

THE MOUND LONG TERM STEWARDSHIP INITIATIVE

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ABSTRACT

Long Term Stewardship (LTS) is designed to provide DOE, regulators, stakeholders and the public with the assurance that the public and the environment are protected from harm after cleanup. The LTS Initiative at Mound, funded through the Deactivation and Decommissioning Focus Area (DDFA), will serve as the prototype for stewardship of facilities (buildings and equipment). It will attempt to confirm that the site and its facilities will be safe, secure, and performing as designed for the long time period (centuries) during which environmental contaminants and hazards are present. This effort will demonstrate and evaluate suites of technologies and integrated systems that have the capability to provide facility surveillance and monitoring through "real time" monitoring of remote locations autonomously. The remote, real time, autonomous function of the technologies has at least three key benefits:

1. It monitors whether control systems are functioning and notifies oversight organizations if they are not;
2. It gives the public, stakeholders, and regulators up to date access to site facility performance and condition, and;
3. It provides a superior level of monitoring and assurance with minimal personnel.

Other LTS technologies investigated at Mound may include automated monitoring of flora and fauna; automated security/surveillance monitoring, and systems for long term data collection, storage, and reporting. This paper will report on the project start-up, goals, and status of technology search and implementation of the Long Term Stewardship Initiative at the Mound.

INTRODUCTION

The DDFA Long Term Stewardship Initiative (LTSI) is being conducted at the U. S. Department of Energy's Mound Plant located in Miamisburg, Ohio. Now officially called the Miamisburg Environmental Management Project (MEMP), the Mound Plant had its beginnings in 1947 and was a follow on to work that was conducted in support of the Manhattan Project during WWII. Mound was part of the nation's weapons complex for over 40 years, manufacturing various components for the nation's nuclear arsenal. In this important work, tritium refining, processing and handling occurred. Significant quantities of tritium were handled in the glove box lines, the large process equipment, and the miles of tubing and piping within the Mound Site. With the end of the Cold War, the Department of Energy (DOE) elected to shut down the plant as part of the peace dividend. The Mound Plant's current mission is

environmental restoration and it is to be performed as quickly, cost-effectively, and safely as possible while still maintaining the public safety and health.

The DOE Office of Science and Technology through the Deactivation and Decommissioning Focus Area (DDFA) of the National Energy Technology Laboratory supports and encourages the use of innovative and emerging technologies by the various field and operations units within the DOE complex involved in D&D activities. As a natural follow-on to D&D, these activities have been expanded to include technologies for monitoring LTS issues. The object of the Initiative is to identify, select, demonstrate and/or deploy cost-effective and safe technologies to perform long-term stewardship monitoring at Mound and evaluate technologies that may be applicable throughout the DOE complex. The LTSI Team will seek technologies that can:

- 1) Reduce the long-term stewardship costs;
- 2) Improve performance of, or perform, a permanent remedy that obviates the need for long-term stewardship, and;
- 3) Improve our understanding of the health and environmental impact of residual contaminants.

The LTSI will seek to address a wide range of stewardship issues. The LTSI concept involves identifying and screening proven technologies, conducting a "real world" deployment of the technology and evaluating its cost and performance.

Technologies for the LTSI are to be focused toward above ground and building stewardship issues. The Fernald Site has a similar project, sponsored by the Subsurface Contamination Focus Area. This project will primarily look at ground water and on-site disposal cell cap monitoring issues. Mound and Fernald personnel are communicating to transfer project knowledge and eliminate redundancy. With the exception of the property required to support the DOE Nuclear Energy (NE) mission at Mound, the site has been bought by the City of Miamisburg, as represented by the Miamisburg Mound Community Improvement Corporation (MMCIC) and will be turned over throughout the remediation process as areas are completed. Many of the buildings are to be left standing and the site will be used as an industrial park. These facilities, then, provide a good opportunity to deploy and evaluate identified technologies on an active D&D project before the final transition.

The LTSI, like many other DDFA Projects, involves a support Team. This Technical Team (TT) is involved in the researching, screening, selection, evaluation, and reporting of the performance of the deployed technologies. Results of the technology deployments in the LTSI will be published as cost and Performance Reports and will be available from the DDFA. The broad experienced LTSI TT includes experts from the following organizations: BWXT of Ohio (Mound), BBWI (INEEL), USEPA National Risk Management Research Laboratory's Superfund Innovative Technology Evaluation Program (SITE), Mississippi State's Diagnostic Instrumentation and Analysis Laboratory (DIAL), University of North Dakota's Energy and Environmental Research Center (EERC), Florida International University's Hemispheric Center for Environmental Technology (HCET), DOE Environmental Measurements Laboratory (EML), The Miamisburg Mound Community Improvement Corporation (MMCIC), and Fluor Fernald.

BACKGROUND

Many Manhattan Project activities occurred around the Dayton, Ohio, area and, in 1947, these activities were consolidated and relocated to an area overlooking the town of Miamisburg. Figure 1 shows the initial building arrangement near the beginning of activities at Mound. Mound continued to grow, finally encompassing 306 acres. The town of Miamisburg also grew, eventually surrounding the site, as shown in Figure 2. Mound was the largest employer in the Miamisburg area for a number of years, when there were over 2000 people working at the site. It still ranks high in single employer percentage of the Miamisburg workforce. With a large part of the Miamisburg area population having been, or knowing

someone who was employed at Mound, there developed a positive relationship with the site over the operating years. This relationship has continued even with the site undergoing remediation. Miamisburg worked with the site and fought vigorously to keep the Mound open when the closing was first announced. When it was made apparent that DOE would not continue with site operations, Miamisburg undertook a course of action to retain the employment base currently provided by the Mound. Miamisburg, represented by the MMCIC, entered into negotiations with DOE to purchase and convert the Mound site into a complex for office, research and standard industrial use. The final site restoration, then, must not only comply with DOE, State and EPA requirements, but also many of the criteria for industrial land use, developed by the local public and final landowner, MMCIC.



Fig. 1. Mound Site, circa 1949, looking West

Mound is a Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanup site, and as such cleanup work is being conducted under Lead Agency authority and CERCLA non-time critical removal action process. The primary contaminants are the radioactive isotopes Pu-238, Th-232, and H-3. Secondary contaminants include VOCs, SVOCs and some heavy metals. The site has been divided into 438 active Potential Release Sites (PRS's) and as a block/parcel (with one or more PRS's) is transferred to MMCIC, a Record of Decision (ROD) is written. Currently, there are 178 PRS's requiring No Further Action, 41 needing a Response Action, 33 needing Further Assessment, and 186 that are building related (either under/around the building or the building itself). There were 145 buildings standing on Mound when the announcement to close occurred in 1992. As of October 2001, 57 of these buildings have been demolished or removed, 28 are scheduled for demolition, 49 are scheduled for

transition to MMCIC, 9 have been leased to MMCIC, and 2 have been sold to MMCIC. Characterization and remediation continues on DOE owned land. Stewardship is conducted on land parcels transferred to MMCIC through the execution of the Operation and Maintenance (O&M) Plan. Easements allow DOE access to MMCIC owned land for continued monitoring. The scope that currently exists within the BWXTO contract supports the development of long term stewardship plans and the annual O&M review conducted by DOE.



Fig. 2. Mound Site, 1988, looking North

The DOE has unequivocally stated that it will be responsible for long term stewardship of the Mound site after there is no longer a federal presence at the site. This responsibility is defined in the site's O&M plan. The O&M plan describes the DOE's responsibilities for implementing the institutional controls applied to land parcels transferred to the MMCIC. As subsequent land parcels are transferred to the MMCIC, DOE updates the O&M plan. There will be many updates of the O&M plan as parcels are released but all controls and responsibilities will be included within the last update as the final site release occurs. This will be the document delineating how the site stewardship will take place. These updated Plans are negotiated with all the stakeholders and the final O&M plan will be no different. Stakeholder input to the O&M plan about Long-Term Stewardship issues is accomplished through the Post Closure Stewardship Working Group (PCSWG). This group of stakeholders, chartered and chaired by MMCIC, is developing a consolidated LTS plan for MEMP, designed to meet the needs of all stakeholders. MEMP's O&M plan for Mound is just one element of the consolidated plan.

Along side these "baseline" stewardship activities is the Long Term Stewardship Initiative. The LTSI is a separate program, outside the BWXTO baseline for clean up and closure by 2006, and as such, not incentivised in the current baseline contract. Sponsored by EM-50's DDFA, the LTSI is systematically exploring and identifying improved methods to validate the effectiveness of the institutional controls necessary to assure that the public and the environment are protected from long-lived hazardous and radiological wastes associated with prior operations at Mound. The LTSI relies on the PCSWG, the baseline project, and MEMP to identify the needs and issues of LTS at Mound and must also rely on the DOE and Technical Team representatives for information of applicable LTS issues elsewhere in the complex.

ISSUES

Long-term stewardship and associated activities are relatively new challenges faced by the DOE. Some of the baseline technologies are labor intensive (e.g. groundwater monitoring) and some of the baseline technologies have recognized uncertainties (e.g. degradation of engineered units of facilities). Table I presents complex wide examples of technical uncertainties associated with long-term stewardship activities. The DDFA is addressing these concerns, via the LTSI, by searching for, selecting, and facilitating deployment of technologies that will require less labor, reduce cost, reduce exposure of personnel to radioactive and other hazardous materials, and minimize or eliminate uncertainties. At Mound, innovative technologies will be deployed to provide DOE, regulators, and stakeholders with the assurance that the remediated site and its legacy facilities are secure and their controls are performing as designed.

Development of needs results from a comprehensive and consistent analysis of the baseline long-term stewardship project. The process is comparable to value engineering of the project design where all aspects of the planned baseline project are evaluated for potential improvements in cost, schedule, and risk to the environment and the workforce. Needs should be as specific as possible to the site's challenges during the long-term phase and prescribed in terms of the objective or outcome rather than prescribing a particular solution. The desired performance characteristics and end state should be fully described whenever possible.

Over the course of the last 24 months, MEMP and the PCSWG have formulated five basic needs that encompass the known issues determined to-date for LTS. These needs follow Table I. It is expected that as the remediation process progresses, these needs will become more focused and additional needs will be developed. The listed needs were not displayed with any particular emphasis or priority intended. All are equally important to LTS.

Table I. Examples of Long-term Stewardship Activities and Technical Uncertainties

Media Potentially Subject to Stewardship	Possible Stewardship Activities	Examples of Technical Uncertainties / Opportunities for Innovative/improved technologies
<p>Water: All contaminated groundwater and surface water sediments that cannot or have not been remediated to levels appropriate for unrestricted use.</p>	<p>Verification and/or performance monitoring Use restriction, access controls (site comprehensive land use plan). Five-year (or comparable) review requirements. Resource management to minimize potential for exposure.</p>	<p>What is the likelihood that residual contaminants will move toward or impact a current or potential potable water source? Are dense non-aqueous phase liquids (DNAPLS) or long-lived radionuclides present in concentrations and/or locations different than those identified? Will treatment, containment, and monitoring projects remain effective and protective? Will ambient conditions change significantly enough to diminish the effectiveness of the selected remedy?</p>
<p>Soils: All surface and subsurface soils where residual contamination exists or where wastes remain under engineered, vegetative, or other caps.</p>	<p>Institutional controls to limit direct contact or food chain exposure. Maintaining engineered controls, asphalt, or markers (site comprehensive land use plan). Five-year (or comparable) remedy review requirement.</p>	<p>What is the likelihood of future contaminant migration if ambient conditions change? How will changes in land use affect the barriers in place to prevent contaminant migration and potential exposure? What is the likelihood of cap failure sooner than expected? What is the effect of contaminant caused degradation on remedy components?</p>
<p>Engineered Units: All land-based waste disposal units with engineered controls.</p>	<p>Monitoring and inspections, per agreements, orders, or permits. Institutional controls, including restricted land use. Maintenance, including repairing caps. Five-year (or comparable) remedy review requirement. Land and resource planning to minimize potential for exposure.</p>	<p>What is the effect of contaminant caused degradation on remedy components? At what point in time will the remedy require significant repair or reconstruction? Is the monitoring system robust enough to capture remedy failure?</p>

Table I. Examples of Long-term Stewardship Activities and Technical Uncertainties

Media Potentially Subject to Stewardship	Possible Stewardship Activities	Examples of Technical Uncertainties / Opportunities for Innovative/improved technologies
<p>Facilities: Buildings and other structures that are no longer in use, which are contaminated, or whose future plans call for maintaining the structure with contamination in place.</p>	<p>Monitoring, inspections, and safeguards and securities measures. Access restrictions. Five-year (or comparable) remedy review requirement. Site reuse or redevelopment controls to minimize the potential for exposure.</p>	<p>Will current controls remain adequate to maintain protection of facilities? How will fixed, residual contamination remain adequately controlled, given current or anticipated facility uses?</p>

Need 1: Data management technology, including considerations of long term storage, accessibility, usefulness, ease of use and location. Information needs to be maintained and kept current as additional activities occur or information is gathered.

Drivers: Provide information and information retention, retrieval and dissemination that:

- (1) provides DOE's "due diligence",
- (2) meets needs of future owners for insurance,
- (3) meets needs of finance and real estate community,
- (4) meets the needs of property transfer for federal facilities under Section 120 of CERCLA,
- (5) provides, through time, a documentation of the result of the monitoring of the remedy,
- (6) provides for education and access of public and involved parties,
- (7) provides information necessary to evaluate future actions not currently contemplated, and
- (8) provides for continuing description of land use and land use restrictions as well as any future institutional control.

Parameters: The data that characterizes the site, remedy decisions and the basis for those decisions, and the institutional controls put in place, all need to be archived in a manner that allows the data to be accessible over time. The information is required to be stored and delivered by CERCLA, GSA, and Federal Records Retention Rules. All or part of this information needs to be transferred to each subsequent landowner throughout time. This information would be used by landowners or the regulatory agencies for requesting variances from the deed restrictions. Landowners and other data users will need to know of the existence of the information and have access to it. Access to continued monitoring results will provide the public with credible evidence that protection being maintained.

Baseline: Current technical data is maintained in an onsite database that is not readily accessible to the public. Reports and the basis for cleanup decisions are available to the public in the offsite CERCLA Administrative Record repository.

Anticipated Schedule, Scale/Scope of Technology Deployment: The current schedule is for DOE to exit the site in approximately 2006. Thus, an automated data collection and retrieval system should be available prior to that date.

Need 2: Real Time monitoring of water where applicable and appropriate, including:

- (1) groundwater areas that may relate to the Sole Source Aquifer,
- (2) seeps and their source of water, and
- (3) bedrock water.

Drivers: OU-1 ROD, Post remedy monitoring, CERCLA five year re-evaluations.

Parameters: Measurements that are needed to perform plume analysis and trend deduction. A combination of hardware, sensor, software, and communication equipment is desirable. Establishing “cheap to measure” indicators rather than direct measurement is a possibility. The plume to be monitored would be tritium and solvent based at levels down to MCL's.

Baseline: Currently conducting quarterly sampling of approximately 20 wells, several bedrock locations and approximately 8 seeps for tritium as well as solvents such as TCE, PCE, DCE and vinyl chloride for offsite analysis. Results are reported to the regulators and the public, and documented in the Mound CERCLA Administrative Record repository.

Anticipated Schedule, Scale/Scope of Technology Deployment: Groundwater remediation is expected to be completed in 2002 followed by long term compliance verification monitoring.

Need 3: Monitoring of institutional controls/deed restrictions prohibiting the removal of soil from the site without regulatory approval (after DOE exits the site).

Drivers: DOE commitment to regulators as part of the Mound closure.

Parameters: Monitoring of Deed restrictions. Monitoring soil leaving the site. If we can identify and demonstrate that there is a reliable indicator, not only field visits but also reporting/paperwork would be reduced.

Example ideas include:

- Remote imagery/sensing (satellite, plane or permanently affixed cameras)
- Portal monitors
- Seismic/sonic sensing of excavation
- Location sensors
- Magnetic tell tales
- Characterize what does need to be monitored, and “cheap to see” indicators

Baseline, Anticipated Schedule, Scale/Scope of Technology Deployment: This activity would not be initiated until DOE exits the site (2006). MEMP oversight and annual walk downs currently monitor parcels already transferred to MMCIC. The plan would require a staff to be maintained at the site and/or regular visits to the site by DOE or its agents. Once initiated, this activity would continue indefinitely.

Need 4: Monitoring of institutional controls/deed restrictions prohibiting the installation of bedrock wells or borings on the site without regulatory approval (after DOE exits the site).

Drivers: DOE commitment to regulators as part of the Mound closure.

Parameters: Monitoring of Deed restrictions. Restriction/notification of installation of borings/wells on the site. If we can identify and demonstrate that there is a reliable indicator, not only field visits but also reporting/paperwork would be reduced.

Example ideas include:

- Remote imagery/sensing (satellite, plane or permanently affixed cameras)
- Seismic/sonic sensing
- Horizontal barriers,
- Magnetic tell tales
- Characterize what does need to be monitored, and “cheap to see” indicators

Baseline, Anticipated Schedule, Scale/Scope of Technology Deployment: This activity would not be initiated until DOE exits the site (2006). MEMP oversight and annual walk downs currently monitor parcels already transferred to MMCIC. The plan would require a staff to be

maintained at the site and/or regular visits to the site by DOE or its agents. Once initiated, this activity would continue indefinitely.

Need 5: Identify and analyze the needs of the insurance and financial communities relative to long-term stewardship monitoring, data, and related factors at current or former DOE sites. Other impacted communities and their corresponding needs also should be identified. The obligations of the DOE in providing and creating information need to be fulfilled.

Drivers: New land owners of former DOE sites may intend to lease and/or sell the former DOE facilities and/or land to private industrial parties. These parties will most likely need private financing and insurance for their activities. The needs of the financial and insurance communities may in some instances differ from those of the stakeholders and the regulators. These informational needs must be identified and the obligations of the DOE need to be fulfilled.

Parameters: An investigation/review of insurance/finance issues at “brownfields” and similar projects, interviews of key companies in this business, as well as discussions with the MMCIC. The assurances that the insurance and financial community need/require must be evaluated. The identified assurances will be used as part of the need evaluations for long-term stewardship technology/data assessments being conducted by the DOE. Impacts to the DOE as well as other community activities (zoning, land use planning, transportation etc.) will require evaluation.

Baseline: The existing baseline does not specifically address this issue.

Anticipated Schedule, Scale/Scope of Technology Deployment: The current schedule is for DOE to exit the site in approximately 2006. Thus, this issue should be addressed prior to that date.

Investigation of Need Five, Insurance and Financial Needs, was conducted early in the needs determination process. A study was commissioned by the DOE Ohio Field Office to determine the depth of insurance and financial issues and, as it turned out, the study (1) identified no major issues or areas of concern in the current transfer/redevelopment process. This need has been retained in the active needs list as a reminder that, while the first parcel transfers have been concluded without major headache, as the site approaches closure and onsite resources (e.g., personnel, institutional knowledge, paper records) diminish, this need may have to be revisited.

PATH FORWARD

In 1995, during the infancy of the remediation process at Mound, a “Core Team” was formed in order to ensure an effective means of decision making among the final site regulators. The Core Team consists of representatives of DOE, USEPA, and Ohio EPA (OEPA) with decision-making authority under CERCLA (2). The PCSWG and MEMP are working diligently to get the specifics of the above five LTS needs defined by the Core Team (e.g. what quantity of soil constitutes a violation in Need Three?). The LTSI is working in parallel with the PCSWG to find solutions on how to meet these needs with a minimum of intrusion and a nonexistent DOE presence. Additionally, the LTSI will focus on other above ground issues such as building contaminant monitoring while searching for technologies to meet the needs of the site.

Because potential end users are often unwilling to accept risk and liability associated with the first time use of a technology or process, the LTSI will sponsor first-time deployments at Mound and/or other sites to comprehensively evaluate the cost and performance of these technologies. The proposed technology may originate in the commercial sector, at other DOE sites, or within other Federal agencies. The LTSI will conduct technology deployments in full scale and over a duration that is convincing to Mound and other potential end users. Cost and performance data from deployment of the technology, or technology

suite will be supplied to the PCSWG, and will provide the PCSWG with sufficient information to make recommendations regarding subsequent use of the technology to the Core Team. The EPA, DOD, DOI, and other DOE sites are potential secondary end users of the innovative technologies identified, selected, demonstrated, and deployed in this project. The fundamental requirements for site deployment are:

- The technology deployments are performed as part of actual long-term stewardship activity, if possible, and
- The problem-holder commits to further deploy or continue to utilize the technology within that project if its cost and performance merit such deployment.

Successful technologies should demonstrate benefits, including but not limited to:

- Increase confidence in longevity of the containment technology
- Improved monitoring measurement of LTS parameters
- Real time analysis data collection/validation and transmission where feasible
- Lower life-cycle cost-which includes all cost aspects of using the technology
- Lower health and safety risks to the worker and the public
- Lower risks for detrimental impact to the environment
- Reduced cost or worker exposure in surveillance and maintenance of facilities

Once the technology needs and problems of the long-term stewardship activity have been established, the screening of a wide range of technologies to address project needs will occur by the LTSI Technical Team. The backgrounds and experiences of the TT members will be utilized in the screening process of the technologies. There are many sources of innovative / improved technologies and the search will include many academic databases as well as any DOE technology information references. The DOE will suggest potential improved technologies whenever appropriate. Additionally, technologies developed by foreign sources are to be considered.

One lesson learned from the DDFA's Large Scale Demonstration and Deployment Projects (LSDDP) is to use the Commerce Business Daily (CBD). Many LSDDPs had success with Expressions of Interest published in the CBD. At the writing of this paper, the LTSI is in the process of issuing the following CBD (as of 1 January 02 CBDs are Fed Business Ops (FBOs)) as a first step towards selecting the first round of deployments for Mound. Interested parties should consult the FBO for a formal notice for all pertinent information.

DUE 02/15/02

POC: Don Krause (BWXT), (937) 865-4501, Email: kraudr@doe-md.gov.

DESC: -- BWXT of Ohio, Inc. (BWXTXO), Prime Contractor for the United States Department of Energy's (DOE's) Miamisburg Environmental Management Project (MEMP), Miamisburg, Montgomery County, Ohio, seeks QUALIFIED SOURCE(s) to provide innovative or improved technologies for deployment by the Long-Term Stewardship Initiative (LTSI) Project at the DOE Mound site in Miamisburg OH. The DOE Office of Science and Technology (OST), EM-50, Deactivation and Decommission Focus Area (DDFA) is sponsoring through BWXTXO a LTSI Project at the MEMP to identify post-closure facility monitoring needs and to find and deploy technologies to support them. The LTSI Project intends to obtain a list of qualified vendors to provide these innovative or improved technologies for long-term environmental monitoring.

A Vendor Workshop for experienced commercial vendors in long-term monitoring technologies will be conducted in Miamisburg, OH during the middle part of March 2002. The objective of the Workshop will be to conduct significant interactions among DOE, BWXTO and Commercial Vendors with expertise in environmental monitoring technologies. Emphasis will be placed on a Vendor's previous operational experience and successes. The expected outcome from the Workshop will be the issuance of a Request for Proposal and the expected deployment of environmental monitoring technologies during the third quarter of government fiscal year 2002.

The MEMP is a 306-acre DOE closure site currently undergoing Deactivation and Decommissioning (D&D) activities before being turned over to Miamisburg Mound Community Improvement Corporation (MMCIC) for reuse. The current contractor, BWXTO, is decontaminating facilities at Mound to either demolish or transfer them to the MMCIC for office, research and standard industrial use. The Project is seeking candidate technologies that are fully developed and ready for full-scale deployment that will provide more efficient and less costly monitoring than is planned. These technologies should improve on the labor-intensive on-site sampling and analysis and should also improve confidence that the chosen institutional controls are protective of human health and the environment.

The LTSI Project will, in the near term, seek technologies for post-closure monitoring of the institutional controls in place for land parcels already transferred to the MMCIC for re-use. These institutional controls are in the form of Deed Restrictions that, among other things, prohibit removal of soil or installation of wells without prior approval from the State of Ohio, and require land use to remain Industrial. The LTSI Project seeks technologies to implement these institutional controls in the most cost-effective manner, ideally, by minimizing reliance on onsite personnel to monitor and/or maintain the monitoring systems. The LTSI Project will continue to seek technologies to address varied but specific LTS issues over the ensuing three years. The next initiative will seek to remotely monitor buildings that have residual levels of radiological or hazardous material contamination (i.e., residual contamination associated with the building itself, or the surrounding environ). In order for the MMCIC to effectively market these buildings to prospective tenants, building occupants must be assured that radiological or hazardous material contaminants have not migrated or caused a negative impact on human health and the environment. All of the above technologies should gather and transmit data (ideally, in an unobtrusive and real-time/near-real time manner) with a minimum of human intervention and equipment maintenance. At some later date, the project may deploy relevant technologies at other DOE closure sites to address their specific LTS issues.

An Internet Web Site will provide additional details on the project and links to support documents, questionnaires, directions for submitting the required information, and information on the upcoming workshop. The prerequisite for a company attending the Workshop is that they have successfully deployed environmental monitoring technologies/strategies at multiple sites AND that they submit to the web site information about their company (Corporate Capabilities) and deployments (Project Histories). Interested companies can access information about the "Mound Long-Term Stewardship Initiative" at <http://web.ead.anl.gov/techcon/projects/moundltsi>. This project web site will also provide questionnaires and directions for submitting the required information on Corporate Capabilities and Project Histories.

The information provided by the responders at this web site will be the only source used for the purpose of preparing a List of INTERESTED, PRE-QUALIFIED SOURCES. Only those responders selected for the Pre-Qualified list will receive an invitation to the Workshop and subsequently an RFP expected to be issued during the second quarter of government fiscal year 2002. All responses must be posted to the web site by 02/15/02. **TELEPHONE INQUIRIES WILL NOT BE ACCEPTED. THIS IS NOT A REQUEST FOR PROPOSAL. CITE: (XXX-XXXXXXX)**

The Workshop will be organized and facilitated by the project team under the guidance of a Steering Committee consisting of representatives from LTSI Project Team. The Workshop will be co-sponsored by DOE, BWXT, DDFA, and SCFA.

LINKURL: <http://web.ead.anl.gov/techcon/projects/moundltsi>.

LINKDESC: Argonne National Laboratory TechCon Web Site

EMAILADD: mak@emswhq.com

EMAILDESC: Michael Krstich

CITE: (xxx-xxxxxxx)

It is the intent of the LTSI to sponsor a workshop in order to solicit interest from technology vendors of interest. This first solicitation will be directed at those vendors having technologies useful in determining soil movement off-site (Need 3), and well drilling/boring (Need 4). The second solicitation, for building monitoring and surveillance technologies will be done in the same fashion. The LTSI has been set up for a five-year life, through 2006, so solicitations should occur through 2005. The LTSI completion at the end of 2006 corresponds with the Site closure, so the technologies deployed over the course of the project should have completed their “shakedown” period and be ready to assume the full burden of an actual stewardship role.

SUMMARY

In 1998, DOE agreed to sell the Miamisburg Environmental Management Project Site (Mound) to MMCIC. The DOE will convey the entire site to MMCIC in discrete parcels, or “release blocks”. The sales contract specifies that a release block must be remediated pursuant to CERCLA and the EPA must formally approve each conveyance. MMCIC, in turn, subleases parcels to private entities while the decontamination and decommissioning activities are ongoing. Private sector tenants have occupied some parcels prior to the remediation of the entire release block. These activities have provided the DOE with a unique long term stewardship challenge and opportunity.

It was the intent of the DDFA to provide a vehicle with which to capitalize on this opportunity when it established the LTSI. The Long Term Stewardship Initiative will be placing technologies into stewardship situations and have the capacity to change and adapt these technologies while there is the ability to redundantly monitor stewardship issues using other site resources. The LTSI will also aid in the identification of more effective solutions to Mounds stewardship needs.

Site stewards need to continually leverage advances in science and technology to reduce costs and risks associated with stewardship activities and to identify more effective ways of managing residual hazards. The benefits to be gained from advances in science and technology are available only if they are recognized and incorporated into stewardship planning and activities. The results of research applied to other areas may be applicable to long term stewardship, but without a mechanism to identify and prioritize technology needs, potential improvements in the ability to meet long term stewardship needs may be overlooked (3). The LTSI is one way Mound will incorporate science and technology advances into its long term stewardship strategy.

REFERENCES

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- (3) "Long-Term Stewardship Study" US Department of Energy Office of Environmental Management and Office of Long-Term Stewardship, Draft for Public Comment, October 2000.