Environmental Restoration
Performance-Based Contracting Guidebook

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United States Air Force
Office of The Civil Engineer
Environmental Restoration Branch
(USAF HQ/ILEVR)

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I. Background and Purpose

The Department of the Air Force (AF) Environmental Restoration Program (ERP) is committed to implementing performance-based contracting (PBC) to achieve cleanup program goals through a more effective acquisition process. To formalize this commitment, the Deputy Assistant Secretary for Environment, Safety, and Occupational Health (SAF/IEE) issued the AF Cleanup Program Performance-Based Management Policy memo, dated 27 October 2004, which calls for the use of PBC and acquisition strategies to the greatest extent possible.[1]

The AF has traditionally relied on specific contracting mechanisms that define the approaches and processes to be used for achieving the defined contract objectives. Such mechanisms typically utilize contract types such as cost reimbursable plus fee, time & material (T&M), and process-oriented firm-fixed price. Under these traditional contracting mechanisms, contractors are required to adhere to the Government-specified processes and technologies, and payments are based on contractor compliance with the provided project specifications, rather than achievement of the intended final objectives.

Performance-based contracting, which typically utilizes the fixed-price contract type, represents a paradigm shift from these traditional acquisition strategies and focuses on the achievement of the desired contract objectives without specifying the processes or technologies used to achieve those objectives. Consequently, performance requirements under PBCs are established in a manner that encourages contractor innovation and creativity, while shifting contract performance risk from the Government to the contractor.

PBC is results oriented and focuses on achieving an end-state objective, whereas traditional acquisition strategies are primarily process oriented and focus on specific and descriptive approaches.

Table 1 on the following page presents some key advantages and considerations in using PBC.

This Guidebook is intended to provide an overview of AF's approach for implementing PBCs and assist remedial project managers (RPMs) in:

- Understanding the basics of PBC;
- Screening restoration sites for potential PBC applications;
- Identifying the key components of a Statement of Objectives (SOO);
- Developing and successfully awarding PBCs for environmental restoration projects.

PBCs are intended to be inherently flexible and applicable to a wide range of projects with numerous funding profiles, end goals, and approaches. PBCs can be utilized for part or all of the environmental restoration process, including site studies, interim removal actions, site remediation, and site closure. However, specific projects may have special considerations that require alternative approaches not discussed here, and therefore, where possible, the Guidebook provides sources on where to seek additional guidance.

[1] SAF/IEE memorandum, Air Force Cleanup Program Performance- Based Management Policy, 27 Oct 2004.

Table 1: Key PBC Advantages and Consideration	
Advantages	Considerations
• Focuses on achieving tangible objective(s) • Allows contractors flexibility in proposing solution(s) • Shifts burden for analysis, solutions, and their efficacy to contractor • Encourages use of best-value awards since solutions can vary • Reduces likelihood of cost growth • Longer periods of performance (POPs) allow AF to "buy" more scope/phases under one contract, and therefore can reduce contract actions and/or cost over time • Reduces AF's level of effort over time • Shifts performance risk to the contractor	• Might not be the best option for poorly characterized site(s), resulting in decreased contractor competition and increase in cost • Uncertain funding during contract POP may limit remedial approaches that require early capital investment • May require higher front-end costs which the budgetary cash flow cannot support • Typically requires more up-front planning and longer lead-times to implement • Challenging regulatory climates can influence how contractors evaluate potential solutions/remedies especially those that are creative, relatively new and/or unproven, or aggressive • Stakeholders (AF and regulators) who do not "buy in" to the PBC approach can negatively impact the results

II. Performance-Based Contracting Characteristics

Federal Acquisition Regulation (FAR) 16.1 prescribes policies, procedures, and guidance for selecting a contract type appropriate to the acquisition. The key point is to select a contract type that will fully accomplish the project objectives, while taking into consideration the unique and specific conditions of the project.

According to FAR 16.1, contract types vary as follows:

- The degree and timing of the responsibility assumed by the contractor for the costs of performance;
- The amount and nature of the profit incentive offered to the contractor for achieving or exceeding specified standards or goals.

Table 2 on the following page summaries the primary contract types used in environmental restoration projects.

PBCs can utilize various contract types, including fixed-price or cost-reimbursable, which offer the highest contractor risk and profit incentive. For environmental restoration projects, the best contract type to use under PBC is typically firm-fixed price, especially when sites are well-characterized with clear project objectives; the contractor has flexibility on proposed approaches; and the payment is linked to achievement of established performance objectives.

Table 2: Summary of Contract Types				
Contract Approaches	Contractor Risk	Profit Linked to Objective	Most Relevant to ERP Projects where …	Payment
Time & Material	Low	Low	The extent or duration of the work cannot be accurately estimated and cost cannot be anticipated with any reasonable degree of confidence	Payment is provided for materials and hours worked at set rates
Cost Reimbursable Plus Fee	Low	Medium	Uncertainties involved in contract performance do not permit costs to be estimated with sufficient accuracy, thereby eliminating the option to use any type of fixed-price contract	Payment is provided for costs incurred and the negotiated fee
Process-Oriented Firm-Fixed Price (FFP)	High	High	The risk involved is minimal or can be predicted with an acceptable degree of certainty	Payment may be linked to work completed but not necessarily related to achievement of an objective
Cost Reimbursement PBC	Medium to High	Low to Medium	Sites are poorly characterized and the AF wants to link payments to objectives and might want to utilize an incentive fee approach	Payments is provided for costs incurred when objectives are reached, but not on a monthly basis
Fixed Price PBC	Highest	Highest	Sites are well characterized with clear objectives and contractor flexibility on approach	Payment may be linked to work complete, but not necessarily related to achievement of an objective.

Definition of Performance-Based Contracting

FAR 2.101 defines performance-based contracting as "…structuring all aspects of an acquisition around the purpose of the work to be performed with the contract requirements set forth in clear, specific, and objective terms with measurable outcomes as opposed to either the manner by which the work is to be performed or broad and imprecise statements of work."

Performance-Based Contracts and Performance-Based Management

The use of PBC is one component of the Air Force Center for Environmental Excellence's (AFCEE) performance-based management (PBM) model, which embraces a "results-oriented" philosophy. PBM and PBC are not the same thing, and therefore it is important that these two terms not be used interchangeably. AFCEE developed this overarching approach to reduce the cost and time required to complete environmental restoration projects while effectively managing the government's environmental liability. PBM is a holistic and systematic results-based approach to restoration programs that expedites risk management and site closure while promoting cost effectiveness.

Understanding the Difference between PBC, Performance-Based Service Contracts (PBSC), and Performance-Based Service Acquisitions (PBSA)

The term PBC is an overarching term that refers to a general contracting mechanism that may be applicable to any government acquisition. In this Guidebook, PBC is used in reference to the actual performance-based contract used to accomplish environmental restoration projects.

PBC procurements for environmental remediation projects are typically used for nonrecurring architectural engineering (A/E) or construction services. PBSCs and PBSAs are specifically used for the acquisition of recurring and routine services, such as janitorial services and grounds maintenance contracts. Thus, A/E and construction services are not considered PBSA or PBSC.

The AF addresses environmental studies and cleanup activities under FAR Part 36 as non-recurring A/E and/or construction services. Other federal government agencies or Departments may treat environmental studies and cleanup actions as service contracts that can be completed under FAR Part 37. Regardless of whether FAR Part 36 or FAR Part 37 is being followed, some of the approaches addressed in FAR part 37.6, *Performance-Based Contracting*, might be applicable under PBC efforts.

Characteristics of Performance-Based Contracts

Several basic characteristics distinguish PBCs from traditional contracting methods:

- **Clearly defined performance expectations/objectives:** PBCs are not based on prescriptive Statements of Work (SOWs). Instead, PBCs use Statements of Objectives (SOOs) or Performance Work Statements (PWSs) that identify performance expectations/objectives (e.g., the contract scope).[2] The SOOs or PWSs typically include a final objective and one or more interim objectives, but do not specify *how* to achieve those objectives. This approach allows contractors more flexibility to leverage their environmental remediation and design expertise and implement innovative cleanup solutions.
- **Performance measures and standards:** To demonstrate that a desired outcome has been achieved, interim and final performance objectives should be measurable and verifiable. The AF will establish qualitative or quantitative performance standards for each objective. A *qualitative* measure could be a regulator approval letter stating that all response actions have been completed at the site and no further action is required. A *quantitative* measure could be achieving the Maximum Contaminant Level (MCL) for a designated contaminant in the groundwater monitoring wells on the site.
- **Payment milestones and due dates:** PBCs should also include a payment schedule linked to specific performance objectives and completion milestones. The preferred approach is to specify a payment schedule as part of the Request for Proposal (RFP) defining the work and the expected performance objectives and milestones. Alternatively, if the milestones cannot be accurately determined, the AF can require a payment schedule as part of the contractor's proposal for performing the work and meeting the performance objectives. This is a critical component of an awarded PBC and provides the contractor with a built-in incentive to achieve the objective(s).

[2] This guidance uses the term "SOO" to describe contract document that includes a description of the site, performance objectives, performance standards, incentives, options, and penalties, the POP, and roles and responsibilities. Most people use SOO and PWS interchangeably. There is a proposed FAR Case 2003-018 that distinguishes a SOO as being a statement of high-level requirements, key agency objectives, and/or desired outcomes, while the PWS is more specific and identifies the agency's requirements in "clear, specific, and objective" terms. However, for the purposes of this Guidebook, "SOO" will be used to refer to both types of SOWs.

III. PBC Acquisition Process

PBC requires advance planning and collaboration to successfully develop and implement a contract package that contains clearly defined and accurate interim and final objectives to motivate the winning contractor to achieve the end-state objective. It is essential to assemble a team that understands the process and the potential of its success. This process may involve a shift in roles and responsibility and require key team players to assist with the upfront contracting strategy.

Note that technically PBCs do not have to be competed and can be awarded under fair opportunities selection. However, the AF Environmental Restoration Branch (ILEVR) views competition as an important factor in executing PBCs, and therefore this Guidebook is written assuming a competitive acquisition process is utilized.

This Guidebook breaks down the development of a PBC into nine steps. These steps have been developed based on lessons learned from actual PBCs and input from the AF contracting, legal, environmental, and engineering communities:

1. Screening Projects for PBC Applicability
2. Establishing the Project Team
3. Planning the Acquisition and Acquisition Schedule
4. Making Project Decisions
5. Evaluating Benefits and Limitations of Insurance
6. Developing the Draft Statement of Objectives
7. Conducting Facility Visit and Issuing the RFP
8. Evaluating Proposals and Awarding the PBC
9. Implementing and Overseeing the PBC

Step 1: Screening Projects for PBC Applicability

Understand the Project

This first step involves screening potential environmental restoration projects for the potential application of PBC methodology.

Understanding the site conditions and the need for environmental restoration is a critical part of the PBC screening process. It is important to review documents such as preliminary assessment/site investigation (PA/SI) reports, Remedial Process Optimization (RPO) reports, remedial investigation (RI) reports, monitoring reports, records of decision (RODs), decision documents (DDs) and other agreements to understand site data and restrictions. PBC is most successful when thorough data regarding the nature and extent of contamination at the site are available and when the contract end-state objective is clearly defined.

Some important questions to address at this point are:

- What are the nature, concentration level, and extent of contamination?
- Is there a conceptual site model for the site(s)?

- What laws and regulations are applicable for determining cleanup goals, including site-specific federal and state regulatory applicable or relevant and appropriate requirements (ARARs)?
- What is the anticipated future land use of the site(s)?
- What does the base comprehensive plan stipulate for future use of the site(s)?
- What uncertainties exist?

Evaluate Opportunities to Group Sites

Grouping sites under a single PBC can result in cost and schedule efficiencies, and thus savings for the contractor and the government. Some PBCs have combined similar sites at similar phases under a single contract. Grouping sites can:

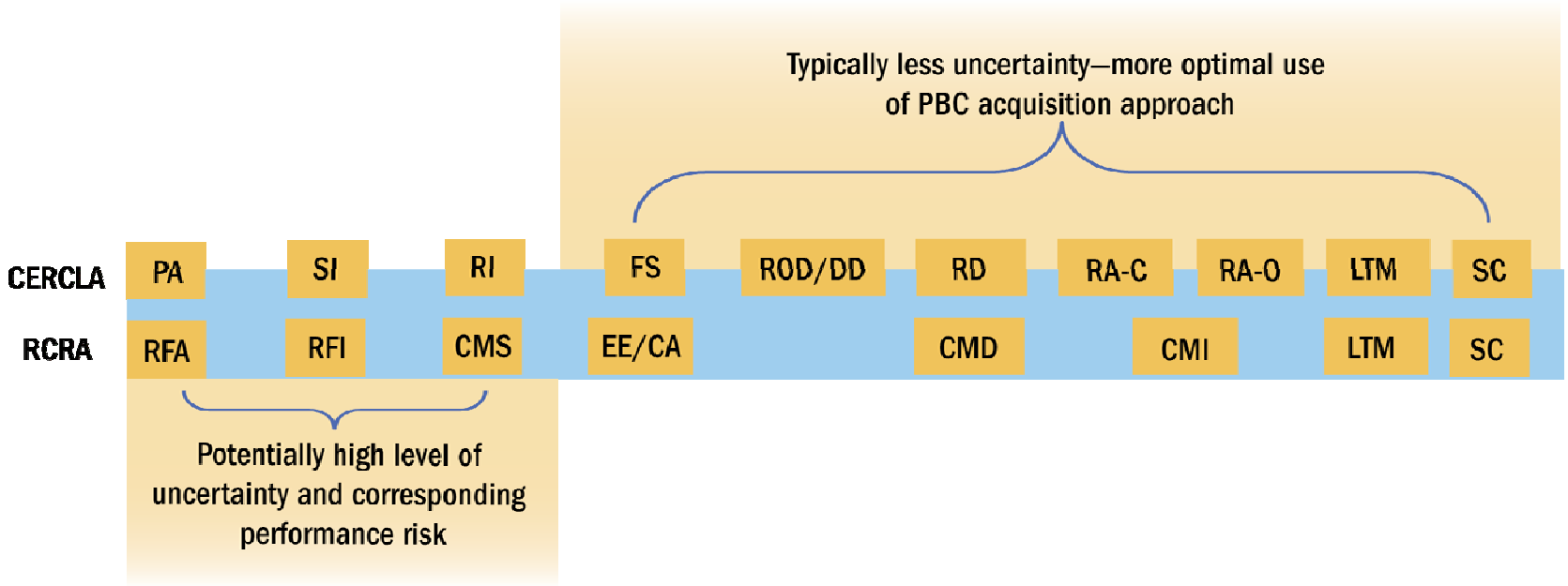
- Reduce the total number of contract actions;
- Spread contractor overhead/project management costs across multiple sites;
- Distribute contractor performance risk across multiple sites;
- Allow development of a single treatment solution for multiple sites contaminated from a single source.

Evaluate PBC as an Acquisition Tool for the Project

PBC should be considered an option for all types of environmental remediation projects, but the ultimate decision should be made on a case-by-case basis. Risk evaluation and professional judgment are required to decide if PBC is the appropriate approach for a project. Answering the following questions may help guide the decision to utilize PBC.

1. **What cleanup phase are the site(s) in?** PBCs have been used successfully in most of the phases defined under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) and/or Resource Conservation and Recovery Act (RCRA). PBCs are most commonly used throughout the feasibility study (FS) to the site closure (SC) phases, but are most effective used after the remedial investigation (RI), since the site has been fully characterized and all potential remedies are still viable at this point (See Figure 1). If a PBC is used prior to completion of the RI, it may be difficult to contract for an end-state beyond the completion of the RI. Since the AF retains signatory authority for all decision documents, thus committing the AF to a selected remedy, any PBC awarded prior to remedy selection will require close coordination between the contractor and AF. Many of the benefits of PBC arise from the contractor's ability to design and implement a remedy that saves money. Even though FAR 36.209 states that "no contract for the construction of a project shall be awarded to the firm that designed the project or its subsidiaries or affiliates," the "head of the agency or authorized representative can provide permission to award a design-build contract."
2. **How extensive is the characterization of the site(s)?** Contractors are more willing to accept the higher performance risk associated with a PBC if the site(s) are well characterized and the project objectives are clearly defined. Conversely, contractors may determine that performance risks are inordinately high and cannot be mitigated given the existing uncertainty. This can result in little contractor interest and/or higher than cost contract bids. Risk mitigation tools such as insurance or a cap on risk may be considered in the SOO, but if the risks cannot be mitigated, a PBC may not be the best contract type.

Figure 1: CERCLA/RCRA Phases and PBC Applicability



Key:

CERCLA Phases

PA – Preliminary Assessment
SI – Site Inspection
RI – Remedial Investigation
FS – Feasibility Study
ROD/DD – Record of Decision/Decision Document
RD – Remedial Design
RA-C – Remedial Action-Construction
RA-O – Remedial Action-Operations
LTM – Long-term Management
SC – Site Closure

RCRA Phases

RFA – RCRA Facility Assessment
RFI – RCRA Facility Investigation
CMS – Corrective Measures Study
EE/CA – Engineering Evaluation/Cost Analysis
CMD – Corrective Measures Design
CMI – Corrective Measures Implementation

3. **Are regulators accepting or knowledgeable of the PBC process? Are regulators willing to work directly with the contractors and/or approve their requests to expedite regulatory reviews?** The AF decides how to execute its contracts, but it is important to consult with stakeholders, such as the regulators, in the planning process to ensure that they understand the PBC process and their role in the process and the fact that the government retains liability and authority. In addition, regulators that are on board throughout the process can play an important role, especially in the pre-solicitation process, by providing input on the site(s) objectives/metrics, the project schedule, and corporate knowledge and perspective during the facility visit. After the contract award, contractors should be encouraged to participate in the restoration partnering process, when applicable

4. **Are there existing agreements governing the cleanup of the site (e.g., RODs, DDs) ?** Although it is not generally preferred, in some cases, PBC may be warranted even though it would require modifying existing agreements. The team should work with the appropriate regulator to assess whether the decision document needs to be modified. Note that getting approval through Explanation of Significant Differences (ESDs) may be a lengthy process, so the AF needs to ensure that the contractor's schedule reflects the additional time that may be needed.

5. **Will the budget support a PBC through the entire period of performance (POP)?** PBCs for certain sites, such as those with large groundwater contamination plumes or those in the early phases of the restoration process, may require longer POPs (e.g. 5+ years), and the funding profile throughout that POP may not match the AF's projections. Contractors may propose significant early capital expenditures to achieve savings in later years, so it is important to evaluate the projected budget versus expected outlays.

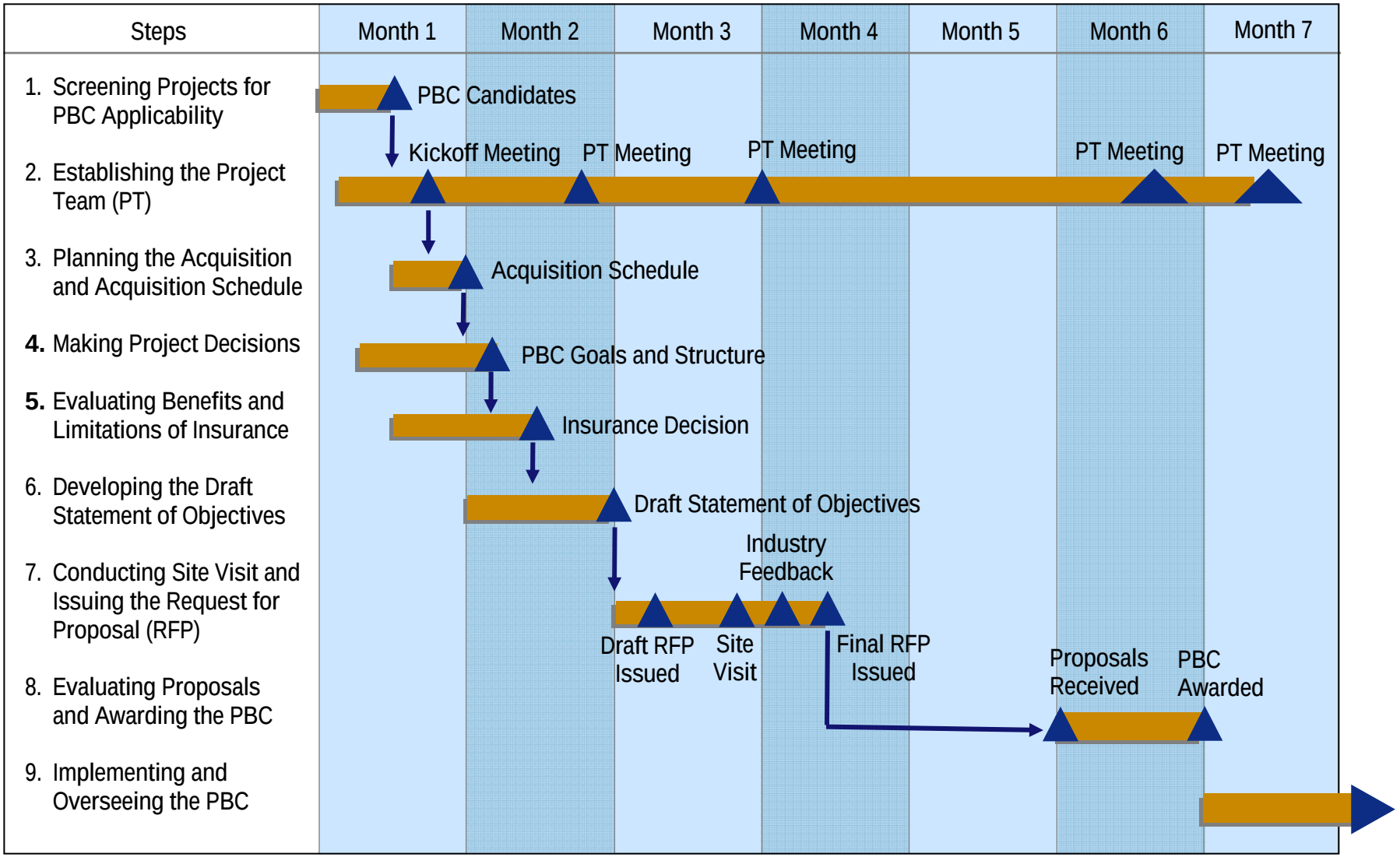
6. **Does the project have clear objectives that are achievable within the allowable contract POP**? If yes, then a PBC may be appropriate. However, if the project is merely "buying" progress but is not expected to achieve a tangible objective within the contract POP, other contract types may be more appropriate.

7. **Does the project have the potential for creative approaches that will leverage the substantial expertise of the private sector?** If the project cleanup approach is already decided or substantially limited for other reasons, then a PBC may not be the best contract choice. If the AF has not specified the precise approach to be followed, then a PBC is an appropriate contracting option.

8. **Can a PBC package be prepared (typically includes an SOO, but not required) that will provide prospective contractors with sufficient site characterization information and a clear understanding of the contract's end-state objective (e.g., site closeout, remedy-in-place, long-term management) and interim performance objectives**? If yes, then PBC in appropriate.

9. **Is there time to execute a PBC**? PBCs can potentially take from three to 12 months or more to be awarded depending on the need to establish measurable site objectives, collect and disseminate site data to all potential bidders, conduct at least one site visit, and allow for a question and answer (Q&A) period during the RFP process. Figure 2 illustrates an example schedule of the nine steps involved in PBC acquisition.

Figure 2: Typical PBC Acquisition Schedule



In general, PBC may be the right approach when the project has the following characteristics:

- Well characterized site(s);
- Clearly defined performance expectations and end-state objective that are achievable within the contract POP;
- Measurable and verifiable performance measures and standards;
- Potential to link the payment schedule to specific performance objectives and milestone completion;
- Regulators are accepting and knowledgeable of the PBC approach.

In general, PBC may NOT be the right approach, or at least not the right initial approach, when the project has the following characteristics:

- Poorly characterized site(s);
- Inordinately high risk to contractors resulting in limited competition and increased costs to the government;
- Requirement for high early capital investment with uncertain return on investment;
- Uncertain funding during the contract period of performance;
- Lack of adequate time and/or resources to conduct substantial up-front planning.

Step 2: Establishing the Project Team

Once the decision is made to consider using a PBC, assemble a project team to assist in strategy, planning, and contract package preparation.

The PBC project team may be the same team that normally develops traditional contracts. However, it is a good idea to:

- Start early;
- Include the service center or contracting office;
- Consult with at least one team member, Air Staff, or MAJCOM expert with experience in executing a PBC;
- Consult with the regulators throughout the project, including the planning stage.

Identify the AF Project Team Members

The PBC project team should work closely with the RPM to ensure the success of the project through proper planning, implementation, and execution. Potential project team members include:

- Remedial Project Manager (RPM) – as team lead;
- Contracting Officer (CO);
- Contracting Officer's Representative (COR);
- MAJCOM Restoration Program Manager;
- Financial Manager;

- Legal Representative;
- Service Center or Contracting Office Technical Lead;
- Community Involvement/Public Affairs Lead;
- Regulators.

It may also be beneficial to include an attorney specializing in procurement or contracts to review procurement documents before they are issued to ensure consistency with the FAR.

Establish Roles and Responsibilities

The team lead assigns roles and responsibilities to make sure that AF team members and government regulatory partners understand the PBC process and their roles during the acquisition. Important roles are summarized in Table 3.

Table 3: Key PBC Roles and Responsibilities	
Role	Responsible Party
Identify data gaps and perform research	RPM – Should know the project and where to access information
Review any existing ROD/DD	RPM, legal representation, or other technical resource
Strategize contracting approach	CO and COR
Determine if any limitations should be imposed on the solution proposed by the contractor (e.g., no land use controls)	RPM, legal representation, or other technical resource
Identify the contractor pool for RFP distribution	Service center/contracting office – CO and COR
Develop a budget and cost estimate	RPM and service center technical resources who understand how to evaluate the potential cost over the contract POP
Develop an acquisition schedule to ensure that the required obligation dates can be satisfied	Service center/contracting office – CO and COR
Ensure best insurance policy suitable for the contract	Insurance Expert
Develop source-selection criteria	Typically led by the CO but with support from a team that should include the RPM and COR

Identify Other Stakeholders

Other stakeholders typically contribute in an advisory role and may provide input that can positively influence project decisions. These stakeholders coordinate on behalf of their organizations and may enhance the planning process by:

- Helping with schedule and budget constraints;
- Guiding the development of the end-state objective;
- Offering innovative solutions or approaches;
- Sharing knowledge about similar projects or PBCs.

Potential additional stakeholders and their possible roles are identified in Table 4.

Table 4: Other Potential Stakeholders

Stakeholder	Role
HQ AF/ILEVR	Provides policy, guidance, legislative interpretation, funding issue assistance
MAJCOM/CEV	Provides guidance, funding issue assistance, end-goal assistance, lessons learned across bases
AFCEE Regional Environmental Offices (REOs)	Shares knowledge about similar projects or PBCs; assists in gaining buy-in for PBC from EPA and state regulators
EPA & State Regulators	Provides Interpretation of regulations, participates in project planning meetings, as appropriate, and assists with approach and schedules
Restoration Advisory Board (RAB) or other Community Stakeholders	Engages stakeholders and advisory groups, such as the RAB. The Project Team should write into the SOO/PWS its expectations of the contractor regarding participation in forums. Although it may be appropriate for the AF to involve RABs in the planning phases, the contractor must comply with the terms of the contract. The RAB is an advisory board and therefore the contractor is not obligated to incorporate the RAB's suggestions.

Define Stakeholder and Contractor Communication for Post-Award Execution

It is vital that the AF, regulators, and the selected contractor understand their roles and responsibilities in the project. Since there are many ways to structure the level of AF involvement in a PBC, it is vital that the level of involvement the AF retains in the PBC is determined before the RFP is issued.

Under PBCs, the AF retains liability, signature authority, and responsibility for the cleanup of sites and their associated remediation documents. The contractor must keep the AF informed of its cleanup progress. As in the case under a traditional contracting approach, with a PBC the AF is still liable under CERCLA/RCRA for the site(s); Therefore, the AF must receive, review, comment, and approve documents prior to their release. However, under a PBC, comments should be restricted to regulatory, factual, and legal issues and should not conflict with the terms and conditions of the PBC. For instance, if a PBC allows a contractor broad flexibility in implementing a remedy at a site, the AF should not then attempt to dictate that a particular remedy be implemented. A final consideration is that PBCs have been implemented to avoid

multiple review cycles; therefore, the AF should be clear in the SOO and the site visit/Q&A sessions as to how involved the AF will be in the the daily details of the project and in the review of deliverables/reports. Such an approach will enable the contractor and the AF to be partners in the process.

Table 5 addresses some of the important questions regarding the roles of the AF, contractor, and regulator(s).

Table 5: Key Questions in Defining AF, Contractor, and Regulator Roles

Question	AF	Contractor	Regulator(s)
Who are the key players after the award of a PBC?	MAJCOM, Base/Owner and service center or contracting office	Selected contractor	EPA and/or State
What are the differences between PBC and traditional roles and responsibilities?	Provides end-state objectives/goals but does not issue prescriptive approaches to the contractors to implement.	Proposes and implements solution(s) and assumes more risk.	Ideally offers input into the development of the SOO and then after contract award work more closely with the contractor on day-to-day performance issues. Note that the AF must be directly involved as decision maker when AF signature is required (e.g.; ROD).
Under PBC, does the AF have an advisory role or can it direct the work?	Must monitor compliance with contract and NOT dictate approach. Must perform inherently government functions such as signing decision documents.	Must keep the AF aware of the progress so AF can approve recommendations and make payments for achieving objective(s).	N/A
How much administrative oversight should the AF provide for a PBC?	Must monitor contractor progress toward the desired performance objectives but not dictate the method of achieving the desired performance.	Provide adequate proof that the milestone was obtained.	N/A
Should the contractors be able to interact with the regulators before PBC award?	Negotiate with the regulators to establish interaction ground rules and ensure that project team and contractors comply. Ensure that regulators are not inundated with phone calls and questions if a large contractor pool exists.	Engage both the AF and Regulators at established times (e.g. site visit) to ensure timely feedback on the PBC ahead of the final RFP.	Encouraged to support the AF and be available to discuss a project and their view of the status and direction of the project.

Regulatory oversight will likely remain at the same level, or may even increase, due to the potential for the AF's reduced oversight role. Timely regulatory review of work plans, remedial designs, cleanup plans, closure reports, and other related technical documents is critical to the success of a PBC. Regulator input into the SOO, and in particular the objective(s) and performance standards, can help accelerate the review process since it will minimize the risk of regulator issues. One thing to consider early in the PBC planning process is the historical

regulatory review cycles versus the project requirements and POP end date. If accelerated review cycles are necessary, funding for state regulators under the Defense and State Memorandum of Agreement (DSMOA) may need to be increased. If the Environmental Protection Agency is involved, confirm their commitment to support the PBC schedule.

In terms of quality assurance (QA) and quality control (QC) within the PBC environment, roles and responsibilities are different than under other contract types and should be defined and communicated clearly and early in the process. The AF should prepare a QA plan to ensure that all stakeholders understand their role in ensuring that contract objectives are satisfactorily met.

Step 3: Planning the Acquisition and Acquisition Schedule

Establish Acquisition Schedule

This step involves clarifying some administrative and logistical details, including the acquisition schedule, available contractual mechanisms, and the approach to change orders.

The project team lead should work with the contracting officer to establish an acquisition schedule and define suspense dates for various components of the acquisition process. As a rule, an average of six months may be required to properly plan and award a PBC (see Figure 2 above). The team must plan to adjust the approach based on inputs received, a contractor facility visit, and at least one formal Q&A process. The schedule can be accelerated, especially if the project objectives are well-established and agreed to by all stakeholders, but the team lead needs to coordinate with the service center or contracting office early in the process to discuss the schedule. A project team knowledgeable in PBC concepts can accelerate the acquisition process.

Plan Logistics for Facility Visit

Scheduling a facility visit and coordinating among base resources, regulators, and contractors requires lead time. Plan this step early to ensure that attendees have time to plan their schedules. Figure 3 is a sample agenda for a facility visit that also provides some direction to the contractors on how Q&As will be handled.

Evaluate Contractual Mechanisms and Contractor Pool

Contracts have differing characteristics in terms of scope, the size of the contractor pool, the types of contractors, and the contract terms and conditions. The project team should coordinate with the service center or contracting office (CO or COR) to evaluate the options that best meet the requirements of the acquisition process. The type and size of the contract will affect the size of the contractor pool, since only a limited number of contractors may have the resources to perform larger contracts. Additionally, the AF can generally control the size of the contractor pool through a two-phased bidding process. For example, the AF may issue a request for qualifications (RFQ). Based on contractors' responses, the AF may then restrict submissions under the subsequent RFP to a subset of contractors that meet the RFQ requirements.

Some PBCs are competed among as few as three contractors while others have been competed to a much larger pool (up to 25 contractors). Generally, four or five qualified contractors may be the

Figure 3: Sample Facility Visit Form

FACILITY VISIT for
PERFORMANCE-BASED CONTRACT FOR PROJECT X AT (AFB and STATE)
Date

AGENDA

0830	Introductions (Location – AF Lead) • AF Team (Team Chief, Field Engineer, Contracting, Support) • Contractors • Regulators • Overview of Project
0900	Project Presentation • Technical issues • Contractual approach
1100	Site(s) Visit
1300	Question and Answer Session (Location)
1500	Adjourn

ADDITIONAL INFORMATION

1. Any technical or contracting questions that arise as a result of today's facility visit shall be submitted in writing to the Contracting Officer no later than (date/time). Answers will be provided to all potential offerors via a publicized Web site, electronic bulletin board, or other appropriate venue by no later than (date/time). The official RFP shall be provided upon availability of funds. Questions should be directed to:

   Contracting Officer
   Tel: XXX
   FAX: XXX
   E-mail: XXX

   Offerors are urged to provide all questions in writing, even if answers to some questions are provided verbally during the site visit. A form is provided with the RFP for submitting questions.

2. Available project information is provided in the Draft Statement of Objectives, and in the CD(s) provided to the contractors.

right pool size to encourage competition. Experience shows that regulators are more likely to engage in substantive discussions with contractors if the contractor pool is limited to three to six firms. Larger contractor pools can be logistically difficult to manage (e.g., facility visit and best value evaluations), while smaller contractor pools may limit the positive impact (e.g., cost or creative technical approaches) that results from a competitive procurement.

Although FFP contract types are preferred for PBC acquisitions, there may be times when a cost type contract (e.g., cost plus incentive fee) is more appropriate, especially when in the early CERCLA/ RCRA investigatory phases. The project team should evaluate the appropriate pricing arrangements, project objectives, and the relevance of incentives in selecting the right contract vehicle for the PBC project.

Determine Appropriate Format for Scoping Document

When selecting the contract vehicle, the project team should check with the service center or contracting office to determine whether to utilize a SOO from a past PBC example to help in structuring the PBC.

Decide on Approach for Change Orders

The team should discuss the potential for Change Orders after the contract award and establish some basic guidelines on how to approach this issue, since contractors will likely request clarification. Consider the following guidelines:

- Change orders will be considered in accordance with the FAR. See Part 43 (Contract Modifications) of the FAR , and specifically 43.2 (Change Orders). Generally, government contracts can contain a changes clause permitting contracting officers to make unilateral changes within the scope of the contract. Also, it is advisable to check with the CO for any other applicable provisions.
- The burden of proof for Change Orders is much higher on the contractor under a PBC acquisition than a traditional contract type. Change Orders should only be considered in cases where the contractor can prove that there is an unforeseeable issue that impacts their objectives and/or costs (e.g., unexpected contamination not captured in existing site(s) characterization information). The AF needs to establish parameters or provide examples to help the contractors understand what types of risk they are accepting and when the AF will consider change orders.
- If the team decides to permit change orders, it should review the language in the FAR applicable to differing site conditions (DSC) and change orders. FAR 52-236-2 addresses DSC modifications, where the contractor identifies a condition that is materially different from those indicated in the contract, and allows the AF to grant an equitable adjustment to the contract. The DSC clause should require the contractor to submit written notice to the AF of the condition. In crafting the clause, the AF may use the language in FAR 52.236.-2 as guidance. However, the AF team should tailor the contingencies that qualify as differing site conditions to the contract, as the contingencies stated in FAR 52.236-2 will likely be overly broad when applied to an environmental PBC. Change orders may thus allow the AF to better meet specific project needs and cleanup requirements without having to use the procedures required for new procurements.

Step 4: Making Project Decisions

Collect Available Site/Project Data

Key project decisions regarding PBC goals, structure of the PBC, and budget are decided in this step, but the initial approach may later need to be adjusted based on the facility visit for the project team and interested contractors.

The project team should start collecting relevant site/project information upfront for distribution to the contractor pool. More comprehensive site data will result in more informed offerors and generally improve the number and quality of proposals received. This step may be logistically difficult depending on the size of the project, number of geographic locations covered by the PBC, and quantity and format of available information. There are many ways to make this information available with minimal cost to contractors, including distributing CDs, allowing access to administrative records, and/or establishing Web sites. Generally, data collection and dissemination should be accomplished by:

- Providing complete and accurate site data to improve quality of proposals;
- Including all relevant information to avoid later claims against the AF;
- Distributing preferably with the draft RFP.

Identify the Project End-State Objective

It is critical that the contract end-state objective be tangible, achievable, and measurable.

The project team should discuss and agree on the end-state objective of the PBC. This may seem like a simple decision, but it can sometimes be challenging to decide what constitutes project success. Examples of factors to consider when establishing the end-state objective include:

- Applicable laws and regulations, such as compliance with the National Contingency Plan;
- Near-term land use of the site;
- Anticipated future land use and construction potential for the site;
- Base Master Plan;
- Options for use of Land Use Controls (LUCs).

It is important to remember that the goal for a typical ERP site is approval of site closure. However, the end-state objective of the PBC will not always be site closure, due to current site status and POP limitations. Some examples of other end-state objectives include:

- Approval of an investigation report;
- Approval of a remedial design;
- Completion of a series of long-term monitoring requirements.

Decide on Appropriate Interim Performance Objectives

The project team should discuss and decide on the appropriate interim performance objectives, which are important milestones towards the end-state objective. Interim performance objectives offset the contractor's negative cash flow as the project proceeds and can reduce overall costs. The AF has several options for determining interim objectives, including:

- Establishing all interim performance objectives;
- Establishing some interim objectives but allowing contractors to propose other interim objectives;
- Allowing contractors to propose all interim objectives, given that the AF includes objectives' relevancy and appropriateness as one of the proposal evaluation factors.

PBCs are designed to be flexible and enable the project team to meet the needs of the specific project and its cleanup requirements. However, it is difficult to negotiate interim objectives after contract award. Though some milestones may have to be renegotiated after contract award, it is only recommended under extenuating circumstances.

Prepare Cost Estimate and Project Budget

The project team should prepare a cost estimate based on the team's conceptual approach to the project. The cost estimate can sometimes be used to help confirm that the PBC end-state objective is reasonable and affordable given any budgetary concerns. Several approaches can be taken to prepare the project estimate, as summarized in Table 6. An estimate based on Remedial Action Cost Engineering and Requirements (RACER) model may be most appropriate, but in some cases a spreadsheet estimate using historical costs may be more appropriate. The accuracy of these estimates can range from high to low depending on the assumed approach used by the government versus the contractor. The cost estimate is important in terms of project execution and for establishing a budget over the life of the contract. The entire budget may be required prior to contract award unless options and other contract approaches can be effectively implemented. This budget projection can become a critical factor if one or more contractors propose aggressive solutions with early capital expenses.

Table 6: Cost Estimating Approaches

Estimate	Purpose	Level of Detail	When
Independent Government Estimate (IGE)	Typically required for the official contract folder.	Fairly detailed; some COs allow use of programming estimates for the file if recent and accurate.	Prior to issuance of RFP.
Estimated payment schedule over POP	Optional – Use if concerned about the budget over the POP. It can support the various potential technical approaches. Especially useful if out-year budgets can be adjusted.	As necessary to equate contract terms to budgets and funding streams.	During PBC planning.
Budgetary & programming	Program the project through the established MAJCOM process.	Typically higher level estimate.	As per the MAJCOM's programming cycle.

Decide How to Measure and Verify Performance

The project team must also establish a viable process for verifying the contractor's performance throughout the life of the PBC contract and should not wait until the end of the POP to determine whether the contractor has achieved the desired end-state objective. Under a PBC environment, the contractor manages its own performance on an ongoing basis, and the government monitors and verifies the completion of interim goals. As with any procurement, it is critical for the government to establish and define roles and responsibilities for managing the government's liabilities and ensure the quality and acceptability of the outcome.

Establish Interim Objective(s) Payment Schedule

The payment schedule is a critical component of a PBC since it establishes how payments will be tied to performance. However, the payments for interim objective(s) must be appropriate to ensure that the project payments are not "front-end loaded" and that sufficient funds are withheld to ensure completion of the end-state objective.

Evaluate Use of Incentives, Options, and Liquidated Damages

The project team should work with the service center or contracting office, including the CO and COR, to understand how and when to utilize incentives, options, and penalties under the selected contract vehicle. Before these options can be considered, however, the project team must have determined the basic project goals and the minimum acceptable objectives. Table 7 and the following discussion summarizes key characteristics of incentives. options, and liquidated damages.

Table 7: Description of Incentives, Options, and Liquidated Damages

Type	Characteristics	Pros	Cons
Incentives	Use to establish price for achieving a tangible outcome or benefit to the AF above and beyond the minimum standard.	Can be used effectively to achieve faster or more stringent site closure	If incentive is not realized, may have to deobligate and send funds back to source.
Options	Can be used to extend contracts beyond one year and/or contract for additional work within scope only when funding is received.	Funds do not have to be on contract until the option is exercised. Allows long-term contracts. May also allow scope to be broken up by Fiscal Year.	May not be applicable to all circumstances. Can be difficult to evaluate proposals under a best-value scenario when basic offers and options are both utilized.
Liquidated Damages	Provides remedies when specific contract requirements are not met, such as an established objective. An example is the use of liquidated damages for contractor delays beyond the POP.	Can be an additional motivating factor for progress towards the contract objective.	Requires documentation from both contractor and government. Can be contentious.

1. Evaluate **incentives** to accelerate schedules, reduce life-cycle costs, or even achieve a more stringent closure standard. Incentives may be based on a cost reimbursement or fixed-price incentive fee to control costs or achieve some sort of performance parameter through the use of a stated incentive for accelerating performance. For example, the contractor will be awarded a per day fee for closing the site early. Incentives may also be more subjective, such as a fixed price or cost reimbursement award fee. However, the project team should only utilize these tools when there is something tangible to "buy" that would benefit the AF. Funding must be on contract in the form of a contingent liability for incentives, whether the incentive is achieved or not.
2. **Options** may be more useful than incentives under certain circumstances, since options can be exercised by the AF and therefore funds can be issued when needed.
3. Although **damages** may have to be addressed via the PBC, generally, there are established controls in place that limit the need for such penalties. The AF's control of payments in relation to the achievement of previously established performance objectives serves as a significant incentive for the contractor. Therefore, it is recommended that liquidated damages be considered on a case-by-case basis. The project team should consult with the service center or contracting office to determine if liquidated damages are needed.

Determine Proposal Evaluation Approach

It is important to determine the AF's process for evaluating proposals and selecting the successful proposal/contractor. The two primary methods for evaluating proposals and awarding PBCs are low price and best value.

The AF generally recommends best-value awards for PBCs based on the criteria that are important and relevant to that particular project. Although price is always a factor in determining how to award a PBC, it is typically not the only factor and may not even be the most important. More detail on selection criteria is covered in Step 8 of the Guidebook. The approach should be tailored to the project, but some of the key advantages and disadvantages are provided in Table 8 on the following page.

Step 5: Evaluating Benefits and Limitations of Insurance

The risks associated with environmental cleanup have prompted the use of Environmental Insurance (EI). EI also allows contractors to be less conservative due to the fact that their business risk is balanced by having insurance coverage. Although the application of EI is a relatively new concept, there are fundamental benefits and limitations in using EI.

Environmental insurance is a type of coverage used to protect the contractor from losses and the AF from default by the contractors.

Table 8: Summary of Proposal Evaluation Methods		
Evaluation Approach	Advantages	Disadvantages
Low Price	• Simple and objective • Requires little time (usually < 1 week) • Can be very useful where there is a clearly defined approach (e.g., a specific type of landfill cap) • Can be useful when cost is the only significant factor in terms of project award • Can be supplemented with "technically acceptable" first step	• No differentiation between technical approaches • No differentiation between contractor's capability on a type of project • No differentiation between contractor's experience in a regulatory environment • Could result in the AF awarding a contract even if it did not agree with the technical approach (note: The approach must meet legal compliance requirements) • Can result in unreasonably low price resulting in later contractor/AF scope and quality conflicts.
Best Value	• Recognizes that for many projects there are important factors that define success in addition to cost • Allows differentiation between technical approaches and therefore promotes innovative proposals • Allows award to be tailored to the project in terms of a number of factors such as insurance, accelerated schedules, and the budget over time • AF can allow the contractor to propose interim milestones and factor the relevancy of the milestones and cost per milestone into its award decision	• More labor-intensive approach for contracting personnel since selection based on many project-specific factors • Requires longer proposal evaluation time (up to 3-4 weeks) • Subjective and must be tailored to each specific contract • Government must be able to clearly define what it means by best value • Must be able to evaluate tradeoffs for cost

Insurance may be used to cover uncertainties, unexpected conditions, and potential risks such as:

- Cost overruns when the estimated cost of the cleanup plan is exceeded;
- Liability for bodily injury resulting from conditions of the site and/or cleanup activities;
- Liability for property damage resulting from conditions of the site and/or cleanup activities;
- Business or work stoppage caused by discovery of previously unknown contaminants;
- Claims against third parties associated with ongoing operations;
- Claims against third parties conducting remediation activities;
- Failure of the initial remedy before transfer of property;
- New contamination discovered after acquiring the property.

Common exclusions from coverage include unexploded ordnance (UXO), radioactive materials,

chemical weapon materials lead-based paints, and asbestos-containing materials. Other site-specific exclusions and nonperformance clauses can also be included.

Assess Pros and Cons of Using Environmental Insurance

Each project must be evaluated separately to determine whether EI is of value to the AF. Potential benefits include:

- Reducing AF costs in many cases since contractors do not have to offer contingencies for failure of the technical approach, new contaminants, changes in requirements, cost overruns, or inflation;
- Significantly reducing the frequency of Change Orders;
- Eliminating the escalation of AF cost-to-complete figures;
- Providing additional independent oversight of contractor performance;
- Providing an independent validation of contractor costs and approach.

Potential drawbacks of utilizing EI include:

- Premiums may range anywhere from under one percent to 25 percent of the estimated cleanup costs, and transaction costs incurred in the insurance purchase and design process must also be added to the cost of premiums, thus making EI coverage cost-prohibitive for a given project;
- Significant unknowns can increase the number of exclusions and thus render the EI ineffective;
- EI does not relieve the AF of its RCRA/CERCLA responsibilities.

Table 9 lists several major options when considering EI in PBCs. The AF evaluates the pros and cons of EI on a case-by-case basis and recommends its use where appropriate.

Table 9: Options on the Use of Environmental Insurance in PBCs

Option	When Applicable
Contractors allowed, but not required, to propose insurance and factor into best-value awards	Low- to medium-risk sites
AF identifies minimum acceptable insurance it will accept	Medium- to high- risk sites
AF doesn't specify insurance to be required as part of contractor proposals	AF does not consider insurance to be necessary

The most common types of EI policies are **cleanup cost cap** (also referred to as stop gap or remediation stop loss insurance), **pollution legal liability** (also referred to as environmental impairment liability), **property transfer**, **finite risk insurance**, and **Brownfield restoration and redevelopment insurance**.

Cleanup Cost Cap (CCC)/Stop Gap/Remediation Stop Loss Insurance: This is the most common type of policy applicable to environmental restoration projects and protects against cost overruns above the estimated cost of remediation. This predominantly covers,

depending on the terms of the specific policy, discovery of new contaminants and additional or higher concentrations of "known conditions," regulatory or requirement changes during remediation, and efforts associated with discovery of new contaminants within the scope of remediation activities. Additionally, this type of policy may cover the costs of cleanup at, adjacent to, or emanating from the defined remediation site location. This policy typically expires once cleanup is completed and the contract is also completed, generally with a "No Further Action" letter, often with a "not to exceed" term of 10 years. Common exclusions for CCC insurance include costs resulting from bodily injury, property damage, unwarranted contractor delays, unapproved cleanup plan changes, radioactive matter, asbestos, and regulator-imposed fines and penalties. Long-term operations and maintenance costs are typically excluded.

Pollution Legal Liability (PLL)/Environmental Impairment Liability (EIL): This is another common type of insurance that may be used under PBC that protects the insured against claims associated with third-party bodily injury and property damage claims (e.g., toxic tort claims), as well as both known and unknown pre-existing contamination (e.g., agency cleanup demand). Although PLL policies may be purchased alone, they are frequently purchased alongside or in stages with CCC policies. Legal defense costs (up to the applicable policy limits) and "re-opener" costs are also frequently covered. Re-opener coverage insures against additional remediation costs imposed by regulators or the law after an agency re-opens a cleanup, including situations where the property's use has been modified or environmental regulations now mandate more stringent cleanup levels than those used in the initial remediation. The insured parties can be the seller, buyer, and the lender. The term of this coverage is typically 10 years. While variations exist among carriers, PLL policies usually exclude losses arising from known pollution conditions or contamination in existence prior to the inception of the policy; contractual liability; and intentional wrongful acts or noncompliance with regulatory agency orders and directives. Some policies also expressly bar coverage for specific pollutants, such as asbestos, radioactive matter (i.e., radon), and lead paint. Others exclude underground storage tanks, though most offer separate storage tank liability insurance. If such coverage still does not afford enough protection, the insured can also generally add (for a higher premium) coverage for risks related to hazardous substances transportation and non-owned disposal sites, as well as business interruptions and diminution of property value due to newfound contamination.

Property Transfer: This type of insurance is similar to PLL/EIL but focuses strictly on property transfer. It protects an insured against claims arising from pre-existing unknown contamination, known insignificant levels of contamination, and third-party claims for off-site cleanup costs that result from on-site pollution. The term of this coverage is typically seven to 10 years.

Finite Risk Insurance: This type of insurance, which is growing in popularity, requires the insured to pay the insurer the full cost of the cleanup plus premiums covering any additional CCC or PLL insurance included up front. The insurer then administers payments to the contractor on behalf of the insured. The benefit of this insurance is that it takes advantage of the time-value of money, often resulting in savings for the insured.

Brownfields Restoration and Redevelopment Insurance: This insurance type is a combination of CCC and PLL/EIL but is specifically designed to cover cleanup sites that have future development activities planned. This policy is attractive to Brownfield redevelopers

because it provides lenders an increased level of confidence due to the fact that property is being restored to a level that is safe for reuse.

Step 6: Developing the Draft Statement of Objectives

The SOO should clearly articulate the AF's objective(s) for the contract and promote informed and responsive contractor proposals

This section of the Guidebook provides general guidance about the components of the SOO. In addition, an example SOO is provided in Appendix B. The project team should coordinate with the service center, contracting office, or CO/COR to see if an applicable example for the PBC contract is available. Further guidance on developing the draft SOO can be found in Section 5 of the DoD Handbook on Preparation of SOW. This handbook can be accessed at

http://www.arnet.gov/Library/OFPP/BestPractices/pbsc/library/DODhandbook.pdf.

The draft SOO will likely be included in the draft RFP that is issued to the contractor pool prior to a site visit. Therefore, the draft SOO needs to be as clear as possible in terms of the end-state objective, contract structure, payment approach, and basis for award. The typical components of a PBC SOO include:

Scope and Objectives

This section provides a concise description of the desired end state objective or goal of the contract, a description of the contract approach, and a listing of the site(s) under consideration. A prospective offeror should be able to read this section and understand the goal of the project and the overall contracting approach.

Site Background

This section of the SOO contains information (or directions to access the information) necessary to understand the background, history, and current status of the contaminated site(s), including the known contaminants of concern. It should provide references to available information sources, such as RI/FS, FFAs, RODs, DDs,, and other regulatory decisions/documents. The availability of comprehensive and complete site information will result in:

- Higher contractor interest and greater competition during procurement;
- Lower uncertainty and risks to the AF and contractors;
- More creative solutions from the private sector.

The project team should start collecting or locating relevant information early in the planning process. As mentioned earlier, information on the site(s) can be disseminated in several ways (e.g., Web sites, CDs, Environmental Resources Program Information Management System (ERPIMS), administrative records). It is critical that the AF divulge relevant information about the site(s) to all potential offerors to avoid future claims by contractors that could result in Change Orders or litigation.

General Requirements

This section should establish any additional requirements, conditions, or parameters that may or may not be specifically identified as project objectives (e.g., data formats/requirements). Be

thorough: Divulging the relevant requirements covered in this section can help prevent Change Orders later. Activities that should be considered for inclusion in this section include: participation at public meetings, public notices, dig permits, regulatory permits, licenses, fees, utilities, badges and passes, security requirements, work hours restrictions, site access, and delays caused by exercises. Key dates (e.g., presolicitation site visit) and coordination requirements (e.g., coordination of waste manifests with relevant parties) may be communicated in this section.

This section also outlines the specific AF conditions under which the contractor is required to perform its work and any limitations on the type of work the contractor can perform.

Interim Performance Objectives, Performance Standards, Acceptance Criteria, Payment, and Milestone Dates

This section links interim performance objectives, performance standards, acceptance criteria, payment, and milestone dates. Interim performance objectives should directly lead to meeting the end-state of the PBC. These interim objectives must be measurable and significant, including well-defined deliverables that document the achievement of each objective. The AF must be "buying" a tangible objective, not simply effort/work. The AF RPM is typically the authority for determining if objectives have been met. Table 10 summaries the key criteria related to interim performance objectives.

Table 10: Establishing Interim Performance Objectives

Interim Performance Objective	Performance Standard	Acceptance Criteria	Payment	Milestone Date
Must be tangible and include measurable outputs	The criteria used to measure the contractor's progress in accomplishing the interim performance objectives.	Defines what indicates that the performance standard was achieved and who has the authority to approve acceptance of the objective.	Ties payment to interim performance objectives (e.g., percentage of total offer or actual dollar amount per objective). .	Can be established by the AF or proposed by the contractor.

Period of Performance

This section is written in the same manner as in other contracts. The POP establishes the start and end dates of the contract. In many cases the POP is established as the duration from the award date of the contract (e.g., 60 months from contract award). Note that some contracts can be extended past five years by utilizing option periods. Check with the CO to determine the appropriate duration.

Incentives, Options, or Liquidated Damages

This section lists any incentives, options, or liquidated damages that may be used to enhance the PBC. The use of these items does not differ from other contracts; however, they should be linked to the performance objectives and end-state objective of the PBC.

Incentives can be written into PBCs in order to provide an additional monetary incentive for the contractor to achieve something of tangible value to the AF (for instance, to accelerate schedules or to achieve supplemental goals above and beyond the minimum objectives). A drawback to incentives is that funds must be allocated and a contingent liability created for the entire amount of the incentives. Therefore, should the contractor be unable meet the requirements of the incentive, the funds allocated for the unpaid incentives must either be used for same-year requirements or returned to the funding source. Thus, it is important to evaluate the AF's goals and determine whether they are critical and achievable (See Table 11 below).

Table 11: Incentive Examples

Basic Contract End Goal	*Incentive*	*Why?*
Closure of Site X to industrial standards	Incentive payment of $100K to achieve closure of Site X to residential standards	Industrial standards restrict future property use and may require LUC/ICs. Residential standards provide unrestricted future land use and may save future funding in terms of LUC/IC costs.
Closure of Site X within 5 years	Incentive payment of $100K to achieve closure of Site X within 2 years	Early site closures may be important to the installation, depending on the site and use of the property. For instance, the AF may be waiting for completion of environmental remediation on land where the installation wants to build a new facility needed to meet its AF mission requirements.

Contract options can be a viable tool when environmental remediation activities must be contracted for long periods of time (e.g., > five years) or when funding may not be available for out-year requirements. This allows large-scope, high-value contracts to be divided into smaller allocations in order to achieve feasible funding. The contract should be written such that the AF has the authority to exercise an option (See examples in Table 12 below). Pre-priced options can also be utilized (similar to an incentive) without having funds allocated prior to contract award. A pre-priced option can be written much like an incentive with an AF option to accept or reject the contractor's proposal.

Table 12: Contract Option Examples

AF Goal	*Basic Contract*	*Option*	*Logistics*	*Why?*
Closure of Site X to allow for planned future development at the site	Closure of Site X to industrial standards	Closure to residential standards if option is exercised by AF	Option amount ($) set by AF or offer by contractor. The AF obtains funding and can exercise the option if the contractor demonstrates the option is achievable.	Industrial standards restrict future property use and may require LUC/ICs. Residential standards provide unrestricted future land use and may save future funding in terms of LUC/IC costs.
Closure of Site Y –modeling shows that Site Y is projected to achieve MCLs in 8 years	Reduction of Trichloroethylene (TCE) in 10 wells to max 8 ppb in each well for 4 consecutive sampling events	Add 3 years to contract POP and reduction of TCE in 10 wells to below MCLs (5 ppb) if option is exercised by AF	Option amount ($) set by AF or offer by contractor. The AF obtains funding and can exercise the option if the contractor demonstrates the option is achievable.	The AF goal is to close the site. If the contactor is demonstrating that the site is on track to achieve MCLs, then the option is exercised to add time, $ and scope.

The use of **liquidated damages** may prove useful for PBCs where there is a clear cost to not completing an objective by a certain date (mission, start date of another contract, etc.). Therefore, it is recommended that damages only be utilized on a case-by-case basis The project team should consult with the service center or contracting office on the need for liquidated damages. An example of when liquidated damages would apply is when a project must be completed by a set date to allow for the mobilization of another contractor to construct a new building. In this instance, the delay of the PBC could significantly impact another contract and the AF mission, and liquidated damages may be applicable.

AF Points of Contact and Roles and Responsibilities

This section should indicate that the government points of contact (POCs) will be provided under separate cover, which will preclude the need for contract modifications when personnel changes occur. This section should identify key team members by role and responsibilities, but not by name.

This information may be more appropriately included in the solicitation and not in the SOO to prevent administrative modifications when POCs change. The CO or COR can likely provide advice on the best approach to include this information.

This section may also be utilized to identify the roles and responsibilities of external parties and clarify the working relationships among the parties.

Proposal Evaluation

The general approach for evaluating proposals and making a decision on how to select the winning proposal should be determined earlier in the planning phase of PBC implementation. This section of the SOO should describe the basic selection criteria for identifying how a particular PBC will be awarded. The AF recommends best-value awards for each PBC, based on the criteria that are important and relevant to that particular project. Although price is always a factor in determining how to award a PBC, it is typically not the only factor and may not be the most important factor. The details of how to approach a best-value evaluation follow in Step 8.

Step 7: Conducting Facility Visit and Issuing the Final RFP

At this point, the Draft SOO and site(s) background information are assembled into a draft RFP, and the CO issues the draft RFP to the offerors. Ideally, contractors will be afforded time to review the draft RFP, as well as the site information, before the scheduled facility visit.

The facility visit and subsequent Q&A cycle will provide different perspectives and typically result in improvements in the SOO and RFP

Hold a Pre-Solicitation Conference or Conduct a Facility Visit

The project team should conduct a pre-solicitation conference, or preferably a facility visit, that includes the right team members. For large and complex PBCs, contractors, AF technical staff, AF contracting staff, and appropriate regulators should attend. Each of these stakeholders has a critical role in the PBC.

Ideally, the RPM can negotiate to have the state/federal regulators at the pre-solicitation meeting and/or facility visit to answer relevant questions. In many cases, the risk driver for a PBC may be the regulators' view of the technical approach, and this may be the only opportunity for direct contact between the contractors and the regulators prior to the proposal phase.

Since the AF is not required to answer all questions at these forums, it is recommended practice to identify a note-taker to capture all questions and establish a schedule to provide timely responses to the questions. These official responses must be provided to all potential offerors.

Conduct Q&A Cycle

The AF project team must respond to the questions posed by potential offerors in response to the draft RFP, pre-solicitation conference, and/or facility visit. Typically, the CO maintains the central repository of Q&As and distributes the Q&As to all potential offerors to ensure that the procurement follows all AF contracting protocols.

An effective approach to Q&As is to assign questions to the project team members based on the type of question (e.g., contractual, administrative, technical, strategic). Difficult Q&As may require one or more teleconferences or meetings by the stakeholders to resolve the issues. The answers should keep the PBC concept in mind and not place undue restrictions or requirements that might limit technical approaches. Where an answer needs to be binding, the response must be incorporated into the final SOO. While the Q&A document will be part of the final RFP package, the SOO should address all significant technical or regulatory issues.

Typical Q&A topics include:

- Clarification of site(s) data;
- Contract modifications;
- Payment schedule;
- Regulator's viewpoints on acceptable technical approaches;
- Method of contract award.

Finalize the SOO and Issue Final RFP to Potential Offerors

The project team is responsible for revising the SOO and finalizing the RFP by incorporating information from the facility visit, input from stakeholders, and the Q&As. This process can be challenging depending on the volume and complexity of the questions. It is common for over a hundred questions to be raised, ranging in nature from administrative matters to highly technical issues. Although contractors can formally request clarification even after the final RFP is issued, the final RFP should be as clear and straightforward as possible to ensure that competitive offers are received.

Step 8 – Evaluating Proposals and Awarding the PBC

Decide on Proposal Response Time

Contractors should be provided adequate time to develop and submit proposals. Development of a PBC proposal typically requires more time than a traditional contract proposal.

A month is typical to prepare a proposal for a moderately complex PBC. Extremely complex PBCs or site conditions might require more time. If in doubt regarding the amount of time to allow, the project team should ask for feedback in Step 7. Factors contributing to increased response time required include:

- Risk transfer is greater compared to traditional contracting methods;
- Technical approach is not necessarily determined by the AF;
- Contract scope is broader;
- Task orders are typically competed;
- Contractors may have to review extensive site documentation;
- Contractors may need to meet with local stakeholders or conduct additional site visits to develop their technical approach;
- Firm-fixed price pricing arrangement drives the need for greater proposal detail.

Receive and Evaluate Proposals

As previously discussed, best-value awards are preferred over low-price awards for many PBCs. The project team should evaluate PBC proposals based on established criteria and priorities, such as:

- Schedule and time to achieve the objective;
- Risk of approach or consequences of non-performance;
- Cost over time/affordability of payment schedule;
- Contractor relevant experience for particular type of project;
- Contractor relevant experience, given the regulatory environment;
- Payment schedule;
- Interim objectives.

Table 13 on the following page contains an example of a performance criteria matrix. The project team should establish rules for the actual ratings (e.g., 1 to 10 or color coded) and the definitions of those ratings.

Table 13: Example of Performance Criteria Matrix		
Criteria	Ranking	Description
COST/PRICE • Payment schedule	Equal to schedule	• Lower cost is better • Appropriate cost loading, balanced, and affordable
SCHEDULE • Required site for construction	Equal to cost	• Faster is better • Achieving SC earlier allows for new construction at site
RISK TO GOVERNMENT OF APPROACH • Technical approach • Experience • Past performance • Performance guarantee	Most Important	• Confidence in achieving project objective • Relevant experience • How well the contractor performed on previous related jobs • Risk mitigation strategy (e.g. insurance)

The project team needs to convene the selection panel to evaluate proposals to determine a winner. In most cases, the selection panel consists of the project team, since it is best suited to perform proposal evaluations. At a minimum, the panel should typically include the RPM, CO, COR, and technical experts or technology specialists. The key is to have a diverse panel of multiple skill sets that is based on the project specifications.

XI. Step 9: Implementing and Overseeing the PBC

Initiate the Post-Award Conference

Once the PBC is awarded, a post-award conference is recommended to initiate the project officially. The project team should integrate the contractor's key personnel (i.e. project manager) into the project team at the post-award conference, since they are now an integral stakeholder. In this meeting, reinforce to all participants that their contract management roles may be different than those previously experiences under traditional contracts. Discuss also relevant base coordination issues, health and safety concerns, and invoicing procedures at this post-award conference.

Reemphasize Air Force, Contractor, and Regulators Roles after Award

It is vital that all stakeholders clearly understand their responsibilities under a PBC. The extent to which a PBC can differ from a traditional contract depends on how the AF has structured the PBC. As noted earlier, the AF still retains the liability for the ERP, the right to provide direction to the contractor, and the review and signature authority for RODs, DDs, and other documents.

Typically, the service center will be the contractor's point of contact for resolving issues with regulators. Under a PBC, the contractor assumes increased contract performance risk and also has a larger amount of flexibility in implementing solutions to achieve the required objective(s). The contractor must keep the Air Force informed throughout the contract life-cycle. The Air Force ties payment to established interim and final contract objectives and must confirm that those objectives are met before making payment.

Perform Air Force Oversight

Collectively, the project team should periodically conduct performance reviews to ensure that the contractor is progressively meeting interim performance objectives at the specified level of quality. The Air Force should review and provide comments on documents and approve them for release to the regulators. However, these comments should be restricted to regulatory, factual, and legal issues and should not conflict with the terms and conditions of the PBC by directing the contractor on approach and matters of opinion. For instance, if a PBC allows a contractor broad flexibility in implementing a remedy at a site, the Air Force should approve reasonable proposed alternatives versus dictating that a particular remedy be implemented.

These performance reviews will help maintain the government's confidence that the desired end-state objective of the PBC is being met. Performance reviews are intended to measure performance and to capture lessons learned early enough to take any necessary corrective actions in order to prevent major issues. The frequency of the performance reviews should be determined at the post-award conference.

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Appendix A

Checklist for the Nine Steps on Developing a Performance-Based Contract

Step 1: Screening Projects for PBC Applicability

- ☐ Understand the Project
- ☐ Evaluate Opportunities to Group Sites
- ☐ Evaluate PBC as an Acquisition Tool for the Project

Step 2: Establishing the Project Team

- ☐ Identify the AF Project Team Members
- ☐ Establish Roles and Responsibilities
- ☐ Identify Other Stakeholders
- ☐ Define Stakeholder and Contractor Communication for Post-Award Execution

Step 3: Planning the Acquisition and Acquisition Schedule

- ☐ Establish Acquisition Schedule
- ☐ Plan Logistics for Facility Visit
- ☐ Evaluate Contractual Mechanisms and Contractor Pool
- ☐ Determine Appropriate Format for Scoping Document
- ☐ Decide on Approach for Change Orders

Step 4: Making Project Decisions

- ☐ Collect Available Site/Project Data
- ☐ Identify the Project End-State Objective
- ☐ Decide on Appropriate Interim Performance Objectives
- ☐ Prepare Cost Estimate and Project Budget
- ☐ Decide How to Measure and Verify Performance
- ☐ Establish Interim Objective(s) Payment Schedule
- ☐ Evaluate Use of Incentives, Options, and Liquidated Damages
- ☐ Determine Proposal Evaluation Approach

Step 5: Evaluating Benefits and Limitations of Insurance

- ☐ Assess Pros and Cons of Using Environmental Insurance
- ☐ Craft the specific EI requirements for the project

Step 6: Developing the Draft Statement of Objectives

- ☐ Scope
- ☐ Site(s) Background
- ☐ General Requirements
- ☐ Interim Performance Objectives, Performance Standards, Acceptance Criteria Payment, and Milestone Dates
- ☐ Period of Performance
- ☐ Incentives, Options, or Liquidated Damages
- ☐ AF Points of Contact and Roles and Responsibilities
- ☐ Proposal Evaluation

Step 7: Conducting Facility Visit and Issuing the Final RFP

- ☐ Hold a Presolicitation Conference or Conduct a Facility Visit
- ☐ Conduct Q&A Cycle
- ☐ Finalize the SOO and Issue Final RFP to Potential Offerors

Step 8: Evaluating Proposals and Awarding the PBC

- ☐ Decide on Time Required to Adequately Respond to the RFP
- ☐ Receive and Evaluate Proposals

Step 9: Implementing and Overseeing the PBC

- ☐ Initiate the Post-Award Conference
- ☐ Reemphasize AF, Contractor, and Regulator Roles After Award
- ☐ Perform Air Force Oversight

Appendix B

STATEMENT OF OBJECTIVES (SOO)
EXAMPLE/GUIDANCE

(Project Description)
(Site(s))
AT
(Facility/Base Name, State)

PROJECT NUMBER: *To Be Determined*

CONTRACT NUMBER:
TASK ORDER:
DATE: *XX XXX XXXX*

STATEMENT OF OBJECTIVES

1.0 PROJECT SCOPE AND OBJECTIVES

This Task Order (TO) is issued as a Performance Based Contract (PBC). Therefore, the contracted work is performed with less focus on government prescribed approaches and increased focus on contractor results and TO end-goals. The desired outcome of the work is identified, typically with few to no restrictions on the methods or technologies to be used.

The goal of this TO is to ***(brief description of the work to be performed, the relevant site(s), the installation/base and end goal of the TO). Note that site-specific historical details can be included in an annex to the SOO).***

Base- and site-specific background information is provided in Annex A to this SOO. ***Provide here all the necessary information the Contractor needs to fully understand the history and the current state of the contaminated site(s), to include the known contaminants of concern. The background information such as maps, permits, or regulatory correspondence, if applicable, should be provided in summary format as an Annex to the SOO. Provide all relevant information you are aware of, but highlight key documents and information.***

The work to be performed under this SOO will be executed as a PBC and the Contractor shall submit a technical proposal with sufficient detail to demonstrate its plan to achieve the objectives identified above including a schedule, technical approach, and risk mitigation factors.

The Contractor shall perform all work in compliance with the basic **(List relevant contract)** contract.

For this PBC, the Contractor shall:

Provide sufficient detail on the TO objectives so that perspective offerors are fully aware of the Air Force objectives. It is critical that the PBC team establish project-specific objectives in the SOO.

Some examples are provided:

> ***Regulatory Closure of Sites Requiring No Further Action. The primary objective of this type of project is to perform any remaining minor remedial actions necessary to close any data gaps, such as: the collection and analysis of additional confirmation samples, the preparation of final closure documentation, and the receipt of final closure documentation from the appropriate regulatory agency(ies). Final site closure "removes the site from the books" and makes the land available for future use either with or without Land Use Controls (LUCs). This type of project is predominantly administrative in nature with limited remedial actions required. No construction is involved.***
>
> ***Long-Term Monitoring (LTM) Optimization. The primary objective of this type of project is to review sites where long-term monitoring is the selected remedial action and determine the potential for optimization. Optimization can include a reduced period of LTM, sampling frequency, monitoring locations, and/or constituents of concern up to the point where the LTM process can be stopped. The overall goal is to evaluate all LTM sites and reduce the level of effort required to meet site***

requirements over time until formal site closure is achieved. This type of project involves routine sampling and analysis and data evaluation; no construction is involved.

<u>Remedial Action Optimization</u>. The primary objective of this type of project is to assure that the in-place remedies are the most effective remedies and ideally that regulatory site closure, either with or without LUCs, is achieved. This type of project can be implemented along with the remedial action operation of remedial systems. Optimization studies may be performed along with system operation to determine if system enhancement would expedite site remediation and ultimate site closure. The PBC requires that the Contractor evaluate the existing remedies and encourages the implementation of more advanced or innovative technologies that may or may not have been available during remedy selection. Note that changing remedies typically requires modification of Records of Decisions (RODs) and requires careful consideration by the Air Force.

<u>Remedial Action Implementation</u>. This type of project involves the construction, start-up, and operation of the selected remedy. Remedial actions involving removal of contaminated soils, installation of landfill caps and associated long-term monitoring, and removal of "hot spots" are examples of the types of remedial actions that can be implemented using PBC.

<u>Site Closure</u>. The AF prefers to contract for a metric-based end state such as achievement of an MCL or PRG. However, if the preferred PBC end state is Site Closure, the SOO must clearly define the objective and how it will be measured. One example definition follows: Site Closure is met when all investigations and remedial actions have been completed, all protective concentration limits or risk-based health standards have been met, no further land-use controls remain, regulatory agency concurs that No Further Action (NFA) is required, and all wells/treatment systems associated with the site have been properly decommissioned.

3.0 GENERAL REQUIREMENTS

Examples of typical general requirements are included. However, the PBC team must tailor these general requirements to the project and ensure they are relevant.

The Contractor shall supply all labor, equipment, and materials necessary to accomplish the performance objectives of this TO.

The Contractor shall perform all work in accordance with federal, state, and local statutes and regulations. Remedies shall conform to environmental permits, decision document requirements, corrective action plans, or other legal requirements.

The contractor shall function as an integral team member in support of the Air Force mission. In addition, the contractor is expected to anticipate and address any technical or regulatory problems or issues and perform successful execution of this TO. The contractor is encouraged to utilize innovative technologies and management techniques to achieve project objectives and promote the use of these technologies to appropriate stakeholders.

Contractors are given the opportunity to attend a pre-proposal site visit on *(include site visit or pre-solicitation meeting information)*, during which participants will have the opportunity to ask questions of the Air Force and/or regulators pertaining to the project. All contractor questions

must be submitted in writing to the Contracting Officer or Contract Specialist for review and response. Questions and answers (Q&As) will be provided with the final Request for Proposal (RFP) to all potential offerors. However, the contract RFP supersedes verbal and/or written Q&As.

The Contractor shall comply with the requirements in the basic contract for any task involving the permitting, handling of waste and transportation of contaminated materials to off-site treatment storage, and/or disposal facilities. Coordination with the relevant base personnel (e.g. Base Civil Engineer) is required.

The Contractor is responsible for public meeting participation in coordination with the Air Force, including ongoing interaction and reporting to stakeholders, regulatory agencies, and the community.

4.0 PERFORMANCE REQUIREMENTS

The following performance standards will serve as the basis for both government acceptance and milestones for contractor payment. ***It is preferable to include interim performance objectives as milestones for payments. An example of an interim performance objective is the completion of site remediation as supported by a construction completion report. Performance objectives (e.g. type and quantity) should be carefully scripted by the Air Force team; however, it is vital that objectives be jointly measurable.***

Performance Objective	Acceptance Criteria	Payment	Milestone Date
Interim and Final Objective(s)	The Air Force may identify one or more interim objectives along with the final objective or allow perspective offerors to do so in their proposals. Interim objectives must be tangible and should include measurable outputs.	As per the payment schedule Payment options: • Establish interim objectives and weighted payment percentages • Establish interim objectives and allow contractors to propose on a bid sheet • Offerors propose interim objective(s) in the proposal with the corresponding payment percentage.	Insert date
Insurance Policy (Contractor option to propose with or without insurance)	Delivery of Executed Insurance Policy	An invoice for the premium from the insurance provider is required for payment approval; this objective should be indicated separately in the payment schedule.	XX days after contract award if proposed

5.0 BID EVALUATION

In most instances, the PBC SOO will not include the evaluation criteria that will be utilized for the award of a project. However, if the Air Force project team chooses to include a discussion of the evaluation criteria in the SOO, this section can be utilized. The evaluation criteria should be carefully tailored to the PBC end-state objectives.

6.0 PERIOD OF PERFORMANCE

The POP (POP) is (X years and X months) from contract award date. The contractor is obligated to inform the government if established milestones will not be achieved according to the established schedule. There may be penalties or lost incentives associated with missed milestones depending on how the government writes the SOO.

7.0 INCENTIVES, OPTIONS, AND LIQUIDATED DAMAGES

This section lists any incentives, options, or liquidated damages used to enhance the PBC. See discussion and examples in Section 8 (Step 6) of the Air Force Environmental Restoration Performance-Based Contracting Guidebook.

8.0 INSURANCE REQUIREMENTS

There may be situations where risk is sufficient to consider the use of environmental insurance (EI). If the project team views EI as appropriate for a PBC, the following sample language can be used.

The contractor is required to provide cost overrun protection for this TO. Therefore, the contractor is required to obtain (e.g., cost cap, stop loss, or similar policy) environmental insurance with a coverage value of at least two times the contractor's (fixed-price) proposed cost. The insurance provider shall be A.M. Best A+ rated and the policy shall extend one year past the period of performance of this TO. The Air Force shall be named as an additional insured on the policy and the Air Force will require the insurance company to waive subrogation.

Proposal Stage - Contractors must submit an "Indication" outlining the relevant terms, conditions, and exceptions with an approximate price. The contractors shall also submit a draft specimen policy and endorsements.

Contract Award – If required or proposed by the contractor, the selected contractor must provide a certificate of insurance that shows evidence of actual coverage. Upon submittal of a certificate of insurance that meets or exceeds the requirements established in this SOO as well as the "Indication" provided with the contractor's proposal, the Air Force will issue the NTP for this TO. This submittal is required within 60 days of the award of the contract.

9.0 GOVERNMENT POINTS OF CONTACT

The following list provides government contracting and technical points of contacts that are considered necessary for administrating, coordinating, and facilitating this project.

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Appendix C

Acronyms

AF	Air Force
AFCEE	Air Force Center for Environmental Excellence
ARAR	Applicable or Relevant and Appropriate Requirements
A/E	Architecture/Engineering
CCC	Cleanup Cost Cap
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CO	Contracting Officer
COR	Contracting Officer's Representative
DD	Decision Document
DSC	Differing Site Conditions
DSMOA	Defense and State Memorandum of Agreement
EI	Environmental Insurance
EIL	Environmental Impairment Liability
ERP	Environmental Restoration Program
ESD	Explanation of Significant Differences
FAR	Federal Acquisition Regulations
FFP	Firm Fixed-Price
FS	Feasibility Study
LUCs	Land Use Controls
MCL	Maximum Contaminant Level
PA/SI	Preliminary Assessment/Site Inspection
PBC	Performance-Based Contracting
PBM	Performance-Based Management
PBSA	Performance-Based Service Acquisition

PBSC	Performance-Based Service Contract
PLL	Pollution Legal Liability
POC	Point of Contact
POP	Period of Performance
PWS	Performance Work Statement
Q&A	Question and Answer
QA/QC	Quality Assurance/Quality Control
RAB	Restoration Advisory Board
RACER	Remedial Action Cost Engineering and Requirements
RCRA	Resource Conservation and Recovery Act
PT	Project Team
REO	Regional Environmental Office
RFP	Request for Proposal
RI	Remedial Investigation
ROD	Record of Decision
RPM	Remedial Project Manager
RPO	Remedial Process Optimization
SAF/IEE	Deputy Assistant Secretary of the Air Force for Environment, Safety, and Occupational Health
SC	Site Closure
SOO	Statement of Objective
SOW	Statement of Work
TCE	Trichloroethylene
T&M	Time and Material
UXO	Unexploded Ordnance

Appendix D

External Performance-Based Contracting Links

1. **The *Federal Acquisition Regulation* (FAR)**: http://www.arnet.gov/far/. The FAR System is established for the codification and publication of uniform policies and procedures for acquisition by all executive agencies. The FAR System consists of the Federal Acquisition Regulation (FAR), which is the primary document, and agency acquisition regulations that implement or supplement the FAR.

2. **United States Army Environmental Center's** (USAEC) Performance-Based Contracting Home Page, containing information regarding environment insurance, cleanup requirements, and procurement. This link is a good source to gain insight into all applicable applications of a Performance-Base Contract: http://aec.army.mil/usaec/cleanup/pbc00.html

Frequently asked questions on USAEC's Web site that specifically pertain to Performance-Based Contracting from a:

- **General audience perspective**: http://aec.army.mil/usaec/cleanup/pbc02a.html;
- **Installation perspective**: http://aec.army.mil/usaec/cleanup/pbc02b.html;
- **Regulator perspective**: http://aec.army.mil/usaec/cleanup/pbc02c.html;
- **Stakeholder perspective**: http://aec.army.mil/usaec/cleanup/pbc02e.html;
- **Private industry perspective**: http://aec.army.mil/usaec/cleanup/pbc02d.html.

3. **DoD Handbook on Preparation of SOW**. This handbook contains further guidance in Section 5 on developing the SOO:
http://www.arnet.gov/Library/OFPP/BestPractices/pbsc/library/DODhandbook.pdf