



**Comptroller General
of the United States**

Washington, D.C. 20548

Decision

Matter of: Purification Environmental

File: B-270762

Date: April 22, 1996

C. G. Steiner for the protester.

Bill Creeden and Arnold B. Olender for Waste Abatement Technology, L.P., and Khodi G. Irani for MKM Engineers, Inc., intervenors.

William A. Hough, Esq., Department of the Army, for the agency.

C. Douglas McArthur, Esq., and Christine S. Melody, Esq., Office of the General Counsel, GAO, participated in the preparation of the decision.

DIGEST

Where record establishes, and protester does not dispute, that only one method of treatment for contaminated groundwater will remove the contaminant without creating a hazardous waste, there is nothing improper in the issuance of a solicitation that requires contractor to use the selected treatment process and to meet state guidelines for remediation.

DECISION

Purification Environmental protests the terms of invitation for bids (IFB) No. DACA21-96-B-0004, issued by the Corps of Engineers for a groundwater treatment system at Redstone Arsenal in Alabama. Purification Environmental essentially objects to the agency's requiring bidders to meet performance requirements of the statement of work while specifying a particular design.

We deny the protest.

In 1989, a valve malfunction in the still of the degreaser at Redstone Arsenal resulted in the discharge of trichloroethylene (TCE), a degreasing solvent, into the local sewer system. Efforts to deal with resulting contamination were not entirely successful which untimely led to the state of Alabama's issuance of a notice of violation that required the Army to take action for interim remediation and control of the contamination.

The IFB, issued on November 13, 1995, contemplates award of a firm, fixed-price contract to the low, responsive, responsible bidder for installation and operation of an interim corrective measure (ICM) groundwater treatment system. The project is intended as a short-term, temporary remedy responsive to the notice of violation

and requires operation of the system for 6 months after installation, with three 1-year option periods.

The solicitation requires extraction of groundwater and management of water and soil containing TCE as a hazardous waste until such time as the contractor has treated it to remove the TCE to below detection limits. In this regard, paragraph 1.1.7 of the summary of work, which is the specification at issue here, requires the contractor to design, provide, install, and operate a water treatment system utilizing advanced ultraviolet (UV) oxidation using hydrogen peroxide. The specification prohibits use of any other treatment technology and requires the contractor to provide a treatment system meeting "the discharge criteria established by the Alabama Department of Environmental Management in the National Pollutant Discharge Elimination System permit to be obtained by the contractor for this project." The solicitation contains certain minimum requirements for components and instrumentation but otherwise leaves detailed design responsibility with the contractor.

The agency initially evaluated several alternative technologies that a contractor might use to remove TCE and other chemicals from the groundwater. The chief alternatives considered were air stripping (including air stripping with vapor and liquid phase carbon adsorption and air stripping with catalytic oxidation in the vapor phase), carbon adsorption, and UV oxidation. The agency determined each method to be feasible, although carbon adsorption did not appear cost competitive. However, air stripping, which transfers the contamination from groundwater to the air, would create an air pollution hazard. Similarly, carbon adsorption produced a concentrated waste stream which would be costly and difficult to dispose of. By contrast, UV oxidation destroyed TCE, leaving no hazardous waste requiring disposal.

The Corps had a contractor prepare a Design Analysis Report (DAR) intended as a guide to the technical aspects of the design and describing the components of the ICM and the basis for selection of those components. The agency requested the contractor to consider the alternative technologies and produce a recommendation. The contractor reached the same conclusion as the agency's own engineer, that UV oxidation represented the best technology for removal of the contamination.

The DAR notes the presence of certain other volatile organic compounds at the site. The contractor recommended selection of the UV oxidation process based on the type and level of contaminants, treatment economy and effectiveness, and the process' ability to actually destroy a wide range of organics to nondetectable levels, eliminating the generation of byproduct wastes or air discharges to handle or treat. The DAR states that the key consideration in the selection of the UV oxidation process is the ability to completely destroy numerous types of contaminants, leaving a residue consisting solely of carbon dioxide, water, and inorganic salts. In short,

the report establishes that use of the UV oxidation process would eliminate, as far as possible, the need for further creation and handling of hazardous wastes. The elimination of this need had the additional benefits of economy and simplification of the permit process.

Purification Environmental asserts that it is improper for an agency to require potential bidders to meet specific performance requirements where, as here, it requires them to use a specific design. The protester argues that the agency is asking bidders to guarantee that a technology selected by the procuring agency—the UV oxidation process—is capable of meeting the discharge standards established by the Alabama Department of Environmental Management. The protester contends that the agency should eliminate the requirement for a design using UV oxidation; relieve potential contractors of the obligation of meeting discharge requirements; or assume the liability in the event a contractor cannot meet those requirements using the UV oxidation process.

Initially, we note that the protester does not allege and there is no evidence that there would be any difficulty in meeting the Alabama discharge requirements with the UV oxidation process. Rather, the key issue, as the protester argues, is whether there is anything improper in an agency's using a combination of design and performance specifications where it determines that such a combination is necessary to meet its minimum needs.¹ The protester identifies no statutory or regulatory prohibition against such a combination, and we have held that there is nothing improper in requiring a contractor to meet performance requirements using a government-dictated design requirement, so long as the agency can show that both specifications—design and performance—represent its legitimate needs. Southern Technologies Inc., B-239578; B-239578.2, Sept. 6, 1990, 90-2 CPD ¶ 394.

The performance requirements are not at issue in the protest: remediation of the site to the Alabama standard is the essential purpose of the procurement. The essence of Purification Environmental's protest is that the agency should not specify one particular design approach; rather, bidders should be able to use any

¹In practice, there is no strict line that separates performance specifications and design specifications; the specifications in government contracts frequently combine characteristics of both. Blake Constr. Co., Inc. v. United States, 987 F.2d 743 (Fed. Cir. 1993). Performance specifications set forth an objective to be achieved—here, meeting the Alabama effluent guidelines—and the successful bidder is expected to exercise his own ingenuity, selecting the means and assuming responsibility for that selection. Design specifications, by contrast, provide a precise, detailed description of the materials to be employed—here, use of the UV oxidation process—and the manner in which construction work is to be performed; a contractor has no discretion to deviate from specifications, but must follow them as road map. Id.

appropriate approach. The protester states that it would use a new Accelerated Chemical Treatment (ACT) process, which the agency did not consider either initially or in the DAR.² The only issue is whether the agency reasonably determined that use of the UV oxidation process represents its minimum needs. We conclude that it did.

In preparing a solicitation for supplies or services, a contracting agency must specify its needs and solicit offers in a manner designed to achieve full and open competition and may include restrictive provisions or conditions only to the extent necessary to satisfy the agency's needs. ABC HealthCare, B-266043, Jan. 23, 1996, 96-1 CPD ¶ 16. The determination of the government's minimum needs and the best methods for accommodating those needs are generally the responsibility of the contracting agency which is most familiar with the conditions under which the products will be used. Purification Envtl., B-259280, Mar. 14, 1995, 95-1 CPD ¶ 142.

The Corps has determined that only the UV oxidation process can remove the TCE without creating a further need for handling hazardous waste. The protester acknowledges that the ACT process requires off-site sludge disposal, which may or not test out as hazardous waste. The protester suggests no other process for achieving remediation without creating further waste, and the record contains no basis for our Office to conclude that the solicitation requirement for use of the UV oxidation process exceeds the agency's actual requirements.

With regard to the combination of design and performance requirements, as noted above, there is no evidence that the performance requirements cannot be met using the specified treatment process. Even if the protester had made such an argument, the mere presence of risk in a solicitation does not render the solicitation improper, and it is within the agency's discretion to offer for competition a proposed contract that poses maximum risks on the contractor and minimum burdens on the agency. See National Customer Eng'g, B-254950, Jan. 27, 1994, 94-1 CPD ¶ 44. Further, where the government does specify a certain design, it has long been established that the risk that the design is unsuited for the intended purpose is allocated to the government, based on a theory of implied warranty. See United States v. Spearin, 248 U.S. 132 (1918); Blake Constr. Co., Inc. v. United States, *supra*; Eng'g Technology Consultants, S. A., Armed Services Board of Contract Appeals No. 43,600, June 1, 1992, 92-3 BCA ¶ 25,133.

²The agency concedes that it did not consider the specific process proposed by the protester but describes it as a variation of the carbon adsorption process, where the TCE is removed from water by passing through a packed bed of activated carbon. In this process, the carbon becomes saturated with respect to TCE and requires disposal.

Given our conclusion that the agency reasonably decided that use of the UV oxidation method was necessary to meet its minimum needs, we see no basis to object to terms of the IFB.

The protest is denied.

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