

ITRC PROJECT PROPOSAL: *Green and Sustainable Remediation (GSR)* (Project under RRM Team)

PROPOSAL DATE: June 27, 2008 [Proposals are due to ITRC Program Administrator by July 1 each year]

Proposal Contact:

Tom O'Neill, NJDEP, 690-292-2150, tom.o'neill@dep.state.nj.us

Patricia Reyes, Noblis, 703-610-2147, patricia.reyes@noblis.org

Javier Santillan, AFCEE, 210-241-9441, Javier.Santillan@brooks.af.mil

Problem Statement (why is this project necessary?)

The ultimate goal of remediation systems is to promote environmental well-being and human health and safety. In order to meet these goals, many remedies in place today were implemented without consideration of green or sustainable enhancements to the environment or their full potential for transferring impacts to other media. For instance, many decisions on remediation technologies do not assess the impacts of greenhouse gas (GHG) emissions, natural resource consumption, adaptability to climate change, or energy usage. Considering these factors during remedy selection will improve overall environmental performance and ensure sustainable processes while ensuring that the remediation remains protective of human health and the environment. This project is necessary to provoke discussion in the regulatory community on the impacts of selecting sustainable remediation technologies versus selecting a technology that could have less desirable consequences.

Many State and federal agencies are just beginning to assess and apply green/sustainable remediation in their regulatory programs. This project will provide an important primer for those that agencies currently initiating GSR programs as well as educate others on the importance of GSR considerations.

Solution / Impact (how will the project impact the environmental marketplace?)

Many decision makers do not consider green remediation practices because they are not informed of available 'green' technologies and/or have tools to consider their effects. At the same time, there is agreement on the need and desire to address the environmental, economic and social aspects of sustainability, on a consistent basis, into the remedy selection & implementation process.

This project is aimed at answering the following questions:

1. How do we quantify the amount of remediation process-related contamination?

2. How can we minimize the overall risk to human health and the environment by applying sound GSR practices?
3. How can we reduce energy consumption or use alternative sources of energy that will be less harmful to overall environment?
4. How do we promote the use and development of GSR technologies?

Addressing the above questions for environmental decision-makers will have lasting impacts on our environment for generations to come.

Success Measures (how you determine the project impact to the market place)

The success of the GSR team's efforts could be measured by:

1. Interest in participation on the Team's following the completion of the Overview document
2. Requests for and downloads of the Overview and subsequent Team documents
3. Participant attendance on the internet based training classes
4. External requests for GSR Team presentations at conferences/forums, and
5. Training participants evaluation of the usefulness of the training

Summary of Deliverables (primary project outputs)

2009

- The RRM Team will spend the first year focused on researching and writing a Technology Overview explaining what Green/Sustainable remediation is, and how GSR is beginning to be implemented in new state and federal programs. The RRM Team will survey ITRC states, partners, and stakeholders (internal and external) on the interest in and focus of a potential Technical Regulatory guidance document.

2010 / 11 (optional)

- Pending the interest of the ITRC and the State team members, the RRM team will devote the second and third years to writing a Technical Regulatory document, including producing a State survey and associated Internet training materials on implementation of GSR.

Project Schedule

2009 GSR Project Schedule

Team Meeting/Getting Started – February 2009

Overview Research and Writing – February – August 2009

Team Meeting/Review of Draft Overview – August 2009

Team Meeting at ITRC Fall Meeting/Review Final Overview document – October 2009

Issue a courtesy Tech Reg Interest Survey to States, Partners and stakeholders – October 2009

External Review of Overview document – November 2009

Evaluate results of the interest survey – December 2009

Overview Editing and Printing –January / February 2010

Develop project proposal for a GSR Tech Reg if survey results are favorable – January / February 2010

Target Audience

The main target audience for this proposed project are state and federal regulators, DoD and DOE and private industry project managers, and environmental contractors. This issue is of national significance today and will also be a great resource for community stakeholders as well as educators.

We will be contacting other State, Federal, and stakeholder organizations, including ASTSWMO, ASIWPCA, NEWMOA, USEPA, SuRF, and the National Governors Association to ascertain their interest in partnering on the subject of green/sustainable remediation and to ensure that we are not duplicating any similar State efforts.

Resources Required

Personnel:

The RRM team is well positioned to take on this project as we have a large team with strong State membership and leadership that is very interested in this topic. Several of our team members have practical experience in evaluating GSR-related issues during the RPO and PBEM reviews conducted at remediation sites. The Team will be made up of the current total of 65 RRM Team members, including members representing 8 States, 5 from USDOE, 16 from USDoD, and 6 from USEPA, as well as numerous industry representatives and a public stakeholder. State Team members have indicated great interest in the proposal, particularly our members from CA and MA. We will also expect to add to the Team in 2009 as additional team members with a special interest in Green/Sustainable Remediation are identified. We plan on managing such a large team by having a sub-team focused on GSR that will report back to the bigger RRM team. The current team leader, Tom O'Neill, (NJDEP) and program advisor, Patty Reyes (Noblis) will continue in their roles during this new project to provide the necessary stability with the RRM team.

Related Work:

There is great interest within State and federal agencies as well as the private sector in understanding and evaluating GSR. Examples of related work that we would coordinate with include :

1. EPA's Technology Innovations efforts on Green Remediation (http://www.clu-in.org/greenremediation/tab_d.cfm)
2. United States Air Force/AFCEE's efforts on sustainable remediation (<http://www.afcee.af.mil/resources>)
3. The Sustainable Remediation Forum (SuRF) –, an industry led group that meets quarterly to enhance efforts to integrated sustainability principles, practices and metrics into remediation projects. (<http://www.battelle.org/Conferences/chlorinated/panel.aspx>)

Other ITRC Teams including the Brownfields Team have indicated their interest in GSR and we would invite them to participate in setting the clear focus of the Technical Overview document.