

SUMMARY
FEDERAL REMEDIATION TECHNOLOGIES ROUNDTABLE

System Planning Corporation Building
Rosslyn, Virginia
June 2, 1994

Introduction

Roundtable Chairman Dr. Walter W. Kovalick, Jr., Acting Deputy Assistant Administrator of EPA's Office of Solid Waste and Emergency Response (OSWER), opened the meeting and welcomed all participants. Roundtable agencies represented included:

- o U.S. Department of Defense (DoD)
- o U.S. Department of Energy (DOE);
- o U.S. Department of Interior (DOI), U.S. Fish and Wildlife Service;
- o U.S. Department of Interior (DOI), U.S. Geological Survey (USGS);
- o U.S. Air Force (USAF);
- o U.S. Navy (USN);
- o U.S. Army; and
- o U.S. Environmental Protection Agency (EPA).

A complete list of participants and other attendees is included as an attachment (Attachment 1) to this summary.

Dr. Kovalick said the National Environmental Technology Act (S-978) passed the Senate in early May. The bill calls for verification of technologies, development of protocols for verification, and joint efforts in technology development and testing. It encompasses all environmental technologies, not just innovative ones. Movement of the bill in the House is expected during the summer. Dr. Kovalick indicated that final passage of the bill could result in the Roundtable's having to broaden its focus to include topics other than remediation.

He updated attendees on the status of joint efforts by DOE and DoD to organize an Interagency Environmental Technology Office. He said, initially, the office would bring together DoD's Project Reliance efforts and those of DOE's technology demonstration and

evaluation programs. The Strategic Environmental Research and Development Program (SERDP), which involves DoD, EPA, and DOE, may be incorporated at some point in the future. As envisioned, the new office would serve as a hub for information exchange on technology development, demonstration, and evaluation. A Memorandum of Understanding (MOU) between DOE and DoD is pending.

EPA/TIO Efforts To Capture Cost and Performance Information

John Kingscott, U.S. EPA Technology Innovation Office (TIO), described efforts by TIO to collect cost and performance data for completed, full-scale Superfund cleanups. He said TIO has invested most of its effort in developing a generalized reporting format, because this helps analysts determine what to look for as they go through available data and provides a framework for reporting data. The interagency Work Breakdown Structure (WBS), developed by an interagency workgroup, was used as the basis for EPA's cost reporting format. In addition to collecting a set of data on actual cost and performance, the EPA format includes space for reporting "vendor claims" relative to cost, including site-specific factors that impact costs and equipment or operational improvements that could be used to reduce future costs. The format also allows for documenting cost- and performance-related "lessons learned" from completed projects.

Mr. Kingscott said EPA is trying to put together stand-alone, primary reference documents on the completed Superfund projects under study. He said the philosophy in preparing the reports is to push for the best available data. He said they have found that some data simply do not exist, or those who have the data are slow to share them. Fred Lindsey, U.S. EPA Office of Research and Development (ORD), asked why people are reluctant to share the data. Mr. Kingscott said it is partly because this is the first time anyone has asked for data in this format and partly because some of the people want or need concurrence from their management and clients before releasing the data. He said field personnel generally are busy and are unwilling to commit time to anything but their own responsibilities.

Mr. Kingscott explained that TIO identified 17 completed projects for study and ranked them according to priority. The 12 high-priority projects include sites with a variety of contaminant volumes and contaminant and soil types. Some are Federal-lead sites; others are PRP-lead. Draft reports have been completed for all but two of the high-priority sites. (Copies of these draft

documents for the Motor Pool Area, Rocky Mountain Arsenal Superfund Site (soil vapor extraction) and King of Prussia Technical Corporation Superfund Site (soil washing) were handed out at the meeting.) These projects involve extracting appropriate data from existing information and filling in any blanks through interviews, first with EPA Regional personnel and then with the involved vendor. Mr. Kingscott said that EPA is holding back on the five low-priority sites because of the age of the projects and the quality of available data.

Mr. Kingscott said TIO has learned some important lessons in the process of analyzing cost and performance data from these projects, including the following:

- o Data collection was more difficult than anticipated.
- o Documentation is consistent with the remediation goal (but rarely goes much farther).
- o Lessons go beyond cost and performance.
- o Cost data are lagging (and there is a reluctance to share data that have been collected).
- o Observations require careful documentation (sensitivity to the issues surrounding the cleanup is important).
- o We need to work with projects earlier (to ensure the needed data are collected and reported in a way that is useful).
- o While the idea of integrating cost and performance data collection and reporting as a "standard operating procedure" in future projects is attractive, there is some question about whether routinizing the task will eventually cause erosion in the quality of data collected.

Responding to a question, Mr. Kingscott said that EPA found the WBS satisfactory as a basis for its cost and performance reporting format, but he acknowledged that it may not go far enough to satisfy the needs of some agencies. DOE probably would want to add the dimension of radioactive wastes, for example. The major advantage, however, is that it would provide a level of data comparability that the cleanup community, Federal or non-Federal, has never had before.

U.S. Air Force Efforts To Capture Cost and Performance Information

Bob Furlong said the Air Force has been working for about two years to collect and analyze cost and performance data for completed and ongoing soil and ground water cleanup projects. Development of these Technology Applications Analyses is one of

several Air Force initiatives to move toward establishing presumptive remedies~narrowing the field to a few workable alternatives to help expedite the cleanup process. Mr. Furlong said the development, with EPA, of the Remediation Technologies Screening Matrix and Reference Guide was a first step in this effort.

The new analyses focus on four categories of technologies: pump and treat, soil vapor extraction (SVE), bioremediation, and a combination of SVE and bioremediation. These are the types of technologies the Air Force believes have most potential for the types of contaminant problems they face. The first of these analyses, on Umatilla Depot, took a year to prepare because the information needed was not readily available. Draft reports from six additional sites have been completed to date. (Drafts on pump-and-treat applications at Langley Air Force Base and DOE's Savannah River Site and SVE applications at Luke and McClellan Air Force Bases were provided as samples to participants at the meeting.)

Mr. Furlong said each report describes site characteristics, contaminants, the treatment system(s) used, performance, cleanup levels, costs, remedial schedules, regulatory and institutional issues, and lessons learned. Reports on 13 additional sites~eight Air Force sites and five DOE facilities~are in process, and drafts will be available this summer; all 20 reports should be finalized by the end of the year.

In general, the types of data the Air Force is collecting track well with the EPA cost and performance data collection projects. Mr. Furlong pointed out that the Air Force reports contain one unique feature, however. The intention is to obtain the signature of the remedial project manager (RPM) and the appropriate State project manager, certifying that the report accurately reflects the performance and costs of the remediation project studied. Mr. Furlong said the Air Force feels this sign-off is an important tool in facilitating the use of the various treatments at Air Force sites throughout the country. Dr. Kovalick pointed out that, while validation of the project results by RPMs and State project managers certainly will add credibility to the information being reported, the first step for the Roundtable members is to achieve consensus on the data elements that should be reported and to agree to collect that data in their individual agencies.

Mr. Furlong said the Air Force would like to see the Roundtable call together a group of experts to review the data collected in all these projects, identify presumptive remedies, and develop some

protocols for their use.

Status of Roundtable Cost and Performance Subgroup Initiative

John Kingscott said the Roundtable's Cost and Performance Subgroup was formed in June 1993 to achieve some consensus about what types of cost and performance data should be collected about innovative technologies and how to present the data when available. The Subgroup held two ad hoc meetings during the fall of 1993. These meetings were open to participation by representatives of non-Federal as well as Federal agencies and organizations. Following the two meetings, the Subgroup reported to the Roundtable meeting in November 1993 that they had begun to identify opportunities for standardizing an approach to collecting cost and performance data for completed remediation projects. The Subgroup held another meeting in April of this year to discuss in more detail a strategy for initiating coordinated documentation of cost and performance data at Federal cleanups. As a result of those discussions, a report of the Subgroup's findings and recommendations was prepared and provided to all Roundtable members and associates for their information prior to this meeting.

Overall, the Subgroup agreed that the use of standardized terms—for example, for site identification, contaminant groups, media, treatment systems, and supplemental treatment systems—is an essential underpinning for coordinated cost and performance reporting. In addition, they agreed that the interagency Work Breakdown Structure (WBS) would be most useful for documenting cost data related to full-scale remediation projects. The WBS provides standard elements for remedial project execution and cost and allows tracking and comparing environmental data from site to site. Using it would help achieve consistency from agency to agency as well.

The Subgroup found that four types of information—waste characteristics that affect cost or performance, operating parameters that affect cost or performance, measurement procedures, and cost—offer the greatest potential for standardization and universal usability in reporting on completed remediations. Definitions and components of each of these categories are detailed in the Subgroup report.

The Subgroup's major recommendation was that these categories of data be used by all agencies as the baseline for documenting cost and performance of innovative technologies. The intention is that these data elements serve as a "core" set of data; each agency

would be free to collect and report on additional data elements that meet their individual needs. In discussing this recommendation, some participants suggested that a basic format for reporting data should be prescribed, as well as the "core" data elements.

The Subgroup also recommended that each agency develop its own plan for implementing data collection using the "core" data elements. Each agency's plans and progress would be shared regularly at Roundtable meetings. This would allow for periodic assessment and updating of the "core" elements and to ensure data quality. They also recommended that the Roundtable periodically convene an ad hoc group of experts to review cost and performance reports. These reviews would focus on a specific technology or contaminant group and would be designed to assess remediation capabilities or to support the development of presumptive remedies.

Dr. Kovalick said he believes this initiative~standardizing the collection of cost and performance of innovative technologies in completed remediation projects~warrants a joint public announcement by the Roundtable agencies. He said he would write to each agency asking them to develop an initial implementation plan and to let him know within 30 days (effectively by the end of July) when they will begin collecting/reporting data. Each letter will include an additional copy of the Subgroup report, so it can be circulated to appropriate officials in each agency. Dr. Kovalick would target having some kind of Roundtable announcement event as soon after that as possible. The emphasis in the announcement would be on what the agencies have agreed to do relative to collecting and reporting cost and performance information and would point to some examples, such as the reports being prepared now by EPA and the Air Force.

Frank Freestone, U.S. EPA/ORD Risk Reduction Engineering Laboratory (RREL), suggested that the Roundtable convene a group of experts to analyze several sample reports to ensure that the data being reported is credible before any public announcement. There was general support for this idea, and Dr. Kovalick indicated that John Kingscott would convene a one-day meeting of the Cost and Performance Subgroup to review the reports. He said the reports to be reviewed would be supplied to Subgroup members prior to the meeting to facilitate the process. He said he would try to orchestrate the announcement event following the Subgroup meeting but prior to the fall Roundtable meeting.

The Subgroup suggested that, to the extent possible, reports which document the status and results of technology demonstrations~such as the combined Army/SITE/Roundtable publication currently in process~be compiled to include cost and performance information documented through this new approach. They also suggested that the Roundtable investigate the feasibility of establishing a database, or some other electronic format, for disseminating cost and performance reports on cleanup projects and technology demonstrations.

Incineration Research Facility

Bob Thurnau, EPA/ORD/RREL, described the operation of the Agency's Incineration Research Facility (IRF), located in Jefferson, Arkansas. He explained that the facility was established in 1985 and was expanded in 1989 to include new RCRA storage facilities.

Mr. Thurnau said the IRF has a pilot-scale rotary kiln system that includes a two-million-BTU/hour primary combustion chamber. The system includes a redundant air pollution control system that is designed to allow for quick, easy sampling. Customized sampling also can be performed.

The IRF has a bench-scale facility and has been involved in treatability testing for a number of Superfund sites requiring treatment of organics mixed with metals. The facility has a full RCRA Part B permit. Mr. Thurnau said IRF makes available to clients a complete inventory of stock sampling equipment and a staff proficient in the use of sampling techniques. He said tests can be customized with control of desired variables.

Mr. Thurnau said that the demand for this type of facility from within EPA is dwindling; it is generally the policy in the Superfund program to avoid incineration. ORD is looking for other clients to use the facility for research and testing. Recent work has been done with DOE, DoD, and the Army Corps of Engineers. The facility also is involved in some projects funded under the Environmental Technology Initiative (ETI) and the Environmental Technology Innovation Commercialization and Enhancement (EnTICE) program may offer some potential.

The Agency is committed to continuing operation of the facility to the extent it can be supported, Mr. Thurnau said. However, if new clients cannot be found to provide additional funding support, EPA may have to close it or transfer the operation to another

agency. He said the Agency would prefer to keep it open because closure would mean the loss of an important alternative to full-scale testing, and the ability to customize test conditions. He said the facility is fully capable of doing low-temperature work and can be used to test technologies that require treatment of off-gases or residuals.

Fred Lindsey (EPA/ORD) encouraged participants to take this information back to their agencies and explore possibilities for using the facility. He said EPA needs to know soon if there is enough demand to keep the facility operating.

DoD National Test Center Program

Richard Eichholtz, U.S. Army Environmental Center (USAEC), explained that the DoD National Environmental Technology Demonstration Program (DoD/NETDP) is a SERDP-sponsored effort, involving the three services and EPA, to develop a comprehensive technology demonstration/evaluation/transfer program. He said currently DoD technology demonstrations are performed using a "shotgun" approach. There are no uniform data collection and evaluation criteria, no procedures for reviewing data to ensure it meets the needs of regulators as well as users, and no adequate technology transfer documentation/information dissemination procedures.

Under the DoD/NETDP, the partners are selecting characterized sites with appropriate contaminants to serve as test locations; developing common Quality Assurance/Quality Control (QA/QC) procedures; and developing coordinated dissemination mechanisms for reporting results of technology demonstrations/evaluations. The three services and EPA will establish partnerships with government and private interests to carry out technology demonstrations at the selected sites and will provide researchers and developers with technical and field support. (A fact sheet on the program, which contains contact points for each of the services and for EPA, was provided to all participants.)

Several sites already have been identified: McClellan Air Force Base (CA) sites will be used for demonstrating technologies for solvent remediation; Port Hueneme Naval Construction Battalion Center (CA) sites for technologies for fuel hydrocarbon remediation; Volunteer Army Ammunition Depot and Jefferson Proving Ground sites for demonstrations involving technologies for the remediation of energetics and heavy metals contamination; and

Wurtsmith Air Force Base for development and testing of integrated biological/physiochemical processes (through an EPA/University of Michigan program) and evaluation of innovative monitoring and measurement technologies (through EPA's Environmental Monitoring Systems Laboratory).

Mr. Eichholtz said there will be a number of payoffs from this project:

- o identifying achievable and cost-effective goals for cleanup;
- o establishing research and development platforms for advancing remedial technologies;
- o enhancing the possibility for acceptance of innovative technologies as presumptive remedies because they are faster and cheaper;
- o developing well documented engineering packages for broader application of the technologies;
- o reducing costs of SERDP-sponsored and other technology demonstrations; and
- o advancing the understanding of the fate and transport of contaminants and of cleanup technology mechanisms.

Mr. Eichholtz said a brochure is being prepared to get the word out about the DoD/NETDP. The brochure will be inserted in the DoD Strategic Plan and the FY95 SERDP Guidance. In addition, the information will be provided to Ground Water and Monitoring Remediation Journal and other publications and distributed during conferences and symposia, DoD Environmental Engineering Training sessions, and on-site visits.

Dr. Kovalick asked if costs involved in these demonstration projects will be low enough to allow small developers to participate. Mr. Eichholtz said that while technical support will be provided, the cost of getting equipment to the site and running it still will be the responsibility of the developers. He added that this does not preclude developers getting help from other agencies or private interests.

Navy Environmental Leadership Program

Joe Graf, U.S. Navy/Naval Facilities Engineering Command (NAVFAC), said the Navy Environmental Leadership Program (NELP) is designed to provide a model for creating the environmentally sound naval base of the future. Two major naval installations, Naval Station (NAVSTA) Mayport (Jacksonville, FL) and Naval Air Station (NAS) North Island (San Diego, CA), were chosen as demonstration

sites. These installations are considered representative of the range of operations and environmental problems encountered on naval facilities throughout the country.

The NELP has been implemented amid ongoing operations at both locations. The object is to examine all elements of shore station environmental management programs, expedite compliance and cleanup with an emphasis on the use of innovative technologies/focused management methods, and transfer successes throughout the Navy. Initial implementation of the NELP began in 1993. Currently, the Navy is in the process of identifying activities that would be undertaken in FY94 and beyond. A primary objective in this project is to provide a continuous record of progress. To address many of the problem areas at the two installations, the Navy is partnering with regulatory agencies and soliciting the involvement of other Federal agency laboratories, academia and industry, as well as the Navy laboratories, to identify and implement technical solutions. For example, both installations have been offered as test sites for development projects to be conducted by the Rice University consortium exploring alternatives for ground water remediation, and the Navy is working with EPA's SITE program on demonstrations of technologies for PCB remediation.

The project began with site visits in September 1993 by NAVFAC and Office of Naval Research (ONR) personnel to identify site-specific problems to be addressed at each installation. Navy technology applications have been reviewed and are being considered to address some problems. Request for Proposals (RFPs) have been issued to solicit proposals from academia and industry for innovative technologies to address other problems. Responses to these solicitations will be screened, and the NAVFAC/ONR team will evaluate and recommend selections. Contract awards are expected to take place by the end of FY94.

Mr. Graf said there have been several contracting-related hurdles to overcome in moving forward on this project, because of the unique nature of procuring innovative technologies. Dr. Kovalick said EPA has faced similar problems in the past, and TIO compiled a set of contracting case studies which may be of help. He offered to send a copy of the case studies to the Navy and all other Roundtable agencies. He suggested that contracting may be a large enough problem that the Roundtable should host a seminar or conference on the subject, but other participants did not feel that was necessary.

General areas to be addressed by the NELP already have been

identified at each of the NELP installations. At NAS North Island, they include:

- o air emissions: zero or low-emission vehicles;
- o NOx control technologies for internal combustion engines;
- o chromate-free primers for aircraft and aircraft parts;
- o tests related to extending maintenance schedules for ground support equipment;
- o degreasing and removing paint thinner from rags;
- o testing underground storage tanks in situ for integrity and pressure testing for piping; and
- o cleanup technologies for 11 installation restoration (IR) sites with contaminants including heavy metals, PCBs, VOCs, and SVOCs.

At NAVSTA Mayport, these areas include:

- o methods for separation and treatment of water containing aqueous film forming foam (AFFF) agent;
- o substitutes for xylene~varnish dipping to rebuild motors;
- o field tests to determine oil quality to allow reuse;
- o reuse of hydraulic fluids in ground support equipment;
- o in situ methods to pressure test the integrity of underground storage tanks and piping;
- o minimizing pesticides and remediating contaminated soil;
- o remediation of hydrocarbon-contaminated surfaces;
- o alternatives for pump-and-treat methods to treat ground water;
- o stabilization of landfill areas for construction;
- o site characterization and field screening methods; and
- o cleanup technologies for four IR sites.

State/Federal/Private Partnership To Evaluate Innovative UST Corrective Action Technologies

Steve McNeely, U.S. EPA Office of Underground Storage Tanks (OUST), explained that EPA's UST program is delegated to the states. The cleanups are handled by the states, with responsible parties paying a portion of the cost.

He said EPA is working with the State of Iowa on a project that will involve the use of innovative and alternative technologies at two community sites in Iowa, Council Bluffs and Shenandoah. These two towns have over 100 sites requiring cleanup. The State also has recently passed legislation fostering the use of innovative and alternative technologies and is willing to pay extra to use them. Since some of the sites are located in proximity to each other, the State has chosen to approach these sites as "community

remediations." That is, the solution that works on the first site in the community will be tried first on the other sites.

Since much of the data from these cleanups will be petroleum-related, a consortium of petroleum companies is providing data analysis assistance to the State. Other partners, particularly Roundtable agencies that may have technologies to demonstrate, are being invited to join in the project. A kick-off meeting for the project is scheduled for June 16, and Mr. McNeely and Dan Powell, U.S. EPA/TIO, encouraged Roundtable participants to attend.

Mr. McNeely explained that the petroleum companies are interested in the transferability of technologies used in this project to UST sites in other parts of the country. He said cost and performance data from this project would be reported using the format John Kingscott discussed earlier in the meeting.

Tom Anderson, DOE Office of Technology Development, suggested that DOE's Lawrence Livermore National Laboratory (LLNL) also be invited to participate. He said LLNL has had some interesting results on gasoline spills using its dynamic underground stripping technology, and the technology may be applicable for sites in the Iowa project.

State-Federal Partnership To Encourage State Participation in Federal Science and Technology Policy

Chris Coburn, Battelle Public Technology Programs, briefed participants on the State-Federal Technology Partnership, an initiative to synergize state and Federal technology research and development efforts and enhance the states' role in the development of national science and technology policy. He said the Partnership is headed by former Governors Celeste (Ohio) and Thornburgh (Pennsylvania). Coburn said that a tremendous amount of technology development is supported by state governments each year, but little, if any, of that work is taken into account when Federal agencies determine their own technology R&D agendas. Two articles about the Partnership are included as attachments (Attachments 2 and 3) to this summary.

The Partnership held a colloquium last September for officials from academia, industry, and the state and Federal governments to kick-off the project, which hopes to stimulate increased cooperation between the state and Federal governments on development of science and technology policy and R&D plans. A copy of the proceedings of that meeting may be obtained by contacting

Matthew Filner, Battelle Public Technology Programs, 25000 Great Northern Corporate Center, Suite 260, Cleveland, OH 44070-5310, 216/734-0094 or (FAX) 216/734-0686.

Mr. Coburn said the Partnership is working with the White House Office of Science and Technology Policy (OSTP) to designate a state science and technology liaison in each Federal agency to facilitate the sharing of policy and program ideas and coordinate on R&D planning. He asked for the Roundtable agencies' support for this effort. In addition, the Partnership is pursuing funding, through the American Society of Mechanical Engineers (ASME), to support a State Fellow in OSTP. Other Partnership initiatives include briefing individual Governors about the project; working with the National Governors Association (NGA) to make the issue a priority within the organization; and preparing a compendium of state and Federal cooperative technology programs which is expected to be available, in pre-publication form, for the NGA meeting in July.

University of Wyoming Center for Environmental Simulation Studies

Dr. Quentin Skinner, University of Wyoming, described the University's new Environmental Simulation Facility (ESF). The facility will serve as a center for research in the areas of natural and environmental resources and as a technology test and demonstration site. The ESF will be available for use by academia, industry, and state and Federal government agencies for research and testing in the areas of solid and hazardous waste disposal, remediation of contaminated sites, protection and cleanup of surface and ground water, environmental monitoring, bacteria transport within underground systems, and wetland and endangered species ecology.

The 70,000-square-foot ESF will include a large ~high bay~ area containing four lysimeters and their associated environmental chambers. The bay will be equipped with a 40-ton crane which will allow movement of large containers of environmental soil and reconfiguration of the environmental chambers to suit specific experiments. The bay will have a loading dock and parking area to accommodate technologies of virtually any size. Project control rooms will overlook the bay and an elevated catwalk will allow access to the lysimeters and chambers to monitor experiments.

The ESF also will contain more than 4,000 square feet of laboratory space as well as storage areas, conference rooms, and administrative support areas. Dr. Skinner said the ESF offers researchers and developers an economical testbed but stressed that

it will not replace field testing. He said using the ESF, however, can help narrow the range of alternatives and enhance the potential for successful field trials.

In response to a question, Dr. Skinner said the annual operational cost of the facility is about \$300,000. Dr. Kovalick pointed out that the ESF is the only U.S. facility that approximates the capabilities of the Canadian laboratory operated by Dr. John Cherry at the University of Ontario, Waterloo.

Status of SERDP Program

Dr. Clemens Meyer, USACE, said that DoD's Strategic Environmental Research and Development Program (SERDP) is funded at \$160 million for FY94. The funds are allocated among six thrust areas: global climate change, cleanup, pollution prevention, conservation, energy, and compliance. About \$139 million actually is available for application to the thrust areas, he said. And, as in the past, the number of proposals for SERDP projects far exceeded the available funds. For example, about 240 cleanup-related proposals were submitted for FY94, and only 35 actually were funded.

In terms of future trends, Dr. Meyer said he expects to see funding for global climate change decrease. Funding for cleanup-related work will continue to increase for a few years but begin to decrease by the year 2000, because most major cleanups should have been completed. Funding for pollution prevention and conservation will rise in the future; energy funding is expected to remain level; and it is unclear if or how funding for compliance will change.

Dr. Meyer said SERDP, which was authorized by Congress in 1990, did not enjoy support within the Administration and DoD until recently. One reason is that funds appropriated involved no "new money" but were taken from existing DoD programs. That changed in FY94, and Dr. Clemens said he expects funding to be stable in the future. He said the emphasis over the next year will be on streamlining and expediting the process of getting funds to project sponsors earlier. Request for Proposals (RFPs) for FY95 projects are expected to be issued in July, and DoD hopes to get the funds awarded by the end of this year. The goal is to have FY96 funds out by the beginning of the fiscal year (October 1995).

Status of the Unified Army/SITE/Roundtable Technology Demonstration Document

Frank Freestone (EPA/ORD/RREL) updated participants on progress in the project, conducted under the auspices of the DoD Environmental Technology Transfer Committee (ETTC), to combine a number of Federal remediation technology documents into a single, easy-to-use compendium to assist site cleanup managers and supporting contractors in selecting remedial technologies. The document will consolidate similar documents published by the Army, Air Force, Navy, DOE, and EPA.

The new compendium will have a three-tiered format. Tier 1 will be a screening matrix, similar to the existing Air Force/EPA Remediation Technologies Screening Matrix and Reference Guide, to direct users to appropriate technology options. Tier 2 will be a series of consolidated technology descriptions. The profiles will provide a common format for existing information in the Screening Matrix, the Federal Remediation Technology Roundtable's Synopses of Federal Demonstrations of Site Remediation Technologies, EPA's Superfund Innovative Technology Evaluation (SITE) Program: Technology Profiles, the Army's Installation Restoration and Hazardous Waste Control Technologies handbook, DOE's Technology Catalogue, and other sources. Tier 3 will consist of lists of references for each technology, such as bulletins, analyses, handbooks, and other articles, to which users can refer for additional information.

Mr. Freestone said a partial draft of the document would be available for review a few days following this meeting. The completed draft will be available for review early in July. The deadline for comments will be the end of July. The goal is to have the volume printed by the end of the fiscal year. While most Roundtable agencies have been involved to some extent in preparation of the document, Mr. Freestone encouraged all agencies to participate in the review process. He said anyone interested should notify him at 908/321-6632, or Ed Engbert (USAEC) at 410/671-1575.

The options for Roundtable agencies to obtain quantities of the document for their own distribution are still being explored, and Mr. Freestone said he would let agencies know as soon as possible. In addition, the alternatives for providing staff support to update the volume in the future have yet to be resolved.

Wrap-Up

Dr. Kovalick reviewed the "action items" from the meeting:

- o John Kingscott (EPA/TIO) will call a one-day meeting of the Cost and Performance Subgroup, or a subset of same, to analyze samples of the cost and performance reports generated by EPA and USAF and verify that the data elements the Roundtable intends to view as "core" elements are credible.
- o Following (or simultaneous with) the meeting, Dr. Kovalick will write a letter to each agency asking them to communicate within 30 days their plan for collecting cost and performance data. Each agency will be asked to commit to the extent possible to collecting data on the "core" elements and indicate when they will start collecting/reporting on specific categories of data.
- o EPA will take the lead in orchestrating an event to announce agreement among the Roundtable agencies on the reporting of cost and performance data. The announcement would be planned to occur before the Roundtable meeting in November.
- o Frank Freestone (EPA/ORD/RREL) and Ed Engbert (USAEC) will see that all Roundtable agencies receive completed drafts of the combined technology demonstration document early in July for final review.
- o Dr. Kovalick will see that the set of contracting case studies EPA/TIO has prepared is sent to all Roundtable agencies.

The meeting adjourned.

ATTACHMENT 1

Participants FEDERAL REMEDIATION TECHNOLOGIES ROUNDTABLE June 2, 1994

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Newell Trask	U.S. Geological Survey	703/648-5719
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Karen Waldvogel	U.S. DOI/U.S. Fish and Wildlife Service	703/358-1864
Richard Weisman	Radian Corp.	703/713-1500
Lt. Col. Timothy Wise	U.S. Air Force	703/697-3534
Jesse Yow	U.S. DOE/LLNL	510/422-3521

ATTACHMENT 2

January 13, 1994, Article from Washington Technology
on State-Federal Technology Partnership

[Note: This attachment is not available in the version on CLU-
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ATTACHMENT 3

October 4, 1993, Article from Chemical & Engineering News
on State-Federal Technology Partnership

[Note: This attachment is not available in the version on CLU-
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