



OFFICE OF THE UNDER SECRETARY OF DEFENSE
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ACQUISITION
TECHNOLOGY
AND LOGISTICS

MEMORANDUM FOR ASSISTANT SECRETARY OF THE ARMY
(INSTALLATIONS AND ENVIRONMENT)
ASSISTANT SECRETARY OF THE NAVY
(INSTALLATIONS AND ENVIRONMENT)
ACTING ASSISTANT SECRETARY OF THE AIR FORCE
(INSTALLATIONS, ENVIRONMENT, AND LOGISTICS)
DIRECTOR, DEFENSE LOGISTICS AGENCY (DES-E)

SUBJECT: Consideration of Green and Sustainable Remediation Practices in the Defense Environmental Restoration Program

The Department of Defense (DoD) currently operates and manages one of the nation's largest environmental restoration programs. DoD continuously evaluates its environmental programs to identify opportunities to improve program performance while achieving the Department's goals of protecting human health, safety, and the environment. The Department is committed to conducting its environmental program in a sustainable manner, consistent with Executive Order 13423, *Strengthening Federal Environmental, Energy, and Transportation Management*. This Executive Order promotes sustainable conditions, "under which humans and nature can exist in productive harmony, that permits fulfilling the social, economic, and other requirements of present and future generations of Americans." The Department continues to evaluate response alternatives to ensure the "overall protection of human health and the environment." However, as part of the Department's ongoing efforts to implement Executive Order 13423 and reduce its energy demand, the Department is considering additional options for minimizing the environmental impact of existing and future remedial systems.

"Green and sustainable remediation" expands upon the Department's current environmental practices and employs strategies for cleanups that use natural resources and energy efficiently, reduce negative impacts on the environment, minimize or eliminate pollution at its source, protect and benefit the community at large, and reduce waste to the greatest extent possible. Green and sustainable remediation uses strategies that consider all environmental effects of remedy implementation and operation and incorporates options to maximize the overall environmental benefit of cleanup actions.

Opportunities to increase sustainability considerations throughout all phases of remediation (i.e., site investigation, remedy evaluation, design, and construction, operation, monitoring, and site closeout) may exist, regardless of the selected cleanup remedy. Green and sustainable remediation is not new to the Department. Several examples of DoD green remediation efforts are detailed in the Environmental Protection Agency's publication: *Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites*. This publication can be found at: <http://clu.in.org/greenremediation>.



I request that each DoD Component take action to evaluate these opportunities and consider implementing them in current and future remedial activities. It is not our policy to re-open Records of Decision or other decisions and agreements that may be in place or under negotiation with environmental regulators. Remedy selection criteria remain the same under this policy but may include aspects of sustainability. For example, when green and sustainable remediation is cost effective, where it supports long-term effectiveness and permanence, where it expand the universe of long-term property use or reuse options, or where it supports community acceptance. The DoD Components shall consider and implement green and sustainable remediation opportunities when and where they make sense.

I request each DoD Component brief this office in December 2009 on current efforts to implement green and sustainable remediation opportunities and strategies, present guidance you may have issued or have under development on the subject, and discuss your plans to further incorporate green and sustainable remediation into the management of your environmental restoration program. Specifically, I would like to hear about your efforts and considerations in the following areas:

- Sustainability analysis during remedy selection;
- Sustainability analysis of existing remediation systems;
- Preserving natural resources;
- Minimizing energy use and increasing energy efficiency;
- Minimizing emissions (e.g. carbon dioxide (CO₂), sulfur oxides (SO_x), nitrous oxides (NO_x), and particulate matter (PM));
- Use of passive sampling where feasible;
- Minimizing fresh water consumption and maximizing water reuse in treatment systems;
- Maximizing recycling, reuse, and reduction of materials including waste;
- Consideration and/or implementation of environmental remediation technologies with inherent sustainability aspects such as those using plants that can sequester carbon (e.g. phytoremediation, evapotranspiration covers, and engineered wetlands) and in-situ remedies (e.g. enhanced bioremediation, biowalls, and composting);
- Minimizing the overall environmental footprint of the remedial system and monitoring program. Environmental footprint can be defined as the impact on the surrounding environment that any entity makes as it performs its activity. It is determined by the amount of resources used and the by-products produced that are (or aren't) absorbed by the surrounding environment.

I also request each DoD Component to brief this office again in June 2010 regarding your progress towards integrating green and sustainable remediation into your respective programs.

My point of contact on green remediation is Vic Wieszek, available at (703) 571-9061 and victor.wieszek@osd.mil. Mr. Wieszek will work with your staff to arrange the briefings.



Dorothy Robyn
Deputy Under Secretary of Defense
(Installations and Environment)