



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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OFFICE OF
ENFORCEMENT AND
COMPLIANCE ASSURANCE

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MEMORANDUM

Subject: Transmittal of "Supplemental Environmental Projects: Green Building on Contaminated Properties"

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To: Director, Office of Environmental Stewardship, Region I
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The purpose of this memorandum is to distribute the attached fact sheet entitled, "Supplemental Environmental Projects: Green Building on Contaminated Properties." This document provides information on supplemental environmental projects (SEPs) that can serve to prevent and minimize the environmental impacts associated with the redevelopment of cleaned up contaminated properties. This document is a companion to OSRE's 1998 fact sheet on "Using Supplemental Environmental Projects to Facilitate Brownfields Redevelopment." The 1998 fact sheet focused on site assessment and clean up of brownfields and this new fact sheet expands on that concept to improve the environmental performance of the redevelopment that follows clean up at any contaminated property. This document was produced with helpful input from EPA SEP, land revitalization, and green building experts. This fact sheet supports EPA's efforts to clean up and revitalize contaminated properties and OECA's Environmentally Responsible Redevelopment and Reuse (ER3) initiative.

If you have questions or comments, please contact us or K.C. Schefski at (202)564-8213, schefski.kenneth@epa.gov.

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Supplemental Environmental Projects: Green Building on Contaminated Properties

Introduction

In settlements of environmental enforcement cases, defendants/respondents often pay civil penalties. EPA encourages parties to include Supplemental Environmental Projects (SEPs) in these settlements and will take SEPs into account in setting appropriate penalties.

A SEP is an environmentally beneficial project that a defendant/respondent agrees to undertake in settlement of a civil penalty action, but that the defendant/respondent is not otherwise legally required to perform. In return, a percentage of the SEP's value is considered as a factor in establishing the amount of a final cash penalty. SEPs enhance the environmental quality of communities that have been put at risk due to the violation of an environmental law. While penalties play an important role in deterring environmental and public health violations, SEPs can play an additional role in securing significant environmental and public health protection and improvement.

The Office of Enforcement and Compliance Assurance (OECA) and Office of Solid Waste and Emergency Response (OSWER) are interested in exploring the use of "green building SEPs" at contaminated properties undergoing cleanup and redevelopment.

This fact sheet explains the environmental impacts associated with buildings, summarizes the "green building SEP on contaminated properties" concept, and provides resources and suggestions for pursuing a green building SEP.

The Environmental Impacts of Buildings and Construction

Few people realize the tremendous environmental impact building construction and operation have on our environment. There are approximately 76 million residential and 5 million commercial buildings in the United States today. According to the Department of Energy, these buildings consume 37 percent of all energy used in the United States; 68 percent of all electricity; 12 percent of fresh water supplies and 88 percent of potable water supplies; and, 40 percent of raw materials. Furthermore, these buildings generate more than 33 percent of municipal solid waste streams; 36 percent of human emissions of carbon dioxide; 46 percent of sulfur dioxide emissions; and, 19 percent of nitrogen oxide emissions. Buildings also produce indoor air pollution that can negatively affect performance and cause short-term illness and more chronic problems such as asthma. Finally, the impervious surfaces (e.g., roads

and parking lots) that typically accompany buildings serve as a source and conduit for non-point source water pollution.

Not only do the buildings in which we live and work contribute pollution to our environment but the construction of those buildings also has significant environmental impacts. Construction and demolition of buildings generates 136 million tons of waste a year. Currently only 20-30 percent of this waste is recycled or reused. Construction sites also serve as a significant source of non-point source pollution in our waterways and impact air quality.

What is Green Building?

“Green Building” is a generic term that generally refers to the practice of increasing the efficiency and performance of building systems and reducing the environmental impacts of buildings through better siting, design, construction, operation, and maintenance. Several entities have created standards for achieving a green building, the most notable and comprehensive being the US Green Building Council’s Leadership in Environmental and Energy Design (LEED). EPA’s own Energy Star for Buildings focuses on energy efficiency. Generally, these standards suggest an integrated design approach where performance and environmental impacts are considered from the beginning and analyzed for the full life-cycle of the building.

Green Building SEPs on Contaminated Properties

A green building SEP would attempt to address one or several sources of pollution that would be generated by a building or construction project. A green building SEP would involve an environmental violator agreeing to support and use green building technologies at the redevelopment of a nearby contaminated property in exchange for penalty mitigation credit. The violations may arise under a variety of statutory authorities and the SEP will generally take place on property not owned by the violator. For example, an entity with air violations located in the vicinity of a brownfield redevelopment could purchase energy efficient materials/systems or low VOC emitting materials for the redeveloper; an entity with water violations might construct a 'greywater' recycling system or provide superior storm water management for a redevelopment project; or, a RCRA violator could purchase recycled construction materials or recycle construction or demolition waste at the site. A green building SEP might also take the form of a larger-scale integrated green design and procurement for a nearby cleanup and redevelopment project.

While a green building SEP does not necessarily need to take place on a contaminated property, this approach has several advantages. First, EPA Regions can more easily identify appropriate candidate properties because the cleanup will often take place under EPA or State oversight. Second, because EPA or the State environmental agency will likely have some

presence at the site, interactions with the violator and site redeveloper can be facilitated and violator compliance with SEP obligations more easily monitored. Third, contaminated properties usually have been a long-term blight on the community – many times an environmental justice community – and its environment; thus a green building SEP on contaminated property will provide additional social and environmental benefits for that community.

High performance green building not only helps the environment but typically pays for itself many times over through higher employee productivity, reduced waste, and energy and water efficiency. Some may be reluctant to accept a green building SEP on a contaminated property because the developer/owner will receive this economic benefit. First, as envisioned, the violator and the owner of the property will be different entities so the limits on profitable SEPs generally will not apply.¹ Second, due to the environmental conditions on the property many brownfields have remained unattractive to the private market; therefore, brownfield redevelopment projects are often undertaken by nonprofits, community development corporations, and other units of local government. EPA particularly encourages green building SEPs that support brownfield redevelopment by noncommercial entities. Finally, although investing in green building may ultimately

¹ *Guidance for Determining Whether a Project is Profitable and, When to Accept Profitable Projects as Supplemental Environmental Projects, and How to Value Such Projects* (2003)

provide more than a return on the investment for the owner, the environmental benefits to the community remain real.

Current SEP Policy

A green building SEP will generally qualify as an environmental restoration or prevention project (e.g., increasing the energy efficiency of the building) or a pollution prevention project (e.g., recycling of construction debris, green roofs or pervious parking lots to prevent contaminated storm water runoff) pursuant to the "EPA Supplemental Environmental Projects Policy" (1998). Under the 1998 policy, pollution prevention SEPs are a preferred category of SEPs, which “can be reflected in the degree of consideration accorded to a defendant/respondent before calculation of the final monetary penalty.” Additionally, as noted, many contaminated sites are in environmental justice communities and EPA encourages SEPs in communities where environmental justice may be an issue.

EPA’s current policy regarding SEPs also includes several guidelines that must be followed to ensure that the SEP is within the government’s authority. While each SEP must meet all of these guidelines the following sections discuss those most relevant to green building SEPs on contaminated properties. If you have questions, headquarters staff can help to ensure that a green building SEP meets the nexus and other requirements of EPA's SEP policies.

Green Building SEPs Require an Adequate Nexus Between the Violation and the Project

The most notable requirement with respect to SEPs is that there must be a nexus between the violation and the project. Nexus exists only if one of the following three conditions is met:

- I. the project is designed to reduce the likelihood that similar violations will occur in the future; or
- II. the project reduces the adverse impacts to public health or the environment to which the violation contributes; or
- III. the project reduces the overall risk to public health or the environment potentially affected by the violation at issue.

Green building SEPs should generally occur within the same geographic area as the violation. However, geography alone is not enough to meet the nexus requirement; the project must also relate to the violations that are the subject of the enforcement action. Since buildings and construction contribute a diverse array of environmental impacts, green building SEPs can generally meet the nexus requirements.

Green Building SEPs Cannot Include Otherwise Legally Required Activities

A key SEP concept is that the environmental improvements resulting from the SEP would

not otherwise have occurred without the settlement incentives provided. Also, SEPs are voluntary projects, which can not be ordered by EPA. Obviously, this means that the SEP must go beyond simple compliance with existing federal, state, and local laws and regulations. With respect to green building SEPs, EPA should pay particular attention to local and state design and construction requirements. For example, many municipalities across the country have improved local building codes to minimize environmental impacts by specifying guidelines on energy efficiency, materials selection, storm water management, etc. Depending on the specific green building SEP activities, the Region should ensure that the defendant/respondent demonstrates that the SEP activities go beyond that required by state and local law.

A Green Building SEP May Not Provide Additional Resources to Support an Activity that the Federal Government is Likely to Undertake or Compel Another to Undertake

Typically, EPA's statutorily directed involvement at a contaminated property is focused on environmental assessment and cleanup. Since green building SEPs focus on mitigating the environmental impacts of the development and not the contamination at the site, a green building SEP is unlikely to run afoul of this requirement. However, EPA should also be mindful of other federal agency involvement at the site to ensure compliance with this requirement.

A Green Building SEP May Not Provide a Federal Grantee with Additional Funds to Perform a Specific Task Identified Within an Assistance Agreement

Federal programs exist that may provide grant funding for green building related projects. For example, while EPA's brownfields program primarily provides grants for environmental assessment and cleanup, they have also provided green building technical design assistance through grantees. In this example, a SEP could not be used to provide additional funds for these design services. However, other aspects of the development could still be the focus of a green building SEP, such as the recycling of construction debris or the acquisition of green building materials. EPA should inquire with the owner regarding any other federal assistance they may be receiving.

Coordination and Communication

Effective communication and coordination will likely be the keys to seeing this concept move from an idea to implementation. At some sites redevelopment moves relatively quickly and it may be difficult to synchronize the timing between the redevelopment and enforcement negotiations. At other sites redevelopment plans may be taking shape early in a lengthy cleanup process, leaving sufficient time for coordination. The Regions will need to be proactive to find an appropriate site and an appropriate case. To implement a green building SEP will take communication amongst cleanup programs/counsel and regulatory enforcement counsel. We encourage the Regions to communicate

internally and welcome suggestions on how to make this type of communication more institutionalized and permanent – possibly a monthly or quarterly discussion and sharing of enforcement case and site redevelopment information.

Headquarters has established an informal workgroup to assist the Regions with green building SEPs on contaminated properties. The following people can provide direction and assistance:

Beth Cavalier (SEPs)
Melissa Raack (SEPs)
K.C. Schefski (contaminated site identification and green building SEPs)
Phil Page (contaminated site identification)
Mike Northridge (SEPs and contaminated site identification)
Alison Evans (contaminated site identification, green building)
Betsy Devlin (contaminated site identification, other OSWER SEP ideas)
Ken Sandler (green building)
Alison Kinn (green building)
Timonie Hood (green building)

EPA also has experts on the environmental impacts of development and solutions to avoid or mitigate these impacts, who can help provide direction. Additional information on green building can also be found at the following websites:

www.epa.gov/greenbuilding
www.usgbc.org

Conclusion

The use of green building SEPs will help further several EPA priorities embodied in the Land Revitalization Agenda (LRA) and the Resource Conservation Challenge (RCC). The LRA seeks to encourage the cleanup and redevelopment of contaminated properties and the RCC focuses on facilitating pollution prevention, reducing priority chemicals, and conserving energy and materials. A focus area for the RCC is green building.

This approach will also expand upon potential SEP activities at brownfield sites as identified in "Using Supplemental Environmental Projects to Facilitate Redevelopment of Brownfields" (1998), and greatly facilitate the environmentally responsible redevelopment and reuse of contaminated properties. In addition to green building SEPs, OECA and OSWER are committed to exploring and working with the Regions to implement other SEP ideas to help achieve these priorities.

For further information, please contact KC Schefski (OSRE), (202)564-8213, schefski.kenneth@epa.gov; Beth Cavalier (ORE), (202)564-3271, cavalier.beth@epa.gov; or, Melissa Raack (ORE), (202)564-7039, raack.melissa@epa.gov