans including actual cost status for the reporting and prior periods.

Milestone Report which graphically depicted major milestones planned and their completion.

WPI prepared and submitted estimates as needed for labor usage and cost status for any tasks that were projected to fall outside the prescribed labor or cost variance at the scheduled time of completion. Proposals were submitted to modify baselines to adjust task scope, labor hours, schedules, and/or budgets for such task changes as required.

WPI executed all internal functions and actions specified in the Quality Assurance Plan including identification of quality problems and corrective actions, quality assessment and oversight and quality improvement measures. The WPI team executed all internal functions and actions specified in the OCI Avoidance Plan, including analyzing all work assignments for OCI issues, mitigating and documenting any mitigation measures necessary to provide OCI-free execution of the contract.

Task 7/97 – Market Readiness Assessment

Period of Performance: September 96-March 97

Initial Task Value: \$546K

Final Task Value: \$30K

The objective of Task 7 was to provide support and assistance for the development and identification of strategic issues and concerns that would face EM for the acceptance and eventual adoption of advanced remediation and waste cleanup technologies being sponsored or supported by DOE into the public and private sectors. As a part of this effort, input from senior management/decision maker level executives would be obtained regarding the acceptance and potential incentives that might be required to allow the advanced technologies to reach commercialization potential.

Task 7 was first implemented on September 30, and subsequently cancelled on October 17. It was reissued on November 7 with a revised value of \$354K, and subsequently cancelled again effective March 31, 1997. The final task value reflects cost involved in implementing the task twice.

Task 8/97 – Technical and Program Support to Large-Scale D&D Demonstration Projects (LSDPs)

Period of Performance: November 96 –March 97

Initial Task Value: \$305K

Final Task Value: \$58K

Task 8 was implemented to provide additional funding for support of the DDFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 4/97 Baseline Support Task for the DDFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for DDFA – Task 4/97. Refer to Task 4/97 for a complete description of work performed for the DDFA under the contract.

Task 9/97 – Technical Assessment of DDFA Programs and Support of the DDFA Technology Development Investment Opportunities Assessment

Period of Performance: November 96-March 97

Initial Task Value: \$292K

Final Task Value: \$91K

Task 9 was implemented to provide additional funding for support of the DDFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 4/97 Baseline Support Task for the DDFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining

funding to the Baseline Task for DDFA – Task 4/97. Refer to Task 4/97 for a complete description of work performed for the DDFA under the contract.

Task 10/97 –Program Support in DDFA Program Documentation and Project Accomplishments

Period of Performance: November 96-March 97

Initial Task Value: \$196K

Final Task Value: \$89K

Task 10 was implemented to provide additional funding for support of the DDFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 4/97 Baseline Support Task for the DDFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for DDFA – Task 4/97. Refer to Task 4/97 for a complete description of work performed for the DDFA under the contract.

Task 11/97 – Risk/Legislative/Regulatory Support

Period of Performance: November 96-August 97

Task Value: \$142K

Task 11 was established to provide risk, legislative and regulatory support to all EM Focus Areas. WPI provided support to the EM Focus Areas in three contexts: 1) risk management; 2) risk communication; and 3) risk policy. Support for these areas was applied to a variety of technical, analytical, administrative and logistical activities, including:

- ?? Assistance in the identification, retrieval, review and/or analysis of information on risk assessment, cost-risk analysis, risk management, and/or communication/stakeholder involvement issues.
- ?? Contributions to the design, development, deployment, and evaluation of integrated communication delivery systems (e.g. presentations, speeches, newsletters, workshops, focus groups, videos, and electronic media/modalities such as interactive and passive Internet applications, electronic bulletin boards, distance-education protocols, multimedia CDs.)
- ?? Assistance in development of technical or analytical products to evaluate the potential impacts of risk assessment, risk management, and cost-risk assessment practices on EM Focus Area activities.

WPI monitored and reported on State and local legislative activities in States which were relevant to the Focus Areas and monitored and reported on Congressional and Executive Office of the President (?Executive Office?) actions which related to the Focus Areas. This support included:

- ?? Monitoring and reporting on State legislative and executive activities (non-regulatory) that were relevant to the following six of the EM Focus Areas States: California, Georgia, Idaho, South Carolina, Tennessee, and Washington.
- ?? Monitoring and reporting on Congressional and Executive Office actions relevant to DOE science, technology and environmental management programs, and on any new Congressional legislation that was relevant to the EM Focus Areas.

WPI provided support to the EM Focus Areas by monitoring and reporting on EPA or DOE regulatory activities related to the Focus Areas.

Task 12/97 – Systems Engineering/Systems Analysis

Period of Performance: November 96-September 97

Initial Task Value: \$522K

Final Task Value: \$250K

Task 12 was established to assist all focus areas to meet their systems engineering and systems analysis needs.

Standard systems engineering (SE) methodology was to be developed to evaluate DOE Environmental Management remediation technologies on the basis of life-cycle cost and performance. The methodology would be formalized and documented in the form of an SE template. The methodology was to be designed to allow significant life cycle cost reduction and system performance improvement for new technologies and needed to be consistent with the Ten Year Plan priorities. The methodology was to be uniformly applied by sites and focus areas for evaluation and selection of remediation technologies so that the OST budget would be allocated effectively to address the most significant issues.

WPI was to utilize SE methodology and other decision-making tools (e.g. the Gate process) to outline a technology plan to clean up the most critical sites within the EM complex based on the goals of the Ten Year Plan. The technology plan would identify the key issues where the application of R&D could benefit the overall objective of achieving 10-year cleanup targets and fulfill regulatory and stakeholder requirements.

The task funding was reduced when the rebaselining of the contract occurred in early 1997, and work stopped before a final product could be developed.

Task 13/97 – Program Execution Support for Technology Development – Subsurface Contaminants Focus Area

Period of Performance: November 96-March 97

Initial Task Value: \$199K

Final Task Value: \$217K

Task 13 was implemented to provide additional funding for support of the SCFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 3/97 Baseline Support Task for the SCFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task.

Task 14/97 – In-Program Technical Support Tanks Focus Area

Period of Performance: November 96-March 97

Initial Task Value: \$271K

Final Task Value: \$21K

Task 14 was implemented to provide additional funding for support of the TFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 5/97 Baseline Support Task for the TFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for TFA. Refer to Task 5/97 for a complete description of work performed for the TFA under the contract.

Task 15/97 –Special Studies Tanks Focus Area

Period of Performance: November 96-March 97

Initial Task Value: \$251K

Final Task Value: \$29K

Task 15 was implemented to provide additional funding for support of the TFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 5/97 Baseline Support Task for the TFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for TFA. Refer to Task 5/97 for a complete description of work performed for the TFA under the contract.

Task 16/97 – Tanks Waste Technology Activities Database

Period of Performance: November 96-March 97

Initial Task Value: \$149K

Final Task Value: \$15K

Task 16 was implemented to provide additional funding for support of the TFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 5/97 Baseline Support Task for the TFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for TFA. Refer to Task 5/97 for a complete description of work performed for the TFA under the contract.

Task 17/97 –Program Management Support for Tanks Focus Area

Period of Performance: November 96-March 97

Initial Task Value: \$306K

Final Task Value: \$103K

Task 17 was implemented to provide additional funding for support of the TFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 5/97 Baseline Support Task for the TFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for TFA. Refer to Task 5/97 for a complete description of work performed for the TFA under the contract.

Task 18/97 – Program Planning and Budget Analysis Support for Technology Development – Subsurface Contaminants Focus Area

Period of Performance: November 96-March 97

Initial Task Value: \$459K

Final Task Value: \$271K

Task 18 was implemented to provide additional funding for support of the SCFA and correlated to the various sections outlined in the contract Statement of Work and in the Task 3/97 Baseline Support Task for the SCFA. However, DOE decided early in 1997 to rebaseline the contract. This involved terminating this task and allocating remaining funding to the Baseline Task for SCFA. Refer to Task 3/97 for a complete description of work performed for the SCFA under the contract.

Task 19/97 – Administrative Support on D&D Center of Excellence Program Documentation and Project Management

Period of Performance: December 96-March 97

Initial Task Value: \$203K

Final Task Value: \$16K

Task 19 was established to support activities of the D&D Center of Excellence (COE) in the areas of research needs identification, RFP design, proposal evaluation, technical interchange, program review, and information dissemination. WPI was to coordinate the activities of the Industry Panel and Oversight Board and assist in monitoring and evaluation of the research efforts. DOE cancelled the task shortly after inception.

Task 20/97 – Program Planning, Coordination and Evaluation Integration

Period of Performance: December 96 – December 97

Initial Task Value: \$2,000K

Final Task Value: \$2,976K

Task 20 was established to provide integration of program planning, budget coordination, and program benefit estimation to all EM Focus Areas and crosscutting programs. Tasks involved the following:

Ten Year Plan Coordination and Integration

Under this subtask, the WPI team provided support for the coordination and integration of activities related to the development of the EM Ten Year Plan (TYP) and the development and publication of the accompanying Science and Technology Development TYP.

Systems Analysis and Special Studies

Under this subtask, the WPI team provided support for systems analyses and special studies related to program planning (including determination of the EM R&D investment strategy) and evaluation efforts, as well as for communicating program plans, impacts and benefits to the appropriate decisionmakers and stakeholders associated with the technology development programs. The analyses and studies examined focus area and crosscutting area processes and activities with respect to technical, economic, risk-related (i.e., risks associated with environmental, safety and health issues), programmatic, and institutional considerations.

Budget Coordination and Monitoring

Under this subtask, the WPI team provided technical analysis support for budget coordination and financial status monitoring across the technology development programs. The subtask included assisting in the packaging and reporting of information, including the determination of uncosted carryover, cost and schedule variances, and reconciliation of financial and funding status.

Management Process Development and Quality Improvement Initiatives

Under this subtask, the WPI team provided support for management process development and quality improvement initiatives focused on performance measurement, Progress Tracking System (PTS) quality, performance baselines and planning, cost estimating documentation and justification, along with anticipated improvements in and streamlining of business processes among the focus areas and crosscutting programs.

Technology System Cost Benefit/Savings Estimation

Under this subtask, the WPI team provided technical assistance to develop an OST program level economic analysis methodology to estimate the potential EM mortgage reduction due to the implementation of new and emerging technology systems. The OST-level analysis required coordinating and assisting in analytical efforts and data generation at the focus area and crosscutting program levels.

Task 21/97 - Industry and University Programs Integration

Period of Performance: March 97-September 97

Task Value: \$200K

Task 21 was established to provide technical and program support to the Industry and University Programs (and other DOE Offices of Product Management for Environmental Management programs, as necessary) to achieve better integration with the crosscutting and focus area programs of the DOE Environmental Management (EM) programs.

Support was required for activities related to budget formulation and tracking, program planning and evaluation, and program management relative to meeting crosscutting and focus area program requirements.

Contract Year 2/Government Fiscal Year 98

Task 1/98 – Integration Support

Initial Period of Performance: August 96 – October 98

Final Period of Performance: August 96 – December 97

Initial Task Value: \$4,100K (included funding from previous fiscal year applied to Task 1/97)

Final Task Value: \$761K (for the period from October 1-December 9, 1997)

On October 24, 1997, WPI received a Task Order for this task that incorporated into Task 1/98 that body of work associated with Task 11/97, Task 12/97, Task 20/97 and Task 21/97 and renamed the task Integration Support. (The previous title of Task 1/97 had been Technical Integration Environmental Management Focus Areas, but was referred to as Contract Transition.) The funding value of Task 1/97 (\$90K) was added to the planned value for this task to reach the total anticipated value of \$4,100K. WPI and its four subcontractors began work under a continuing resolution at the commencement of government fiscal year 1998. However, this task was terminated on December 9, 1997 at a value of \$740K, the amount of booked costs as of that date. An additional modification to the task was provided in March of 98 in an attempt to reconcile the WPI Team costs against funding and the task value was raised to \$761K, the amount of booked costs as of that date.

Task 2/98 – Baseline Program for Mixed Waste Focus Area

Period of Performance: September 96 – October 1998

Initial Task Value: \$1,987K (included funding from previous GFY)

Final Task Value: \$300K (for the current government fiscal year)

Task 2/98 was established to provide continuation of the Baseline Support for the Mixed Waste Focus Area, which commenced at the beginning of the previous government fiscal year and is described in this document in the section for Task 2/97. As with Task 1/98 above, WPI and its subcontractors began work under a continuing resolution and this task was cancelled on December 9, with a value of \$182K. The task was reopened when WPI received a modification dated February 12, 1998 with a value of \$300K.

Task 3/98 – Baseline Program for Subsurface Contaminants Focus Area

Period of Performance: September 96 - October 98

Initial Task Value: \$3,527K (included funding from previous fiscal year applied to Task 3/97)

Final Task Value: \$1,524K (for the current government fiscal year)

Task 3/98 was established to provide continuation of the Baseline Support for the Subsurface Contaminants Focus Area that commenced at the beginning of the previous government fiscal year and is described in this document in the section for Task 3/97.

Task 4/98 – Baseline Program for Decontamination and Decommissioning Focus Area

Period of Performance: September 96 - October 98

Initial Task Value: \$3,233K (included funding from previous fiscal year applied to Task 4/97)

Final Task Value: \$1,500K

Task 4/98 was established to provide continuation of the Baseline Support for the Decontamination and Decommissioning Focus Area that commenced at the beginning of the previous government fiscal year and is described in this document in the section for Task 4/97.

Task 5/98 – Baseline Program for Tanks Focus Area

Period of Performance: September 96 – October 98

Initial Task Value: \$3,236K (included funding from previous fiscal year applied to Task 5/97)

Final Task Value: \$1,600K

Task 5/98 was established to provide continuation of the Baseline Support for the Tanks Focus Area that commenced at the beginning of the previous government fiscal year and is described in this document in the section for Task 5/97.

Task 6/98 – Contract Management and Reporting

Period of Performance: September 96 – October 98

Initial Task Value: \$844K (included funding from previous fiscal year applied to Task 6/97)

Final Task Value: \$98K

Task 6/98 was established to provide continuation of the Contract Management and Reporting Task that commenced at the beginning of the previous government fiscal year and is described in the document in the section for Task 6/97. However, the task was terminated on December 9, and then later reinstated on March 12 at the final value shown. WPI was instructed by letter dated December 9, 1997 to begin charging management costs directly to the other Task Orders in place at that time.

Task 7/98 – Environmental Management Science Program

Period of Performance: October 97 – October 98

Initial Task Value: \$375K

Final Task Value: \$468K

Task 7/98 was established to provide support for the Environmental Management Science Program (EMSP). WPI Idaho Falls was the lead office for this work. For this task, WPI assisted in coordinating the financial and technical review of Technical Task Plans (TTPs) and approved program funding documentation including changes, and providing technical analysis for financial status reports. The team assisted in the financial data analysis via PTS and other database systems and analyzed, prepared and maintained life cycle Science Program portfolios. Other responsibilities included assisting the program in developing and submitting programmatic documentation including, Program Execution Guidance, Technical Task Plans, and budget formulation submittals. WPI provided assistance in developing metrics and the administrative management support of EMSP research portfolio. WPI supported research needs identification and definition, partner identification, assessment, and prioritization.

The team assisted in review of various aspects of EM cleanup activities for identification and prioritization of emerging problem areas and research needs. WPI developed and disseminated EMSP documentation to the public, including fact sheets, summary reports, and presentations, posters, videos, and public relations information. WPI conducted technical assessments and provided unbiased expert technical review of the Science Program studies and research. WPI provided input to strategic plans, implementation plans, and program management plans and guidance, technical activity data sheets, and budget development documents. The team assisted in preparing periodic programmatic performance assessments and provided input to monthly and quarterly EM-50 documents.

WPI provided assistance in updating the Internet with current EM information. Staff assisted the Science Program in mid-year reviews as required. WPI facilitated communication and data transmission among the Science Program participants, including EM headquarters, DOE field personnel, researchers, contractors, and subcontractors, to efficiently coordinate and integrate program planning, execution, evaluation, and reporting.

Task 8/98 – Industry and University Programs

Period of Performance: October 97 – October 98

Initial Task Value: \$500K

Final Task Value: \$530K

Task 8/98 was established after Task 1/98 was terminated to continue to provide support for the Industry and University Programs Task that was originally established as Task 21/97 during the previous government fiscal year. Task 1/98 had incorporated within its scope of work the Industry and University Programs Task, but was terminated December 9. Refer to Task 21/97 for a description of work performed under this task.

Task 9/98 – Accelerated Site Technology Deployment

Period of Performance: March 98 – December 98

Task Value: \$300K

Task 9/98 was established to provide support to the Accelerated Site Technology Deployment (ASTD) Call for Proposals. WPI Idaho Falls was the lead office for this work. The work involved the following activities: preparing the draft CBD announcement on the call and assisting with the draft of ASTD Call for Proposals; updating and revising the FY97 TDI mailing/distribution database as necessary for ASTD, mailing and distributing the Call for Proposals. WPI managed the ASTD Workshop in Denver, CO (including meeting/workshop registration, hotel and conference room management, meeting information and packets, slides and talking points, meeting and trip reports) and provided the point of contact support during the call and selection process. WPI collected the frequently asked questions (FAQs) and prepared draft responses. WPI drafted the Proposal Selection Process Plan/Configuration Management Plan; developed proposal inquiry response logs, provided review team and selection committee planning, supported proposal review and selection meetings, and provided database-scoring system and input data. WPI provided communications support and interfaced with the private sector, other entities of the government, academia, and the focus areas (FAs) and crosscut (XCs) programs in support of ASTD.

Contract Year 3/Government Fiscal Year 99

Task 2/99 - Baseline Program for the Mixed Waste Focus Area

Period of Performance: October 98 – September 99

Initial Task Value: \$50K

Final Task Value: \$171K

Task 2/99 was established to continue to provide support for the Mixed Waste Focus Area. Most of the work at this reduced tasking level was performed in the WPI Gaithersburg office and the work scope remained unchanged, although it was now performed at a level commensurate with the reduction in value of the task. For a description of the work see Task 2/97 in this report.

Task 3/99 – Baseline Program for the Subsurface Contaminants Focus Area

Period of Performance: October 98 – September 99

Initial Task Value: \$2048K

Final Task Value: \$2154K

Task 3/99 was established to continue to provide support for the Subsurface Contaminants Focus Area. Additional resources were applied to the support as the task(s) values increased. Refer to Task 3/97 for a description of ongoing work performed for this Focus Area.

Task 5/99 – Baseline Program for the Tanks Focus Area

Period of Performance: October 98 – September 99

Initial Task Value: \$1,525K

Final Task Value: \$1,541K

Task 5/99 was established to continue to provide support for the Tanks Focus Area. Refer to Task 5/97 for a description of ongoing work performed for this Focus Area.

Task 6/99 – Crosscut Support

Period of Performance: October 98 – September 99

Initial Task Value: \$79K

Final Task Value: \$436K

Task 6/99 was established to provide a broad spectrum of crosscutting support to assist in the timely and proper execution of the Technical Integration - Environmental Management Focus Area Contract. WPI agreed to furnish the necessary management, qualified personnel, materials, supplies, equipment, technical expertise and services required for, but not limited to, the following areas of work: Program Planning and Management Support, such as literature searches, background reviews, technical and

market assessments, strategic planning, special studies, budget reviews and preparation, task plan preparation, measures development and application, cost reduction analyses, cost benefit analyses, performance measurement and R&D evaluations; Project Planning and Management Support, such as project planning and analysis, process engineering, project reporting, environmental compliance, characterization and assessment, environmental risk analyses, health physics, safety analyses, technical assistance and reviews for assigned projects, problem definition, assessment and prioritization, project tracking and technology integration; and Communications and Outreach Support such as public information, outreach, technology transfer, communications, information transfer, technical meeting coordination, information management and dissemination, document maintenance, communications effectiveness determinations and contract reporting.

As Task 6/99 evolved, various sub-tasks were established as needed and required by DOE. Each of these sub-tasks had a distinct work scope, and funding established from a variety of sources. To accommodate the efficient tracking of expenditures, WPI established and reported the following separate sub-tasks as requested by the client:

Sub-task 6.1/99 – OST Work Package Ranking System Support

Period of Performance: October 98 – September 99

Sub-task Value: \$10K

WPI's role was to enhance a Microsoft Access Work Package database designed and written by WPI in 1998, in preparation for the work package data collection and scoring (ranking) effort being conducted by DOE for FY99.

Sub-task 6.2/99 – Technology Achievements Study

Period of Performance: October 98 – September 99

Sub-task Value: \$275K

WPI provided support for the Technology Achievements Study to validate declared FY95-98 deployments of innovative environmental technologies by contacting vendors and site representatives with standardized questionnaires. WPI coordinated and managed the data collection process with the associate contractor, maintained the database of collected data, coordinated the results with the Focus Areas, and analyzed data and provided reports to OST management.

Sub-task 6.3/99 – Transportation Study

Period of Performance: October 98 – September 99

Sub-task Value: \$25K

WPI conducted analyses on transportation related issues and provided consulting services related to the rail shipments of radioactive and hazardous waste materials for the Department of Energy. Tasking involved support to the following: Surface Transportation Board (STP) costing methodology, railroad transportation law in the areas of future rail rates and charges and reparation awards, litigation in federal court involving rail rate matters.

Sub-task 6.4/99 – Radford Arsenal Community Relations Program

Period of Performance: May 99 – September 99

Sub-task Value: \$23K

WPI's work for the Radford Program involved building upon an existing community relations program and implementing a state of the art program by (1) providing support for and assisting the existing Restoration Advisory Board, (2) establishing and maintaining an administrative record and (3) researching community relation techniques, policy and regulations (promulgated and proposed) so as to provide sound, cutting edge advice for implementation.

Sub-task 6.5/99 – Mountaintop Removal/Valley Fill Mining Technology

Period of Performance: June 99 – September 99

Sub-task Value: \$20K

WPI provided support to NETL and their interagency support to EPA Region III. WPI supported the development of technical issues necessary to complete the Environmental Impact Statement on Mountaintop Removal /Valley Fill Mining. WPI coordinated the following activities for a symposium on mining technology: development of a meeting agenda, invitation list, letter of invitation, and other necessary preparations. WPI participated in a weekly teleconference as the symposium developed. WPI provided meeting facilitation services, and preparation of a conference deliverable.

Sub-task 6.6/99 – EPA Training

Period of Performance: September 99 – September 99

Sub-task Value: \$50K

WPI supported the efforts of the member agencies of the Federal Remediation Technologies Roundtable (FRTR), coordinated by EPA's Technology Innovation Office (TIO), to increase the acceptance of field analytical technologies and the usefulness of data generated by such methods when applied to decision-making. WPI provided input into strategies sections of training courses based on the principles using DQO processes.

Task 7/99 – Environmental Management Science Program

Period of Performance: October 98 – September 99

Initial Task Value: \$450K

Final Task Value: \$613K

Task 7/99 was established to provide continuing support to the Environmental Management Science Program and as such, was a follow-on to Task 7/98. Refer to Task 7/98 in this document for a description of the work performed for this ongoing task.

Task 9/99 – Accelerated Site Technology Deployment

Period of Performance: January 99 – September 99

Initial Task Value: \$35K

Final Task Value: \$70K

At the beginning of government fiscal year 1999, Task 9/98 – Accelerated Site Technology Deployment (ASTD) had a funding balance of \$68K remaining. Task 9/98's period of performance was extended through December 31, 1998. Task 9/99 was established in January of 1999 to continue the work through the remainder of the 1998 government fiscal year.

WPI continued support to DOE Idaho by providing historical knowledge and experience of the FY97 activities associated with the Technology Deployment Initiative (TDI) Call for Proposals and the FY98 ASTD Call. Specific tasking involved meeting support, program document review and comment, and providing historical information and files as requested. WPI provided communications support and interface with the ASTD Program Manager, the LMITCO Team and other program support groups, the private sector, other entities of the government, academia, and the focus areas (FAs) and crosscut (XCs) programs in support of ASTD.

Task 10/99 – Global Climate Change Support

Period of Performance: March 99 – September 99

Initial Task Value: \$40K

Final Task Value: \$80K

Task 10/99 was established to support the Global Climate Change Technology Systems Data Center. WPI's involvement included: interviewing industry and technical area experts, performing a requirements analysis, identifying the Data Center's potential clients, conducting needs analysis and evaluations. Other tasking for WPI involved identifying potential competitors to NETL, applicable standards, and providing meeting support as needed.

Task 11/99 – Arctic Military Environmental Cooperation

Period of Performance: June 99 – December 99

Task Value: \$310K

Task 11/99 was established to cover all activities related to completing the goals and objectives set out in Arctic Military Environmental Project (AMEC) Project 1.3 pertaining to "Design and Construction of Treatment Systems for Solid Radioactive Waste Generated and Accumulated During the Decommissioning of Russian Nuclear Submarines". To support the AMEC Project 1.3 Project Officer in the accomplishment of the project objectives, WPI provided the following technical support services. WPI assisted in the development and coordination of draft financial and technical AMEC Project 1.3 plans for the Project Officer, developed and coordinated methodologies and

plans for project execution, assisted in the development and maintenance of project management systems, decision analysis tools, and performance measurement systems. WPI performed long-range requirement analyses, prepared performance specifications, recommended standards, performed special studies, created test plans, and developed relevant training materials. Staff provided acquisition support such as assisting in the review and evaluation of vendor technical proposals, participation in quality assurance (QA) reviews of documents submitted in support of AMEC contracts, and procurement of equipment and services. In addition, WPI provided industry oversight support such as independent third party reviews regarding industry products such as designs, field operations, and other technical activities. Work also included performing integration support and program resolution such as decision analysis, operational validation of new technologies, and monitoring changes in Federal and international regulations and advice as to their applicability to AMEC projects. WPI provided scientific support in the fields of chemistry, geochemistry, ecology, biology, geology, hydrogeology, environmental engineering, civil/chemical engineering, and risk assessment while assisting in the review and/or performance of scientific analyses of documents and the validation of procedures for correctness. The team coordinated with international partners and agencies in Norway and Russia on technical and regulatory issues to include subcontracting for specific scopes of work related to engineering and implementation of selected technologies.

WPI established a separate sub-task to identify and serve as a collection point for the project hardware costs as differentiated from the labor costs collected under Task 2.

Task 12/99 – EPA Global Climate Change Support

Period of Performance: July 99 – December 99

Initial Task Value: \$570K

Final Task Value: \$300K

Task 12/99 was established to provide support to DOE's Global Climate Change Program in support of the Environmental Protection Agency (EPA) in fulfilling its mandate to design risk management strategies for climate change. WPI's support efforts focused on, (1) technical support; (2) literature search support; (3) program planning support; (4) risk management/communication/policy support; and (5) stakeholder knowledge base support. WPI provided logistical, administrative and technical support for office activities, including conference calls, meetings, workshops, and conferences, training programs and program reviews. WPI developed white papers/think pieces outlining possible structures, components and/or approaches for climate change programs.

The WPI team provided technical, logistical and administrative support for activities related to the establishment and maintenance of a climate change program including support for performance tracking, program integration, and program review.

WPI assisted in communication and information transfer activities in support of rapid and widespread dissemination of results from the Environmental change projects as well as

tracking of the impacts of results as they were used in Environmental change program goals. WPI contributed to the design, development, deployment, and evaluation of integrated communication delivery systems (e.g., presentations, speeches, newsletters, workshops, training materials, focus groups, videos, and electronic media/modalities such as interactive and passive Internet applications, electronic bulletin boards, distance-education protocols, and multimedia CD.) Internet application assistance was provided to design, develop and implement an environmental change World Wide Web site to facilitate and disseminate information.

Contract Year 4/Government Fiscal Year 00

Task 2/00 – Baseline Program for Mixed Waste Focus Area

WPI began work under a continuing resolution on Task 2/00. However, tasking was never implemented and work ended shortly after the beginning of the government fiscal year.

Sub-task 2.2/00 - Mixed Waste Thermal Treatment

Period of Performance: January 00 – July 01

Sub-task Value: \$162K

WPI contracted with GE Energy and Environmental Research Corporation to provide support for the Mixed Waste Thermal Treatment Task to provide the DOE technical and organizational support to assist National Technical Workgroup (NTW) to identify and resolve permitting and compliance issues for mixed waste treatment. Areas to be addressed were related to implementation of the MACT rule for mixed waste HWCs, and mixed waste combustor emissions risk assessment. WPI and its subcontractor facilitated the coordination of EPA and DOE research applicable to the resolution of mixed waste treatment needs and associated regulatory development.

Task 3/00 – Baseline Program for Subsurface Contaminants Focus Area

Period of Performance: October 99 – September 00

Task Value: \$1970K (Included \$70K of uncosted carryover from previous year)

Task 3/00 was established to continue to provide support for the Subsurface Contaminants Focus Area. Refer to Task 3/97 for a description of ongoing work performed for this Focus Area.

Task 5/00 – Baseline Program for Tanks Focus Area

Period of Performance: October 99- September 00

Task Value: \$1,520K (Included \$120K of uncosted carryover from previous years)

Task 5/00 was established to continue to provide support for the Tanks Focus Area. In June WPI's scope was modified to include supporting a Tanks Salt Processing Project with PNNL at an office at the Savannah River Site. WPI provided technical and administrative support for this effort. Refer to Task 5/97 for a description of ongoing work performed for this Focus Area under the Baseline Task in FY00.

Task 6/00 – Crosscut Support

Sub-task 6.2/00 – Technology Achievements Study (TAS)

Period of Performance: October 99 – June 00

Sub-task Value: \$290K (Included 40K uncosted carryover from FY99)

WPI continued the verification of technology deployment claims identified in the DOE's Technology Management System (TMS), as well as other potential deployments identified by TAS. WPI used the standard DOE-approved TAS methodology (interviewed vendors and site user points of contact provided by the technology developer and/or vendor to validate information on vendor participation in deployments and to verify potential deployments). TAS obtained two questionnaires per technology vendor and one questionnaire from each site user, plus technology developer questionnaires. WPI coordinated and managed the data collection process, maintained the TAS database, coordinated data with Focus Areas, and analyzed data and provided reports to OST management.

Sub-task 6.4/00 – Radford Arsenal Support

Period of Performance: October 99 – September 00

Sub-task Value: \$17K (Uncosted carryover from FY99)

This subtask was a follow-on to work begun in FY99. Refer to Task 6.4/99 for initial activities. During this fiscal year, WPI supplied the necessary personnel, facilities, equipment and expertise to provide the following services as requested by the Radford Army Ammunitions Plant (RFAAP). WPI provided meeting support, established and maintained two administrative records repositories, developed factsheets, monitored newspapers and publications, and prepared and distributed news releases.

Sub-task 6.5/00 - Mountaintop Removal/Valley Fill Mining Technology/Symposium Support

Period of Performance: October 99 – September 00

Initial Sub-task Value: \$3.5K (Uncosted carryover from FY99)

Final Sub-task Value: \$86K

Sub-task 6.5/00 was initially established to finish work on the Mountaintop Removal/Valley Fill Mining Technology Symposium. Early in the government fiscal year, the need for additional symposium support was identified, and as a result, additional funding was added to the task and the name was changed to accurately describe the task scope.

WPI provided support to NETL in the conduct and follow-up necessary to host symposia at DOE and at off-site locations. The symposia accommodated four federal agencies, including the Office of Surface Mining, Environmental Protection Agency, the US Army Corps of Engineers, and Fish and Wildlife Service, and the West Virginia Division of Environmental Protection who were preparing an Environmental Impact Statement to

determine the impact on environmental resources from the size and location of excess spoil disposal in valley fills associated with mountaintop mining operations, and determine the impacts of mountaintop mining on waters of the United States and fish and wildlife resources. The EIS considered developing agency policies, guidance, and coordinated agency decision-making processes. NETL was hosting and supporting symposia on related environmental issues and required assistance from WPI to coordinate and execute these symposia. WPI supported the five-agency group and their designated agents in the development of meeting agenda, invitation lists, letters of invitation, and other necessary preparations to make these meetings successful. WPI provided meeting facilitation and note-taking services, supported preparation of conference deliverables, and supported symposium follow-up efforts necessary to meet the goals of the five-agency group for the EIS.

Sub-task 6.6/00 – EPA Training

Period of Performance: October 99 – September 00

Sub-task Value: \$50K (Uncosted carryover from FY99)

WPI supported the efforts of the member agencies of the Federal Remediation Technologies Roundtable (FRTR), coordinated by EPA's Technology Innovation Office (TIO), to increase the acceptance of field analytical technologies and the usefulness of data generated by such methods when applied to decision-making. WPI provided input into strategies sections of training courses based on the principles using the DQO process as outlined in the on-line tutorial at WPI. The training emphasized the importance of using a team approach to planning site work (with an experienced analytical chemist as an integral part of that team) and the need for systematic, thorough planning to maximize the cost-effectiveness of data gathering activities.

Sub-task 6.7/00 – Contract Management and Reporting

Period of Performance: October 99- September 00

Sub-task Value: \$68K (Uncosted carryover from previous years)

Sub-task 6.7 was established to enable WPI to utilize dollars from previous years to help partially defray the cost of ongoing management and reporting. Refer to Task 6/97 for a description of the work conducted under this sub-task.

Sub-task 6.8/00 – DOE HLW Waste Matrix

Period of Performance: August 00 – March 01

Sub-task Value: \$150K

For this sub-task WPI agreed to procure and deliver 155 gallons of a waste simulant, characteristic of the DOE High Level Waste (HLW) tanks and prepared according to technical instructions provided by NETL, to enable bench-scale testing of the Advanced Vitrification System (AVS). The waste simulant needed to be received at Mississippi State University, Diagnostic Instrumentation & Analysis Laboratory (DIAL), where the testing would occur, within 2 months of the date that NETL signed a contract with the Radioactive Isolation Consortium (RIC) for bench-scale testing of the AVS.

WPI was to ensure that the DOE HLW Tanks Waste Simulant was procured without conflict of interest where the Office of Science and Technology, Tanks Focus Area, and RIC were concerned. Specifically, WPI was to provide assurance that the waste simulant was prepared by a manufacturer with no vested interest in the outcome of the bench-scale tests of the AVS. Additionally, WPI was to have the composition of the waste simulant validated by an independent analytical laboratory.

WPI began work on the task in late August, but the procurement of the simulant could not take place before the end of the current fiscal year. The task continued in FY01.

Task 7/00 – Environmental Management Science Program

Period of Performance: October 99 – September 00

Task Value: \$651K

Task 7/00 was established to support the ongoing work for the Environmental Management Science Program established during FY98. Refer to Task 7/98 for a description of the work performed under this task.

Task 9/00 – Accelerated Site Technology Deployment

Period of Performance: October 99 – September 00

Task Value: \$251K

Task 9/00 established two areas for WPI support: Program/Project Management and Portfolio Management and Reporting. WPI supported budget activities, program coordination and Headquarters interface under the first area. Under the second area of support, WPI provided: ASTD web page development and management, web page and database technical support, linkage development (database to web page), ASTD program queries and reports, and data analysis.

Task 10/00 – Global Climate Change Support

Period of Performance: October 99 – September 00

Task Value: \$37K (Uncosted prior year carryover)

Task 10/00 was established to provide continuance of the work begun under Task 10/99. Refer to Task 10/99 for a description of the work activities conducted under this task.

Task 11/00 – Arctic Military Environmental Cooperation (AMEC)

Period of Performance: October 99 – December 00

Initial Task Value: \$277K (Uncosted Carryover from FY99)

Final Task Value: \$601K

Task 11/00 was established as a follow-on to the task begun in FY99. Refer to Task 11/99 for a description of the ongoing work conducted under this task.

Contract Year 5/Government Fiscal Year 01

Task 2/01 – Baseline Program for Mixed Waste Focus Area

Sub-task 2.2/01 - Mixed Waste Thermal Treatment

Period of Performance: January 00 – July 01

Initial Task Value: \$27K (Uncosted Carryover from FY00)

Final Task Value: \$207K

WPI and its subcontractor continued to provide support for this task as outlined in Sub-task 2.2/00.

Task 3/01 – Baseline Program for Subsurface Contaminants Focus Area

Period of Performance: October 00 – September 01

Task Value: \$2,000K

Task 3/01 was established to continue to provide support for the Subsurface Contaminants Focus Area. Refer to Task 3/97 for a description of ongoing work performed for this Focus Area.

Task 5/01 – Baseline Program for Tanks Focus Area

Period of Performance: October 00 – September 01

Task Value: \$1,690K (Includes \$90K of uncosted carryover from a previous year.)

Task 5/01 was established to continue to provide support for the Tanks Focus Area. Refer to Task 5/97 for a description of ongoing work performed for this Focus Area and FY00 for additional work added during that fiscal year for the Salt Processing Tanks Focus Area Project at the Savannah River Site.

Task 6/01 – Crosscut Support

Sub-task 6.1/01 – Markal-Macro Training and International Fossil Energy (IFE)

Briefing Approach

Period of Performance: June 01-September 01

Sub-task Value: \$53K

WPI, through the services of Alternative Energy Development, provided training on the MARKAL-family of models through a 3-day training seminar and workshop at the Pittsburgh site of the NETL to familiarize key personnel with the principles, data requirements, operation, and interpretation of results. In addition to the training, WPI and its subcontractor developed an approach to create an annual briefing document for International Fossil Energy Technology Selection Issues and Answers.

Sub-task 6.5/01 – EPA Region III Support (formerly Symposium Support)

Period of Performance: October 00 - September 01

Sub-task Value: \$76K (Including \$14K of uncosted carryover from previous year)

EPA Region III (the EPA) and NETL requested WPIs assistance in developing and implementing a program to support the development of Total Maximum Daily Load (TMDL) briefings for the congressional delegations in Region III. The purpose of this task was to provide support materials to educate Congressional staff about TMDLs and related water quality issues. WPI compiled information and used material provided by the EPA regarding water quality issues that have emerged in Region III, as those issues relate to, or are affected by, the TMDL program. The EPA provided the state-by-state issues. WPI provided staff and technical resources to ensure completion of the TMDL briefing program in Region III.

Sub-task 6.6/01 – EPA Training

Period of Performance: October 00 - July 01

Sub-task Value: \$23K (Uncosted carryover from previous year)

Sub-task 6.6/01 was established to allow WPI to complete this task, which began in a previous fiscal year. For a complete description of the work, see Sub-task 6.6/99 and 6.6/00 in this document.

Sub-task 6.8/01 – HLW Waste Matrix

Period of Performance: August 00 – March 01

Initial Sub-task Value: \$150K

Final Sub-task Value: \$128K

WPI began work on procuring the HLW Matrix simulant in the previous fiscal year when the task was established and completed the work during the current fiscal year. WPI procured simulant at lower than expected costs, so \$13K was deobligated when the task was completed. See Sub-task 6.8/00 for a complete description of the work performed under this task.

Sub-task 6.9/01 – Writing Workshops

Period of Performance: January 01 – July 01

Sub-task Value: \$22K

Sub-task 6.9/01 was established to provide WPI the necessary support to conduct two 3-day writing workshops (each 1½ days plenary; 1½ days individual tutorials), for approximately 12 - 15 members of DOE's Office of Science and Technology with the aim of providing these federal officials with the understanding, tools, techniques, and tips they needed to prepare documents that would be right the first time in terms of both audience and purpose. Preparation consisted of reading, marking up, and creating training materials derived from three pieces of writing from each participant—an internal memorandum, an external letter, and a brief (5 pages or less) report as sources of workshop explanations and exercises. Participants received notebooks containing all

workshop materials and exercises plus the instructor's markup of their written submissions, which were discussed privately in half-hour sessions beginning the afternoon of day two. One workshop was held in April and another in June.

Task 7/01 - Environmental Management Science Program

Period of Performance: October 00 – September 01

Task Value: \$625K

Task 7/01 was established to support the ongoing work for the Environmental Management Science Program established during FY98. Refer to Task 7/98 for a description of the work performed under this task.

Task 9/01 – Accelerated Site Technology Deployment Support

Period of Performance: October 00- September 01

Task Value: \$205K (Included \$55K of uncoded carryover from FY00)

Task 9/01 was established to support the ongoing work for the Accelerated Site Technology Deployment established during previous fiscal years. Refer to Task 9/00 for a description of work performed under this task.

Task 10/01 - Fossil Energy Knowledge Management

Period of Performance: February 01- September 01

Task Value: \$125K

Under Task 10/01 WPI provided a Mercury Knowledge Management (MKM) System and Mercury Web site that will integrate with the National Energy Technology Laboratory's business and technology infrastructures. The MKM System is accessible via a web browser and includes both an internal "Intranet" system and an external "Internet" system. The objective of the resulting MKM system is to facilitate the sharing, development and capture of information. The Intranet system is secured behind a firewall and allows for the internal collaboration of NETL engineers and scientists as they address mercury issues. The Internet system allows stakeholders to personalize their view of the external information and enables transparent information sharing with multiple organizations that possess relevant mercury knowledge.

Task 11/01 – Arctic Military Environmental Cooperation

Period of Performance: October 00 – September 01

Task Value: \$786K (All Years of Task combined)

Task 11/01 was established as a continuation of the work begun in FY99. Cutting and Shearing tools, which met the criteria for use in an arctic setting, were designed, tested and procured by WPI. The tools were shipped to Russia in late summer and training of Russian technicians took place in late September.

Conclusion

Over the life of this five-year, task order, cost plus fixed fee contract, WPI and its subcontractors provided support to the Department of Energy in a variety of geographic locations and with the highest quality of technical products, graphics, communications tools, and information dissemination. Performance appraisals conducted throughout the life of the contract list WPI's performance as routinely excellent in all areas of quality, cost control, timeliness of performance, business relations and customer satisfaction. At its conclusion, the contract's cost control efforts resulted in expenditures of within one-half of 1% of planned cost.