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# Understanding Environmental Remediation On An Air Force Installation

BY MAJOR MICHAEL SCHRAMA

Bases worldwide must field questions related to environmental remediation, an area of law that intersects environmental law, government procurement, and a host of policy considerations.

JAG attorneys provide a full spectrum of legal services to the U.S. Air Force and very often need to give guidance in a number of legal specialties. Specifically, bases worldwide must field questions related to environmental remediation, an area of law that intersects environmental law, government procurement, and a host of policy considerations. Why is environmental remediation so prevalent? Because Air Force bases have rich histories that predate legislation describing how hazardous substances should be handled and disposed; and the military mission inherently involves various substances, solvents, fuels and munitions, that make their way into the subsurface and groundwater. Environmental remediation is the removal of pollutants and contaminants from soil, groundwater, sediment, or surface water.[1]

The **Defense Environmental Response Program (DERP)** was established as a mechanism for the Department of Defense (DoD) to respond to the clean-up of hazardous substances associated with past DoD activities and is consistent with the provisions of the **Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)**. CERCLA and policy considerations direct DoD taking response actions to the release of hazardous substances, pollutants, or contaminants from military installations that pose a risk to human health and the environment and can use appropriated funds to do so.[2] Under DERP, the DoD conducts cleanup at active installations, formerly used defense sites (FUDS), and base realignment and closure (BRAC) locations. After determining the site and actions needed, the individual military branch must procure a private contractor to undertake the actual remediation.

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## The government relies on private contractors to meet its extensive and challenging environmental remediation responsibilities.

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The government relies on private contractors to meet its extensive and challenging environmental remediation responsibilities.<sup>[3]</sup> This reliance stems from the costly, time-consuming, and complex nature of environmental remediation, as well as the government's need for the scientific and technical expertise contractors can provide.<sup>[4]</sup> Additionally, because no two sites are the same, environmental remediation requires contracts be customizable to meet the needs of each individual remediation site.<sup>[5]</sup> As a result, environmental remediation projects have developed a character separate and distinct from all other government contracts.<sup>[6]</sup> The provisions in government contracts need to be well thought-out because they have the ability to allocate risk and ensure completion of the remediation projects.

A JAG at the base legal office should know that the Air Force has specially trained environmental and government procurement attorneys that choose the method of remediation and then make determinations for bid criteria and choosing the right contractor. Further, the Air Force has environmental and government contracting field support centers specifically designed to assist base legal office with substantive law questions. However, base attorneys should have a general understanding of the techniques used to deal with risk allocation in contract performance for environmental remediation. Specifically, how the Air Force uses certain types of contracts, certain specifications, and certain contract clauses to shift the performance burden. This article will examine each of these techniques, in turn.

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### CONTRACT TYPES

A contract type is the structure used in federal government contracts that signify the compensation agreements and responsibilities. The two types of contracts used in environmental remediation are fixed-price and cost-reimbursement.<sup>[7]</sup> In fixed-price contracts, the government and the government contractor agree, before any work is performed, that the government will pay the contractor a fixed fee or price for performance of the contract.<sup>[8]</sup> Fixed-price contracts bind the contractor to complete work at a fixed amount of compensation, once adjusted, regardless of the costs of performance.<sup>[9]</sup> This has the effect of placing the risk for performance costs upon the contractor.<sup>[10]</sup> If the contractors' actual costs are lower than the fixed price, they profit from the contract. If the actual costs are more, the contractor is accountable for the cost overrun.

With cost-reimbursement contracts, the government reimburses the contractor for allocable, allowable costs as they are incurred in performing the contract.<sup>[11]</sup> Cost reimbursement contracts are only used when circumstances do not allow fixed-price type contracts or uncertainties involved in contract performance do not permit costs to be estimated with accuracy.<sup>[12]</sup> A contractor fee is negotiated before work, which represents the profit the contractor will make on the contract.<sup>[13]</sup> Contractors pass their costs directly to the government and the contractor's profit is predetermined.<sup>[14]</sup> Any performance cost that is higher than expected or not contemplated by either party does not negatively impact the contractor's profit.

The cost-reimbursement contract fee and reimbursement scheme place the risk of the contract on the government. Fixed-price contracts are attractive to the government because of the government's ability to control the cost and divest itself of cost risk. There is a general preference for executive offices to use fixed-price contracting because of the preference to "minimize risk and maximize value for the taxpayer."<sup>[15]</sup> Fixed-price contracts are seen as the "best suited for achieving this goal because they provide the contractor with the greatest incentive for efficient and economical performance."<sup>[16]</sup> Fixed-price contracts are seen as providing "greater incen-

tive than cost-reimbursement contracts for the contractor to control costs and perform efficiently.”[17]

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### The strategy in environmental remediation should be to use the contract that will ensure project completion.

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The strategy in environmental remediation should be to use the contract that will ensure project completion. Subjecting the contractor to an unreasonable amount of risk will only serve to drive up contract prices and run the risk that contractors walk-away from projects.[18] Fixed-price contracts are supposed to be used when “the risk involved is minimal or can be predicted with an acceptable degree of certainty.”[19] However, if there are a considerable number of unknowns and unpredictable risks in a specific remediation, cost reimbursement may strike a fairer balance between contractor motivation and reasonable risk-taking. Although the government wants a fair price and cost control, the goal is the environmental remediation. Fixed-price contracts create more economic motivation to fulfill the contract; however, cost reimbursement contracts provide more stability and a higher probability of project completion.

#### CONTRACT SPECIFICATIONS

Generally, the government uses specifications in solicitations to communicate what it needs by setting forth objectives and standards. Specifications may include descriptions of the work to be done or drawings. For environmental remediation projects, two types of specifications are particularly important for the government: design and performance specifications.[20]

Design specifications “set forth in precise detail the materials to be employed and the manner in which the work [is] to be performed, and the contractor [is] not privileged to deviate therefrom, but [is] required to follow them as one would a road map.”[21] In theory, design specifications are beneficial to the government in that they provide for budget manage-

ment, quality control, a single source of accountability, and faster project completion.

Design specifications are conducive to tasks that can be clearly described and the government clearly understands the problem and solution—for example, finding a contractor to conduct a remediation (such as establishing a water treatment plant) or completing an environmental study. However, design specifications may not be appropriate where the government does not possess expertise in the field, or the work is particularly complex. Not having the requisite expertise is an issue because the government is liable for defective design specifications when it designates a particular type of design, method of performance, or particular process that is not feasible.[22]

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### The extent of environmental remediation can be difficult to predict, which can impact performance specifications.

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Performance specifications “specify the results to be obtained and leave it to the contractor to determine how to achieve those results.”[23] The specifications attempt to describe the work in terms of what the end goal is supposed to be instead of delineating exactly how to perform the work. The contractor assumes almost all the risk when accepting the terms of the performance specifications. Further, performance specifications allow the contractors flexibility to seek the best avenue to accomplish work during performance, thereby benefiting both the contractor and the government.[24]

The extent of environmental remediation can be difficult to predict, which can impact performance specifications. Often times, making forecasts is not possible when a project is complex, long-term, and has many variables.[25] In these cases, the use of performance specifications often results in the government or the contractor receiving less than the benefit of the bargain. Ultimately, in negotiating an environmental remediation contract, the government should balance design and performance specifications based on the

extent of the remediation, the expertise of the government, and the availability of established practices.

## CONTRACT CLAUSES

Most government contract terms are boilerplate contract clauses that are located in the Federal Acquisition Regulation (FAR). Unless the FAR authorizes a contract clause modification or omission, the standard terms apply. With regard to environmental remediation contracts in particular, the FAR provides general clauses mandating that contractors abide by applicable federal, state, and local hazardous materials laws,<sup>[26]</sup> as well as other specific clauses that shape whether the government or the contractor bears the risk in performance.

For example, any contract must include an environmental protection plan. The plan will include a combination of clauses in the contract to address matters such as Pollution Prevention,<sup>[27]</sup> Permits and Responsibilities,<sup>[28]</sup> and Protection of Existing Vegetation.<sup>[29]</sup> These clauses will require the contractor to contemplate potential environmental issues that need to be addressed during the project. The contractor will also need to develop a plan with detailed steps to avoid or minimize negative impacts on the environment during construction. Further, the contractor is responsible for obtaining any necessary licenses and permits, and for complying with any applicable laws.<sup>[30]</sup> The environmental plan and accompanied clauses provide a powerful risk-shifting mechanism that places both known and expected compliance costs on the contractor.

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“One of the major risks in environmental remediation is the type of subsurface or other latent physical conditions that may be encountered.”<sup>[31]</sup> The major clause to deal with risk allocation of these conditions is the Differing Site

Conditions clause.<sup>[32]</sup> “If bidders were required to assume the full risk of these conditions, they would either have to make extensive examinations and analyses of the site, or include contingencies in their bids to protect against potential unfavorable conditions.”<sup>[33]</sup> The purpose of this clause is to take some of the gamble on subsurface conditions out of the bidding process. The contractor no longer needs to add a large contingency to every bid to cover the risk and the government benefits from more accurate bidding, without inflation for risk that may not occur.<sup>[34]</sup>

Another clause found in the FAR that is integral to proper risk allocation in remediation contracts is the Changes Clause. The Changes Clause gives the “government the unilateral right to order changes in contract work during the course of performance.”<sup>[35]</sup> This clause provides the government flexibility to make changes to the contract to accommodate advances in technology or changes in the needs and requirements of the government.<sup>[36]</sup> Although contractors have no unilateral right to make any changes, they can propose work changes that the government may accept, which can make performance more efficient and improve the quality of the work.<sup>[37]</sup>

The Changes Clause also allows the government to order additional work within the general scope of the contract without having to go through the process of awarding a new contract.<sup>[38]</sup> Environmental remediation often deals with latent issues below the surface and the Changes Clause would allow the government to change the contract to meet demands. This clause allows the government to effectuate effective remediation. Further, if the government’s policy shifts in the extent of remediation, the government could adjust the contract to meet the stated policy.

Moreover, as with all contracts, practitioners should keep in mind that complicated ventures are best accomplished when the parties develop common goals. Accordingly, practitioners should adopt the concept of “partnering in an effort to improve the working relationships of the contracting parties.”<sup>[39]</sup> Although not an enforceable term of the contract, this concept fosters relationships between the various contractors and the government that promotes

achievement of mutually beneficial goals, including successful environmental remediation.

## CONCLUSION

The expectations are not for base level attorneys to be substantive experts in the field of government procurement or environmental remediation. However, having a knowledge base allows the base attorney to have intelligent conversations with the various actors and understand the thought process behind decisions. Essentially, the Air Force can utilize the procurement process to institute risk-shifting measures and lay the groundwork for effective, timely, and comprehensive environmental remediation. As indicated above, the type of contract used, the specifications used, and the clauses used can all be chosen strategically in order to effectively strike a balance between contractor and government interests, while ensuring that ultimately the environmental remediation is completed in a timely manner.

## ABOUT THE AUTHOR

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## EXPAND YOUR KNOWLEDGE:

### EXTERNAL LINKS TO ADDITIONAL RESOURCES

- **Air Force Civil Engineer Center (AFCEC)**, <https://www.afcec.af.mil/Home/Environment/>
- **Air Force Response to PFOS and PFOA**, <https://www.afcec.af.mil/WhatWeDo/Environment/Perfluorinated-Compounds/>
- **Air Force PFOS/PFOA Snapshot (PDF)**, [https://www.afcec.af.mil/Portals/17/documents/Environment/Emerging%20contaminants/PFOS-PFOA\\_Snapshot.pdf?ver=2019-08-28-155658-617](https://www.afcec.af.mil/Portals/17/documents/Environment/Emerging%20contaminants/PFOS-PFOA_Snapshot.pdf?ver=2019-08-28-155658-617)
- **Air Force Protects Airmen, Environment with New Firefighting Foam**, <https://www.afcec.af.mil/News/Article-Display/Article/1556282/swap-complete-af-protects-airmen-environment-with-new-firefighting-foam/>
- **Air Force Working Toward Innovative Groundwater Cleanup Solution**, <https://www.afcec.af.mil/News/Article-Display/Article/1498001/air-force-working-toward-innovative-groundwater-cleanup-solution/>
- **EPA: Remediation Technologies for Cleaning Up Contaminated Sites**, <https://www.epa.gov/remedytech/remediation-technologies-cleaning-contaminated-sites>
- **Military Times: DoD: At Least 126 Bases Report Water Contaminants Linked to Cancer, Birth Defects**, <https://www.militarytimes.com/news/your-military/2018/04/26/dod-126-bases-report-water-contaminants-harmful-to-infant-development-tied-to-cancers/>
- **PFOA and PFOA (Video; 3:26)**, <https://www.youtube.com/watch?v=GmnQWpgwhRY&feature=youtu.be>

### ENDNOTES

- [1] La. Generating, L.L.C. v. Ill. Union Ins. Co., 832 F.3d 618, 625 n. 17 (2016).
- [2] 10 USC § 2701; 42 USC § 9604; Executive Order 12580, Jan. 23 1987, as amended by Executive Order 13016, Aug. 28, 1996.
- [3] John F. Seymour, *Liability of Government Contractors for Environmental Damage*, 21 PUB. CONT. L.J. 491, 495 (1992).
- [4] Amy L. Momber, *Federal Environmental Remediation Contractual and Insurance-Based Risk Allocation Schemes: Are They Getting the Job Done?*, 58 A.F. L. REV. 61, 63 (2006).
- [5] *Id.*
- [6] *Id.*
- [7] In 1984, the Competition in Contracting Act (CICA) amended federal procurement laws to eliminate the statutory preference for negotiating competitive proposals if four conditions are met: (1) time permits sealed bidding; (2) price and price-related factors are the sole basis for the award; (3) discussions concerning bids are unnecessary; and (4) more than one bid is reasonably expected. *See* FAR 6.401; 10 U.S.C. § 2304(a)(2)(A). Because of the complexity of environmental remediation, discussions are necessary to ensure offerors understand compliance requirements. Further, because of the variable nature, cost is only one factor considered in determining the best offer. As a result, negotiated procurement is usually justifiable and preferable to sealed bidding.
- [8] FAR 16.202-1.
- [9] CIBINIC ET AL, *FORMATION OF GOVERNMENT CONTRACTS*, 1218 (4th ed. 2011).

- [10] *Id.*
- [11] FAR 16.301-1.
- [12] FAR 16.301-2.
- [13] CIBINIC ET AL., *supra* note 7, at 1245.
- [14] *Id.*
- [15] MEMORANDUM FOR THE HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES - SUBJECT: GOVERNMENT CONTRACTING, OFFICE OF THE PRESS SECRETARY (4 Mar. 2009), <https://obamawhitehouse.archives.gov/the-press-office/memorandum-heads-executive-departments-and-agencies-subject-government-contracting>.
- [16] *Id.*
- [17] *Id.*
- [18] FAR 16.103-16.104.
- [19] FAR 16.103
- [20] 41 U.S.C. § 253(a)(3) (2006); *see also* FAR 11.002(a)(2)(i).
- [21] J.L. Simmons Co. v. United States, 412 F.2d 1360, 1362 (1969).
- [22] *See* Leslie-Elliott Constructors, Inc., ASBCA 20507, 77-1 BCA ¶ 12,354 (government design of three-pipe sprinkler system was defective since it did not meet performance requirements); *see also* Drennon Constr. & Consulting, Inc. v. Dep't of Interior, CBCA 2391, 2013 BCA ¶ 35,213 (design of road that did not meet scenic river requirements).
- [23] *Fireman's Fund Ins. Co. United States*, 92 Fed. Cl. 598, 652-53 (2010).
- [24] Ralph C. Nash & John Cibinic, Postscript: Proposals and Promises 15, No. 1 NASH & CIBINIC REP. P 3 (2001).
- [25] Momber, *supra* note 1, at 70.
- [26] FAR 52.223-3(g).
- [27] FAR 52.223-5.
- [28] FAR 52.236-7.
- [29] FAR 52.236-9.
- [30] FAR 52.223-3(g), 52.236-7.
- [31] JOHN CIBINIC, JR. ET AL., ADMINISTRATION OF GOVERNMENT CONTRACTS 435 (5th ed. 2016).
- [32] FAR 52.236-2
- [33] CIBINIC ET AL., *supra* note 28, at 435.
- [34] The Differing Site Conditions clause offers relief only when there is a material difference between the conditions causing increased costs and the contractor is able to demonstrate that the conditions encountered differ materially from the known and the contractor could not have reasonably anticipated or discovered such conditions prior to bidding. *See* Charles T. Parker Constr. Co. v. United States, 433 F.2d 771, 778 (Ct. Cl. 1970); *Perini Corp. v. United States*, 381 F.2d 403 (Ct. Cl. 1967); *James E. McFadden, Inc.*, ASBCA 19921, 76-2 B.C.A. (CCH) ¶ 11,983 (1976). The clause reduces contractor risks by allowing an equitable adjustment any time the contractor encounters a differing site condition in one of two categories:

(1) Subsurface or latent physical conditions at the site which differ materially from those indicated in the contract; or

(2) Unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inhering in work of the character provided in the contract.

FAR 52.236-2(a). *See also* *Stuyvesant Dredging Co. v. United States*, 834 F.2d 1576, 1581 (Fed. Cir. 1987) (detailing what the contractor must prove to recover for Type I differing site conditions); *Appeal of Covco Hawaii Corp.*, ASBCA 26901, 83-2 B.C.A. (CCH) P 16,554 (1983) (detailing what the contractor must prove to recover for Type II differing site conditions).

- [35] CIBINIC ET AL., *supra* note 28, at 345.
- [36] *Id.* at 346.
- [37] *Id.*
- [38] *Id.*
- [39] CIBINIC ET AL., *supra* note 28, at 9.