



Environmentally Preferable Purchasing In Action



Parking Lot Project Fact Sheet An EPP Pilot Project Update

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After more than a year of experience with the "green" parking lot contract, the Department of Defense (DOD) and the U.S. Environmental Protection Agency (EPA) are sharing the most recent results of this Environmentally Preferable Purchasing (EPP) pilot project. This fact sheet describes the project's background and current status, highlights recent project successes, suggests future challenges, and details the lessons learned. It is an update to *Paving the Road to Success*, an EPP case study published in November 1997 (EPA742-R-97-007). The full case study is available via the EPP Web site <www.epa.gov/opptintr/epp> or by calling the Pollution Prevention Information Clearinghouse at 202 260-1073.

Background

In June 1997, DOD awarded D-M&S, Inc., a 5-year, \$1 million per year, fixed-price, line-item contract to maintain and repair the parking lots and access roads at the Pentagon and three other DOD facilities. The contract includes traditional price and performance requirements as well as incentives to use products with multiple, positive environmental attributes.

The contract includes work sheets for 20 product categories representing 90 percent of the materials used to repair and maintain the parking lots. Each work sheet identifies the mandatory operational requirements for a product. Eleven work sheets also include optional environmental attributes for which D-M&S, with DOD approval, can earn a 2-percent price differential for each attribute it incorporates up to a ceiling of 10 percent per line item and an overall task-order price differential of 5 percent. The contract also provides additional opportunities for the contractor to improve environmental performance and earn price differentials, which are subject to the same line-item and task-order ceilings.

As of October 21, 1997, Federal Acquisition Regulations (FAR) require all federal agencies to purchase "environmentally preferable and energy-efficient products and services" (FAR 23.704). The DOD parking lot contract illustrates one way of satisfying this FAR requirement.

This fact sheet is designed to be removed from the EPP Update and kept with your existing copy of *Paving the Road to Success*, the EPP case study documenting DOD's parking lot pilot project. Living its mission, the EPP program determined that it was more environmentally preferable to insert this fact sheet in the newsletter than to produce and deliver it separately.



227,934 square feet of parking lots and roadways have been paved with products that contain positive environmental attributes.

Current Status

During the 15 months the contract has been in place, the contractor has used products with positive environmental attributes to pave 227,934 square feet of parking lots and roadways. When compared to traditional products, the contractor's products have increased recycled-content percentages, reduced volatile organic compound (VOC) levels, and decreased overall toxicity.

Use of Environmentally Preferable Products

Since the contract began, the DOD contractor has used:

- 3,328 tons of recycled asphalt
- 1,031 tons of recycled concrete
- 300 cubic yards of concrete containing recovered materials
- 3,558 linear feet of recovered glass for reflective surfaces
- 5,200 linear feet of an asphalt sealer containing recovered crumb rubber
- 3,558 linear feet of paint containing less than 50 grams per liter of VOCs
- 24,324 square feet of low VOC concrete curing compound
- 5,200 linear feet of recovered-content asphalt joint sealant

Project Successes

While this pilot project has enjoyed many successes, the two most recent success stories involve identifying new environmental attributes and promoting the wide-spread use of environmental products.

Identifying New Environmental Attributes

To prepare the contract work sheets, the DOD/EPA team used publicly available information and conducted a limited market survey to identify the environmental attributes. The team believed it would be challenging for the contractor to locate products exceeding the attributes it identified.

A few months into the contract, however, D-M&S had already identified eight products exceeding the environmental criteria detailed on the work sheets and had proposed an environmental attribute for several products for which DOD had not identified any criteria. The contractor conducted an extensive Internet search and queried numerous contacts and suppliers throughout the paving and road construction industry looking for products with improved environmental performance. "All we needed to know," according to Sam Croghan, a cost-estimator with D-M&S, "[was] what types of environmental information to look for."

Promoting the Wide-Spread Use of Environmental Products

Several of the products D-M&S identified as environmentally preferable perform better than traditional products. In fact, the contractor is using them on other projects, not because of their environmental features, but by virtue of their

performance. As a result, the use of environmental products is spreading beyond the scope of the pilot project, achieving one of the goals of the DOD/EPA pilot project team and of the EPP program. It also demonstrates that environmental improvements can be made without compromising cost or performance.

In addition, several organizations have contacted DOD and EPA regarding the environmental language used in the parking lot repair and renovation contract. Several cities, counties, and municipalities are considering incorporating similar language into their contracts.

Future Challenges

Currently, DOD officials can readily determine if a proposed product improves environmental performance because the parking lot contract clearly identifies the environmental attributes on 11 of the 20 product work sheets. If a work sheet identifies a VOC content of less than 80 g/L as environmentally desirable, for example, and the contractor proposes a product containing 60 g/L, the new product is considered environmentally preferable.

Determining environmental preferability will likely become more difficult as the contract continues, however. DOD, for example, is currently evaluating two competing sealants—a traditional sealant with environmental criteria defined on an existing product work sheet and another potentially revolutionary product that is more durable. While durability is generally a positive environmental attribute, it does not necessarily mean the new product is more environmentally preferable. It is possible, for example, that the processes used to manufacture the more durable product require more energy to produce and transport the product or are more toxic than those used to produce the traditional product. These additional environmental concerns might negate the environmental improvements attributed to its increased durability. From an environmental life-cycle perspective, it is still unclear which product is preferable.

At this point, DOD, EPA, and D-M&S have asked the manufacturer of the new sealant for additional environmental information about its product. The information provided by the manufacturer will help DOD determine which of the two competing sealants to use. Until the environmental benefits of competing products are clearly defined, traditional measures like price and performance will remain the primary determining factors.

This situation highlights the complexities associated with comparing the environmental attributes of two different types of products designed to perform the same function. As new environmental attributes are introduced, these decisions will continue to become more complex. It also should lead to the development of new environmental decision-making tools.

Lessons Learned

In addition to the lessons cited in the full case study, recent contract experiences demonstrate that contractors can locate environmental products as part of routine project performance, price differentials might not be necessary, and environmentally preferable does not necessarily mean “more expensive.”

New environmental decision-making tools will continue to develop as more environmental attributes are introduced to products.

Contractors Can Locate Environmental Products

D-M&S's ability to collect information on the environmental attributes of the products used under the parking lot renovation and repair contract suggests construction contractors might be in a better position than federal purchasers to identify the environmental attributes of construction products because of the contractors' previous experience with the products and their contacts throughout the industry. After DOD identified the environmental attributes of concern, D-M&S obtained product information that allowed DOD to compare products based on their environmental performance. This experience suggests the contracting mechanisms used in this innovative contract might be appropriate in other situations.

Price Differentials Might Not Be Necessary

The DOD/EPA team included price differentials in the contract fearing small businesses would not otherwise be able to afford to conduct the product research. D-M&S claims, however, the price differentials had no effect on its decision to bid on the project. According to Mr. Croghan, the 2-percent price differential is not nearly as important or as profitable as the following:

- Keeping the customer happy.
- Gaining knowledge and experience in identifying and working with environmental products and processes.
- Using the experience working with environmental products and processes to distinguish D-M&S from its competitors.

Environmentally Preferable Does Not Mean 'More Expensive'

After more than one year of experience with the contract, the average cost for the work completed is significantly *lower* than similar work on other DOD parking lot repair contracts, which do not include environmental features. The price differential has increased expected contract costs by only 0.5 percent. In fact, even if the contractor had earned the maximum price differentials as defined in the contract, the average costs still would be lower than other DOD parking lot repair and maintenance contracts.

Bob Cox, the DOD program manager for the contract, attributes the favorable contract price to DOD's competitive contracting process and the traditional evaluation factors—price and performance. Furthermore, as a fixed-price, line-item contract, the contractor, not DOD, absorbs any cost difference between the contractor's proposed line-item cost and actual costs. The contractor might be making additional profits on some line items and losing money on others, but the cost to the government does not change. "With this contract," according to Mr. Cox, "DOD is receiving a quality product with improved environmental performance at a lower cost, which proves you do not have to pay more to go 'green.'"

"No one will get rich off of the price differential, but we believe the knowledge we gain will bring us a lot of future business."

— Sam Croghan,
D-M&S, Inc.
DOD Parking Lot
Repair Contractor