November 1, 2004

Acquisition

Pueblo Chemical-Agent-Destruction Pilot Plant Project
(D-2005-009)

This special version of the report has been revised to omit contractor proprietary and Government predecisional information.

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Acronyms

ACWA	Assembled Chemical Weapons Assessment (now Alternatives)
ADM	Acquisition Decision Memorandum
AT&L	Acquisition, Technology, and Logistics
ATSD (NCB)	Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs
CAIG	Cost Analysis Improvement Group
DATSD (CD&TR)	Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction
FAR	Federal Acquisition Regulation
GAO	Government Accountability Office
OSD	Office of the Secretary of Defense
PCAPP	Pueblo Chemical-Agent-Destruction Pilot Plant
WHEAT	Water Hydrolysis of Explosives and Agent Technology

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202–4704

November 1, 2004

MEMORANDUM FOR ACTING UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY, AND LOGISTICS

SUBJECT: Report on the Pueblo Chemical-Agent-Destruction Pilot Plant Project (Report No. D-2005-009)

We are providing this report for your information and use. We performed this audit in response to your request concerning the acquisition and contract management of the Pueblo Chemical-Agent-Destruction Pilot Plant Project. We considered management comments on a draft of this report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Bruce A. Burton at (703) 604-9071 (DSN 664-9071), Mr. John E. Meling at (703) 604-9091 (DSN 664-9091), or Mr. Rodney D. Britt at (703) 604-9096 (DSN 664-9096). See Attachment J for the report distribution. The team members are listed inside the back cover.

By direction of the Deputy Inspector General for Auditing:

Mary L. Ugone
Assistant Inspector General
for Acquisition and Technology Management

This special version of the report has been revised to omit Contractor proprietary and Government predecisional information.

Office of the Inspector General of the Department of Defense

Report No. D-2005-009 **November 1, 2004**
(Project No. D2004AM-0180)

Pueblo Chemical-Agent-Destruction Pilot Plant Project

Executive Summary

Who Should Read This Report and Why? DoD program officials who oversee and manage chemical weapons disposal should read this report because it discusses lessons learned from implementing the acquisition process for the Pueblo Chemical-Agent-Destruction Pilot Plant (PCAPP) project.

Background. The Acting Under Secretary of Defense for Acquisition, Technology, and Logistics requested an audit of the PCAPP project because of his concern over the increase in the size and life-cycle cost of the planned facility. In his memorandum, the Acting Under Secretary requested that we determine deficiencies in the PCAPP project's acquisition process and the acquisition lessons to be learned, and identify actions to ensure compliance with the congressional certification required by Public Law 105-261. In addition, the Acting Under Secretary asked whether the PCAPP project, as currently designed, is at risk of not meeting the Chemical Weapons Convention Treaty's (the Treaty) extended destruction deadline of April 29, 2012.

Public Law 104-208, "National Defense Appropriations Act for Fiscal Year 1997," September 30, 1996, directed that DoD conduct a pilot program to identify and demonstrate alternatives to the baseline incineration[1] process and establish the position of Program Manager for Assembled Chemical Weapons Alternatives. Later, Public Law 105-261, "National Defense Authorization Act for Fiscal Year 1999," October 17, 1998, directed that the Under Secretary of Defense for Acquisition, Technology, and Logistics certify to Congress that the selected alternative technology was as safe and cost-effective as incineration for disposing of assembled chemical munitions and was capable of completing the destruction in accordance with the Treaty.

In September 2002, the Program Manager, through the contracting officer, awarded a $166.8 million contract to Bechtel National, Inc., San Francisco (Bechtel), to design the PCAPP facility. In January 2003, the Under Secretary certified to Congress that the neutralization of the assembled chemical munitions followed by biological-treatment[2] was as safe and cost-effective as incineration and that the entire stockpile could be destroyed by 2010 for $1.5 billion in FY 2002 constant dollars. In May 2004, the Program Manager informed the Acting Under Secretary that, based on Bechtel's 30 percent design submission, the life-cycle cost estimate had escalated to $2.65 billion, the estimated completion of operations to August 2011, the square footage of main processing buildings to 273,000 square feet, and the number of employees to approximately 890.

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[1] The baseline incineration method uses remote control equipment to disassemble and separate the explosive components, and mechanically open the munitions or bulk containers to expose and drain the agent. After the agent is drained, it is destroyed in an incinerator.

[2] Neutralization followed by biological-treatment uses hot water to neutralize the chemical agent, effectively destroying the chemical agent. Ordinary bacteria then consume the neutralization by-product.

Results. The Program Manager and contracting officer did not place controls in the contract over the life-cycle cost of the PCAPP facility design, which gave Bechtel the opportunity to propose a larger, more heavily staffed facility; the contracting approach did not include reconfiguration acceleration as directed in the Under Secretary of Defense's Acquisition Decision Memorandum because the State of Colorado's environmental laws did not support both accelerated permits and reconfiguration; the systems contractor should not have handled public outreach and involvement responsibilities because of indications of a conflict of interest; and the Program Manager and contracting officer did not ensure that Bechtel prepared engineering planning documentation for use in controlling the design process and for the effective operation of the facility when constructed. Further, the audit team determined that Bechtel developed a design for the PCAPP facility that was not executable, did not meet the intent of the Under Secretary's certification to Congress in January 2003, and is at risk that agent destruction will not be completed by the Treaty's destruction date.

Summary of Recommendations. We recommend that the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics recertify the PCAPP project to Congress; revise the Acquisition Decision Memorandum to the Program Manager, emphasizing the need to keep the PCAPP project within the baseline costs; and require the Program Manager to attend the statutorily required Program Manager course at the Defense Acquisition University. We recommend that the Program Manager for Assembled Chemical Weapons Alternatives use the industrial engineering analysis to be performed by the National Research Council to determine the appropriate square footage needed for the facility; remove public outreach and involvement responsibilities from the contract with Bechtel; develop a systems engineering plan for the milestone decision authority's approval; request that the Contracting Officer, Army Field Support Command, revise the contract scope of work to require the systems contractor to submit an acquisition logistics plan and a software management plan for approval; and task Bechtel to adhere to its contract requirements to submit configuration management, quality management, and information assurance and systems security plans.

Management Comments. We received comments from the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs, responding for the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics, and the Program Manager for Assembled Chemical Weapons Alternatives. The Assistant to the Secretary of Defense agreed that a new certification to Congress and a revised Acquisition Decision Memorandum were needed. He also stated that the Program Manager should be issued a waiver for the statutory training requirements. The Program Manager did not agree that the National Research Council was performing an industrial engineering analysis, that the PCAPP public outreach and involvement work should be removed from the contract with Bechtel, or that acquisition logistics and software management plans were needed. However, he did concur with the recommendation to submit a systems engineering plan to the Acting Under Secretary for approval. Although not required to respond to recommendations addressed to the Program Manager, the Assistant to the Secretary of Defense agreed that the PCAPP public outreach and involvement work should be removed from the contract with Bechtel, and stated that steps were being taken to terminate the public involvement contract with the systems contractor. He further concurred that an industrial engineering analysis, and systems engineering, acquisition logistics and software management plans were needed. We considered editorial comments that he provided in preparing the final report and changed the text where appropriate. See Part I of the report for a discussion of management comments and Part III of the report for the complete text of the comments.

Audit Response. Although the comments of the Program Manager for Assembled Chemical Weapons Alternatives were not fully responsive to the recommendations, actions planned by the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs were responsive to those recommendations. Accordingly, no further comments are required in response to the final report.

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Background

The Assembled Chemical Weapons Assessment (ACWA) Program was established by Public Law 104-208, "National Defense Appropriations Act for Fiscal Year 1997," September 30, 1996, which directed that a pilot program be conducted to identify and demonstrate not less than two alternatives to the baseline incineration process for demilitarizing assembled chemical weapons at the Pueblo and Blue Grass chemical depots. The Defense Acquisition Executive approved neutralization followed by biological-treatment (neut-bio) as the technology to safely dispose of the chemical weapons stockpile at Pueblo, Colorado, in accordance with the Chemical Weapons Convention Treaty (the Treaty), which required the United States to declare and destroy its chemical weapons by April 29, 2007 (or April 29, 2012, if granted a 5-year extension).[1] In July 2002, the Defense Acquisition Executive approved a Fast Path[2] concept to dispose of munitions at Pueblo. The Fast Path concept was based on a life-cycle cost estimate of $1.6 billion and completion of operations by April 2010.

Contract for the Pueblo Chemical-Agent-Destruction Pilot Plant Project. In September 2002, the Program Manager for Assembled Chemical Weapons Assessment, through the contracting officer, awarded a cost-reimbursable, task order contract to Bechtel National, Inc., San Francisco, California (Bechtel), for the design-through-closure of the Pueblo Chemical-Agent-Destruction Pilot Plant (PCAPP) project. The Program Manager selected Bechtel based on best value, where the technical approach ranked as the highest evaluation factor and cost as the least important factor. The contract included a performance-based statement of work with minimum requirements for the systems contractor to control the size, cost, or staffing level of the facility. The contract required Bechtel to submit the initial design, at 30 percent completion of the facility design, and the intermediate design, at 60 percent completion of the facility design, to the Government for review and approval.

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[1] In accordance with the Treaty, disposal of 100 percent of the U.S.-declared, chemical weapons stockpile must be completed no later than 10 years after entry into force, or April 29, 2007. Treaty provisions allow for a one-time, 5-year extension to this deadline. If granted, the time available for disposal would be extended to April 29, 2012.

[2] The Fast Path concept is a combination of neutralization technologies to show that a neutralization technology operations schedule could be accelerated to meet the requirements of the Treaty and to reduce cost.

Background (cont'd)

PCAPP Life-Cycle Cost Estimates. In January 2003, the Under Secretary of Defense for Acquisition, Technology, and Logistics (AT&L) used the Fast Path estimate to certify to Congress that the entire Pueblo stockpile would be destroyed for $1.5 billion[3] by 2010. However, on May 28, 2004, the Program Manager submitted a Program Office life-cycle cost estimate of $2.65 billion to the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs (ATSD [NCB]) based on Bechtel's 30 percent design submitted in January 2004. Bechtel did not submit its $2.3 billion life-cycle cost estimate for the PCAPP project until August 23, 2004.

Path Forward for the PCAPP Project. In April 2004, the ATSD (NCB) directed the Program Manager to pursue a revised design and conduct supporting analysis because of concerns about the PCAPP project being fiscally unexecutable. In response to the direction, the Program Manager requested Bechtel to submit a proposal to address potential design changes, and awarded Mitretek Systems, a support contractor, a task to independently assess Bechtel's 30 percent design. The Program Manager also tasked the National Research Council subcommittee to review Mitretek Systems's independent assessment. On May 14, 2004, the Acting Under Secretary of Defense (AT&L) requested that the Office of the Inspector General of the Department of Defense conduct an audit of the PCAPP project as discussed on page 3. Subsequently, on June 28, 2004, the ATSD (NCB) issued a memorandum to the Program Manager directing him to work toward keeping costs of the PCAPP facility within the cost that the Under Secretary of Defense (AT&L) certified to Congress in January 2003 and to complete destruction of the Pueblo chemical weapons stockpile before the Treaty's extended destruction date of April 29, 2012.

See Attachment D for detailed background information on the Chemical Demilitarization Program and Attachment E for the evolution of events on the PCAPP project.

[3] The $1.5 billion as certified to Congress by the Under Secretary of Defense (AT&L) is in current-year dollars and is equivalent to the $1.6 billion Program Office life-cycle cost estimate, which is in then-year dollars.

Objectives

The Acting Under Secretary of Defense for Acquisition, Technology, and Logistics requested that we determine:

- Deficiencies in the PCAPP acquisition process and specifically address the following:

  1. Has the Government's contractual relationship with the systems contractor contributed to the growth in the life-cycle cost of the facility?
  2. Was the systems contractor's handling of the public affairs contract proper?
  3. Has the accelerated contracting approach used for the facility been effective in controlling cost growth?
  4. Did the structure of this performance-based contract inadvertently provide the contractor with an incentive to propose a larger and more heavily staffed facility?
  5. Did this contracting approach operate to eliminate Department-approved acceleration efforts?
  6. What are the reasons for the growth in staffing levels and processing area?

- What acquisition lessons can be learned from the experience?

- What actions can be identified to ensure the Department complies with the intent of the congressional certification required by Public Law 105-261?

Objectives (cont'd)

Additional Information Requested by the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics:

On July 26, 2004, the audit team briefed the Acting Under Secretary of Defense (AT&L) on the preliminary results of the PCAPP project audit. At that time, the Acting Under Secretary of Defense (AT&L) requested that the audit team identify in the audit report whether the PCAPP facility, as currently designed, was at risk of not meeting the Treaty's extended destruction deadline of April 29, 2012.

Part I

Answers to the Request of the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics

The Government's Contractual Relationship

1. Has the Government's contractual relationship with the systems contractor contributed to the growth in the life-cycle cost of the facility?

Answer:

We did not find any evidence of an inappropriate personal relationship between the Program Manager or the contracting officer and Bechtel personnel. However, the Program Manager and the contracting officer (the Government) did not adequately define in the contract the project requirements, reviews, and approvals that would provide controls over the life-cycle cost growth of the PCAPP project.

Criteria:

DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003, provides guidance on program managers' responsibilities in considering life-cycle costs and affordability while managing acquisition programs. Specifically:

- Program managers shall consider supportability, life-cycle costs, performance, and schedule equally in making program decisions. Planning for operations and support and the estimation of total ownership costs shall begin as early as possible.

- Approved program baseline parameters shall serve as control objectives.

The Government's Contractual Relationship (cont'd)

Contract Terms:

The contract terms contributed to the project's cost growth because:

- The Program Manager and the contracting officer issued a request for proposal for a performance-based contract that was not fully consistent with the requirements of the Acquisition Decision Memorandum (ADM) and DoD Regulations. Specifically, the Program Manager stated that he did not require the enhanced reconfiguration concept, as approved in the ADM, to be a design constraint in the contract statement of work because he believed that the ADM did not restrict the design of the PCAPP facility. Further, he stated that the request for proposal had been approved by the Office of the Secretary of Defense (OSD).

- The contracting officer did not place language in the contract statement of work that required Bechtel to design the PCAPP facility within the cost constraints that were established by the earlier system-and-process analysis performed by the OSD Cost Analysis Improvement Group (CAIG) and the National Research Council.

- The Program Manager and the contracting officer reviewed and approved key project information that Bechtel provided, which was based on contractual requirements that deviated from the terms of the ADM, and the Program Manager did not first seek approval from the milestone decision authority.

- Bechtel was allowed to submit the PCAPP facility 30 percent design to the Government for evaluation in January 2004 without being required to submit a life-cycle cost estimate also. The Program Manager accepted the design after Bechtel addressed 1,168 Government comments.

The Government's Contractual Relationship (cont'd)

Conclusion:

The Program Manager and the contracting officer awarded a contract to Bechtel that did not emphasize cost in the design development. As a result, Bechtel did not consider cost constraints in designing the facility, which caused the current life-cycle cost estimate to escalate to $2.65 billion from the $1.5 billion that was certified to Congress in January 2003.

Management Comments on the Conclusion and Audit Response:

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred with the conclusion, stating that cost was one of the five major factors considered in the best value source selection. He stated that pursuant to the Congressional mandate to maximize the protection of the workforce, public, and environment, and the ADM direction to accelerate stockpile destruction, cost was not considered the most important factor. Furthermore, the Program Manager stated that the $1.5 billion certification to Congress made in accordance with Public Law 105-261, was a point of comparison and placeholder based on assumptions considered during the Defense Acquisition Board process. He also stated that the certification was not coordinated with him, and that he would have nonconcurred with the $1.5 billion cost reference.

Audit Response. The intent of Public Law 105-261 was for the Under Secretary of Defense (AT&L) to assure Congress that the alternative technology chosen for the stockpile destruction at Pueblo would be as cost-effective as incineration. Accordingly, the Under Secretary of Defense (AT&L) did certify to Congress in the certification that the accelerated neut-bio technology option would cost $1.5 billion and was as cost-effective as the $1.8 billion accelerated incineration option. Therefore, the Program Manager should have considered the $1.5 billion life-cycle cost as the approved program baseline parameter when structuring the contract statement of work to ensure that the Department remained in compliance with the certification.

The Propriety of the Public Affairs Contract

2. Was the systems contractor's handling of the public affairs (outreach and involvement) contract proper?

Answer:

The systems contractor should not handle the public affairs (outreach and involvement) contract because there are indications of a conflict of interest in safeguarding the interests of the Government.

Criteria:

Federal Acquisition Regulation (FAR) 1.602-2, "Contracting Officer Responsibilities," states that contracting officers are responsible for ensuring performance of all necessary actions for effective contracting and safeguarding the interests of the United States in its contractual relationships. In addition, FAR 9.5, "Organizational and Consultant Conflicts of Interest," states that the contracting officer should prevent the existence of conflicting roles that might bias a contractor's judgment.

Events:

Before issuing the request for proposal for the PCAPP facility, the Program Manager, through the contracting officer, contracted public outreach to a third-party support contractor. In October 2003, subsequent to the contract award to Bechtel, the Program Manager decided to eliminate the use of the third-party support contractor and give Bechtel full responsibility of managing public outreach.

The Propriety of the Public Affairs Contract (cont'd)

In the same month, October 2003, the Program Manager obtained approval from the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction (DATSD [CD&TR]) to increase Bechtel's responsibility for public involvement activities in Task Order Four of the contract. The public outreach activities and public involvement were to be used as a pilot program to test the feasibility of using systems contractors to perform certain public affairs responsibilities. Bechtel's increased responsibilities included managing the outreach program within the local community, developing and implementing a site-specific public outreach and involvement strategy, and providing protocol support to the Program Manager.

The following occurred as a result of Bechtel's handling the public affairs outreach and involvement responsibilities in the contract.

- A Bechtel public involvement representative spoke on behalf of the Pueblo Chemical Depot and Chemical Stockpile Emergency Preparedness Project public outreach offices without consulting the Depot or Project representatives to ensure that the Government's interests were accurately represented.
- A representative of the Office of the DATSD (CD&TR) stated that concern had existed within the OSD staff since November 2003 about the unauthorized disclosure of Government information to the public, including:
  - informing the U.S. congressional delegation that the ATSD (NCB) intended to perform an analysis of alternatives of the PCAPP design before the official memorandum was issued, and
  - informing the citizens of Pueblo, Colorado, of the December 2003 Program Budget Decision to realign $147 million from the ACWA Program to the Chemical Stockpile Disposal Program.

Bechtel public involvement representatives are a potential source of those disclosures because they may believe that they have the authority to make disclosures on behalf of the Program Manager, as specified in the terms of the PCAPP public affairs outreach and involvement responsibilities in the contract.

The Propriety of the Public Affairs Contract (cont'd)

Conclusion:

By directing the contracting officer to award the public outreach and involvement responsibility in the PCAPP contract to Bechtel, the Program Manager created a conflict of interest and provided inadequate safeguards to protect the interests of the Government. Assigning those responsibilities to Bechtel also created a perception that the contractor had control over information released and generated a situation that might bias the contractor's judgment.

Management Comments on the Conclusion and Audit Response:

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred with the conclusion, stating that he did not share the interpretation that a conflict of interest or a perception of a conflict of interest existed. He further stated that the contract statement of work includes distinct guidance for the contractor to follow when performing public outreach activities, and that controls were placed on the systems contractor to specifically protect the interests of the Government. Additionally, the Program Manager stated that he directed the Government public affairs officer, in full coordination with the Pueblo Chemical Depot public affairs office, to provide continuous oversight of the contractor. He further stated that he believed that the systems contractor adhered to the terms of the contract that specifically restricted Bechtel public involvement representatives from providing any information to the public not previously cleared by Government officials.

Audit Response. As previously stated in the report, contracting officers are responsible for safeguarding the interests of the United States in its contractual relationships and preventing the existence of conflicting roles that might bias or have the appearance of biasing a contractor's judgment. Because a Bechtel public involvement representative spoke on behalf of Pueblo Chemical Depot public affairs offices and the OSD staff expressed concern that Bechtel public involvement representatives had potentially disclosed Government information to the public, a real or apparent conflict of interest exists. To remedy this condition, action needs to be taken to remove the systems contractor from handling public outreach and involvement in public affairs responsibilities.

Accelerated Contracting Approach

3. Has the accelerated contracting approach used for the facility been effective in controlling cost growth?

Answer:

The accelerated contracting approach was useful in allowing the Program Manager, through the contracting officer, to award the contract to Bechtel in 3 months rather than the standard 12 to 14 months. However, the contract structure used for this facility was not effective in controlling cost growth.

Criteria:

FAR 34.005-2 (b), "Mission-Oriented Solicitation," requires the contracting officer to indicate in the solicitation, and explain when appropriate, the schedule, capability, and cost objectives and any known constraints in the acquisition. In addition, FAR 34.005-4, "Demonstration Contracts," states that the contracting officer should provide contractors with operational test conditions, performance criteria, life-cycle cost factors, and any other selection criterion necessary for the contractors to prepare their proposals.

Accelerated Contracting Approach:

The contracting strategy that the Program Manager used for the PCAPP project was to quickly award one contract for all phases of the project to meet the schedule set forth in the Treaty. To meet the Treaty deadline, the Program Manager, through the contracting officer, awarded a performance-based task order contract that was cost-reimbursable. In making the award, the Program Manager ranked cost as the least important evaluation factor. Further, the request for proposal and the contract awarded did not impose parameters on the contractor to limit the size or cost of the facility designed or the staffing level needed to operate the facility.

Accelerated Contracting Approach (cont'd)

The contract structure was not effective in controlling cost growth because:

- The request for proposal did not establish cost objectives, provide known constraints or life-cycle cost factors, or establish a cost or funding profile ceiling for the PCAPP project.
- The performance-based contract did not provide the contractor with parameters to limit the size or cost of the facility designed or the staffing level needed to operate the facility. The contract required Bechtel to base the size and staffing level of the PCAPP facility on the design it developed.
- The Program Manager did not ensure that the contracting officer established effective incentives in the contract for the contractor to control facility costs. The incentives in the performance-based contract were 75 percent schedule incentives and 25 percent cost incentives.
- The performance-based contract gave Bechtel the latitude to make design changes without considering the effects on the life-cycle costs for the PCAPP project.

Conclusion:

The accelerated contract structure that the Program Manager used was not effective in controlling cost growth because it allowed Bechtel to prepare a design for the facility with more square footage and that required a larger staff, which led to an increase in the estimated life-cycle cost for the PCAPP project.

Accelerated Contracting Approach (cont'd)

Management Comments on the Conclusion and Audit Response:

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred with the conclusion, stating that there has been no substantive contract cost growth. He further stated that the accelerated contract structure allowed him to develop a mature cost estimate based on the systems contractor's actual design. He also stated that the direction to accelerate destruction while maximizing the protection of the workforce, public, and environment increased the complexity of designing a first-of-a-kind facility. The Program Manager finally stated that the development of cost parameters or facility size limitations before development of a mature design was unreasonable.

Audit Response. While there has been no substantive contract cost growth for the design task orders of the contract, there has been significant growth in the Program Office life-cycle cost estimate for the project, from $1.6 billion in July 2002 to $2.65 billion in May 2004. The project life-cycle cost growth resulted from the Program Manager and the contracting officer not imposing parameters on the contractor to limit the size or cost of the facility designed and the staffing level needed to operate the facility. As a result, Bechtel prepared a $2.65 billion design with more square footage and a larger staff, which is not fiscally executable and does not meet the intent of the certification that the Under Secretary of Defense (AT&L) submitted to Congress in January 2003.

Structure of the Performance-Based Contract

4. Did the structure of this performance-based contract inadvertently provide the contractor with an incentive to propose a larger and more heavily staffed facility?

Answer:

As stated in the response to Question 3, the contract structure was not effective in controlling cost growth and, in fact, provided Bechtel with the opportunity to propose a larger and more heavily staffed facility. During the design phase, the proposed facility size and staffing level did not affect the amount of fixed and incentive fees that the contractor could earn. Although the fee structure has not been established for the construction phase, Bechtel could very well earn increased fixed and incentive fees with the larger facility size and higher staffing levels during the construction phase.

Contract Terms:

The basic contract awarded to Bechtel outlined a general fee structure that contained fixed-fee and performance-based incentives that would be defined with the award of each specific project phase.

For the design phase:

- The contracting officer awarded design Task Orders One and Two to Bechtel for $166.8 million. The design task orders included a $141.6 million fee-bearing target cost, a 10 percent fixed fee ($14 million), and a 5 percent incentive fee ($7 million).

- The $7 million incentive fee consisted of a 75 percent schedule incentive to meet Colorado State permit deadlines and a 25 percent cost incentive to complete the design phase under the $141.6 million fee-bearing target cost.

Structure of the Performance-Based Contract (cont'd)

- The specific incentive-fee structures for future construction, systemization, pilot testing, operation, and closure phases have not yet been established.

Conclusion:

The contract structure gave Bechtel the opportunity to prepare a facility design with more square footage and that required a larger staff. Before awarding performance-based contracts, contracting officers need to include adequate requirements, reviews, and approvals to provide the Government with controls over facility design and cost growth. The contracting officer has not defined or negotiated the fixed- and incentive-fee structure for the construction phase yet, but with increased construction costs, the fee amount would also most certainly increase.

Management Comments on the Conclusion and Audit Response:

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred with the conclusion, stating that the uncertainties and inherent risks for a first-of-a-kind neut-bio facility made it unreasonable to establish facility size or personnel limitations before completing the facility design. He further stated that those premature limitations could result in increased safety risks or an extended operations schedule. Additionally, the Program Manager stated that for internal control purposes, three separate reviews will be conducted to evaluate the initial, intermediate, and final design packages before the start of construction.

Audit Response. We acknowledge that the Program Manager's strategy was to place ownership and accountability on the systems contractor under a performance-based contracting approach. However, as previously stated, it was also the Program Manager's responsibility to consider the life-cycle cost when structuring the terms of the performance-based contract to ensure that the project remained fiscally executable. Accordingly, the Program Manager and contracting officer should have included requirements in the contract statement of work to ensure adequate Government controls over facility design and cost growth.

Elimination of Department-Approved Acceleration

5. Did this contracting approach operate to eliminate Department-approved acceleration efforts?

Answer:

The contracting approach that the Program Manager used included source selection and environmental permit acceleration as directed in the ADM, but it did not include the concept of reconfiguration acceleration as directed in the ADM because the environmental laws of the State of Colorado did not support both accelerated permits and reconfiguration.

Acquisition Decision Memorandum:

The ADM directed the Program Manager to accelerate the stockpile destruction process by:

- expediting source selection,
- optimizing the environmental permit process,
- reconfiguring the munitions, and
- working with the community and Federal, State, and local governments.

Program Manager Actions:

- Three of the four Department-approved acceleration efforts in the ADM were adequately pursued by the Program Manager, including expediting source selection, optimizing the environmental permit process, and working with the community and Federal, State, and local governments.

Elimination of Department-Approved Acceleration (cont'd)

- The reconfiguration of the munitions acceleration option was not pursued because the environmental laws of the State of Colorado did not support both accelerated permits and reconfiguration. To reconfigure the munitions in a separate building from the main processing building, the systems contractor needed to obtain a full Resource Conservation and Recovery Act Part B permit, which, according to the Program Manager, could take up to 2 years.

- The Program Manager did not inform the Under Secretary of Defense (AT&L) through OSD officials of the conflicting requirements in the ADM or seek direction and approval for the requirements that should have been pursued. Instead, to partially comply with the ADM and optimize the environmental permit process, the Program Manager opted to pursue a research, development, and demonstration permit in a staged approach, which would allow the pilot plant to be designed while necessary permits for construction were being obtained from the State.

- Bechtel submitted the Stage I research, development, and demonstration permit to the Site Project Manager for review on October 14, 2003 and to the State for review in December 2003. The Colorado Department of Public Health and Environment issued the draft permit on April 9, 2004, and expected to issue the final permit in July 2004. Bechtel submitted the Stage II permit application to the Site Project Manager for review in May 2004.

Elimination of Department-Approved Acceleration (cont'd)

Conclusion:

The Program Manager and the contracting officer included the requirements for accelerating the permit process and working with the community and the Federal, State, and local governments as contract incentives in the request for proposal, but they did not include the requirement for reconfiguring the munitions because the environmental laws of the State of Colorado did not support both accelerated permits and reconfiguration. Before the Program Manager approved the exclusion of the process for reconfiguring the munitions in the facility design, he did not obtain approval from or advise the Under Secretary of Defense (AT&L) of the potential effect of the exclusion on the life-cycle costs of the facility.

Management Comments on the Conclusion and Audit Response:

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred with the conclusion, stating that the ADM did not explicitly require reconfiguration, but directed the Program Manager to complete any additional National Environmental Policy Act analyses necessary for reconfiguration of the munitions and other acceleration efforts as quickly as practicable. He further stated that his decision not to pursue enhanced reconfiguration of the munitions eliminated the lengthy Resource Conservation and Recovery Act Part B permit process early in the schedule, did not require the Under Secretary of Defense (AT&L) to be notified, and did not conflict with ADM directives.

Audit Response. As previously stated, by optimizing the environmental permit process through a research, development, and demonstration permit rather than exploring the enhanced reconfiguration of the munitions under a Resource Conservation and Recovery Act Part B permit, the Program Manager partially complied with the ADM. However, because of the cost effect of not pursuing the enhanced reconfiguration of the munitions, the Program Manager should have notified the Under Secretary of Defense (AT&L) of his planned contract action and obtained the Under Secretary's approval before continuing the project.

Growth in Staffing Levels and Processing Areas

6. What are the reasons for the growth in staffing levels and processing area?

Answer:

Bechtel and the Program Manager explained that the PCAPP facility design increased in size because Bechtel:

- included three lines for processing to accelerate the destruction of munitions instead of the original two-line processing design.
- included reconfiguration of the munitions in the processing area because the environmental laws of the State of Colorado do not support enhanced reconfiguration of munitions under a research, development, and demonstration permit, and would require a full Resource Conservation and Recovery Act Part B permit.
- eliminated congestion around equipment in the main processing buildings for safety and maintenance purposes.
- incorporated lessons learned at other munitions destruction facilities to make closing the facility easier.
- added equipment to process secondary waste and dunnage simultaneously to more efficiently manage the project, thereby reducing the schedule for post-operations and closure.

As a result, Bechtel estimates that increased staffing levels will be needed to handle the reconfiguration of the munitions and to operate the additional processing line and equipment.

Growth in Staffing Levels and Processing Areas (cont'd)

Request for Proposal:

The Program Manager and the contracting officer decided to use a performance-based contract and include a minimum number of requirements in the statement of work to provide the systems contractor with flexibility during the PCAPP facility design phase. Accordingly, the request for proposal did not include parameters to limit the square footage for the main processing buildings and the staffing levels. However, Bechtel's Technical Proposal, which became part of the contract when Bechtel was awarded the systems contract for the PCAPP project, stated that:

- the Energetics Process Building, where munitions are unpacked and the fuses and bursters are removed, would be a 23,000 square foot building, and
- the Agent Processing Building, where the agent is removed from the munitions and neutralized, would be a 32,000 square foot building.

The total square footage of the two main processing buildings proposed by Bechtel and included in the systems contract for the PCAPP project totaled 55,000 square feet.

Design Differences:

The Fast Path concept that was approved by the Defense Acquisition Executive in the ADM was largely based on the original Water Hydrolysis of Explosives and Agent Technology (WHEAT) neut-bio design concept. An explanation of the differences between the WHEAT, Fast Path, and Bechtel's 30 percent design follows:

Original WHEAT Neut-Bio Concept. The WHEAT design included concurrent energetics treatment, conventional disassembly of munitions, and a two-line processing area. The overall schedule was estimated at 17 years. The Program Office estimated that the floor area for the main processing building totaled 110,000 square feet. The Program Office staffing estimate was for 550 staff members to operate the facility.

Growth in Staffing Levels and Processing Areas (cont'd)

Fast Path Accelerated Concept. The Fast Path concept included energetics reconfiguration, cryofracture, and a three-line processing area using neut-bio. The Program Manager estimated that the overall project schedule would drop to 9 years and 5 months. Although an additional processing line was added, the Program Office estimate for the floor area of the main processing buildings totaled the same 110,000 square feet. However, the Program Office staffing estimate increased from 550 to 740 staff members.

Bechtel 30 Percent Design. In May 2004, the Program Manager revised his life-cycle cost estimate based on the Bechtel 30 percent design, which included concurrent energetics treatment, conventional disassembly of munitions, and a three-line processing area using neut-bio. He revised the overall schedule from 9 years and 5 months to 11 years and 2 months. The Program Manager estimated that the floor area for the main processing buildings would be 273,000 square feet, and the staffing level would increase to 890 staff members. Although negotiations for facility staffing levels have not yet taken place, the Program Manager and the contracting officer anticipate that Bechtel will propose a staffing level of approximately 1,100 to operate the facility.

In summary, the estimated PCAPP facility size escalated from 55,000 square feet in the Bechtel technical proposal, to 110,000 square feet in the Fast Path design specified in the ADM, to 273,000 square feet in Bechtel's 30 percent design. Neither the Program Office nor Bechtel substantiated their facility square foot estimates with an in-depth industrial engineering analysis.

Conclusion:

Although Bechtel proposed a 55,000 square foot design for the main processing buildings in its technical proposal, the Program Manager stated that he did not consider the proposed facility square footage in making the decision to award the contract and did not require Bechtel to maintain that square footage when designing the facility. In addition, the Program Office and Bechtel did not substantiate their proposed facility square foot estimates with an in-depth industrial engineering analysis.

Growth in Staffing Levels and Processing Areas (cont'd)

Management Comments on the Conclusion and Audit Response:

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred with the conclusion, stating that the facility square footage was not a requirement of the proposal because the design was not expected to be mature at that time, and was not considered when selecting the systems contractor. He further stated that the 55,000 square foot estimate was unrealistic, and therefore an inaccurate assumption in Bechtel's Technical Proposal. Additionally, the Program Manager stated that industrial engineering standards for a chemical demilitarization facility do not exist, and that the PCAPP facility size was based on sound engineering judgment and experience. He stated that the current square footage and staffing levels were appropriate, based on all the considerations that went into the design.

Audit Response. The Program Manager's response affirmed statements in the conclusion statement. Without an in-depth industrial engineering analysis of the facility square foot estimates, the need for a facility larger than the facility that the Defense Acquisition Executive approved in the ADM has not been substantiated.

Acquisition Lessons Learned

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs

1. Program oversight and communications with the Program Office would have been improved had the ATSD (NCB) designated a program manager to be solely responsible for the ACWA Program and encouraged the Army to designate a separate director for the Chemical Materials Agency, in accordance with Public Law 104-208. Also, the ATSD (NCB) should have recommended that the ACWA Program be established as a separate Acquisition Category I program as provided for in DoD Instruction 5000.2.

Public Law 104-208 requires that the Program Manager for ACWA not be in direct or immediate control of the incineration demilitarization program. In February 2003, the Army reorganized the Chemical Demilitarization Program, which resulted in the Program Manager for ACWA also being the Director, Chemical Materials Agency. Under this arrangement, the Program Manager for ACWA controlled both the alternative technology and the incineration destruction sites.

DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003, defines major Defense acquisition programs as acquisitions with an eventual total expenditure for research, development, test, and evaluation of more than $365 million in fiscal year 2000 constant dollars. The April 2003 acquisition program baseline agreement for the Chemical Demilitarization Program contains baseline information for the ACWA Program as an annex, for which the research, development, test, and evaluation cost objective is $3.8 billion in then-year dollars for the demilitarization of assembled chemical weapons at the Pueblo and Blue Grass chemical depots.

Acquisition Lessons Learned (cont'd)

2. The ATSD (NCB) could have influenced the Program Office's acquisition strategy had his office timely reviewed and provided direction on the adequacy of the Program Manager's acquisition strategy and acquisition plan.

In August 2002, the Program Manager submitted a draft acquisition strategy and an acquisition plan to the ATSD (NCB) for review that provided the Program Manager's intended acquisition approach for the PCAPP project. As of August 2004, the ATSD (NCB) had not approved the acquisition strategy and had not commented on the acquisition plan.

Because the Office of the ATSD (NCB) did not respond to or disapprove the PCAPP project's acquisition strategy and acquisition plan, the Program Manager released the request for proposal and awarded the performance-based contract to Bechtel, through the contracting officer, without the ATSD (NCB) assuring the Under Secretary of Defense (AT&L) that project costs would remain affordable as the Under Secretary of Defense (AT&L) had certified to Congress in January 2003.

Management Comments on Acquisition Lessons Learned:

The Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred with the acquisition lessons learned. He stated that the OSD submitted a legislative proposal to merge the Program Manager for Assembled Chemical Weapons Alternatives under the Army Chemical Materials Agency, and that the proposal was accepted by the House Armed Services Committee and will now be considered at the Armed Services Committee Conference. Once the proposal is accepted or rejected, the Assistant to the Secretary of Defense stated that he will consider designating a separate Program Manager for the ACWA Program. Additionally, he stated that the Program Manager previously provided the acquisition strategy and the acquisition plan to his office in August 2002 for preliminary comments, not for a formal review and approval. The Assistant Secretary stated that, on August 4, 2004, he requested that the Program Manager provide those documents to his office for approval. He stated that the Program Manager provided the documents on September 9, 2004, and that approval was anticipated within 30 days of receipt.

Acquisition Lessons Learned (cont'd)

Program Manager for Assembled Chemical Weapons Alternatives

1. Because of continued program affordability concerns, the Program Manager should have informed the ATSD (NCB) of the contract conflict with the ADM requirements and the potential effects of the conflict on pilot program costs. He also should have requested direction and approval from the Under Secretary of Defense (AT&L) before proceeding with program decisions that were not fully compliant with the ADM.

The ADM directed the Army and the ACWA Program Manager to accelerate the stockpile destruction process by expediting source selection, optimizing the environmental permit process, reconfiguring the munitions, and working with the community and Federal, State, and local governments. The environmental laws of the State of Colorado would not support both accelerated permits and reconfiguration, and required a full Resource Conservation and Recovery Act Part B permit if reconfiguration of the munitions was to be pursued. As a result, the Program Manager chose to pursue the accelerated permitting approach under a Research, Development, and Demonstration permit and did not include the design requirement for reconfiguration of the munitions in the request for proposal. The Program Manager took this action without informing and obtaining direction and approval from the Under Secretary of Defense (AT&L) concerning the contract's nonconformance with ADM requirements.

2. The Program Manager should have communicated the program status to the ATSD (NCB) before May 2003, including changes, deviations, and other critical program information.

Acquisition Lessons Learned (cont'd)

The Interim Defense Acquisition Guidebook, October 30, 2002, provides guidance on the program manager's responsibility as the program proceeds through its acquisition life-cycle. Specifically, program managers should:

- Immediately notify the milestone decision authority when a deviation occurs if they have reason to believe that the current estimate for a program indicates that a performance, schedule, or cost threshold value will not be achieved.
- Notify the Overarching Integrated Product Team leader (in this case the DATSD [CD&TR]) if program changes require changes to the baseline threshold value. Further, they should quickly bring proposed changes to the acquisition program baseline to approval authorities for decision.

In June 2003, when the Program Manager became aware that the facility design would deviate from the WHEAT design and that the cost of the project would deviate from the cost established in the acquisition program baseline agreement, he should have informed the ATSD (NCB) of the estimated breach in the life-cycle cost threshold for the PCAPP project and submitted a revised acquisition program baseline to the milestone decision authority for approval before allowing Bechtel to proceed with the escalated design. Also, in June 2003, the Program Manager provided an updated life-cycle cost estimate of $1.9 billion to the DATSD (CD&TR) but did not explain why the PCAPP life-cycle cost estimate deviated from the $1.5 billion that the Under Secretary of Defense (AT&L) certified to the Congress in January 2003 or request that the acquisition program baseline for the PCAPP project be revised.

3. In retrospect, the Program Manager should probably have competed the PCAPP project to the 30 percent design phase to better understand the life-cycle cost for the PCAPP project and to determine the affordability of the proposed design before selecting one contractor.

Acquisition Lessons Learned (cont'd)

The Program Manager decided not to compete the PCAPP project to the 30 percent design because he wanted to rely on a performance-based contracting approach with a minimum number of requirements. This contracting approach, however, provided Bechtel with significant latitude to change the design without having to consider the fiscal constraints that the Under Secretary of Defense (AT&L) certified for the PCAPP project.

4. Program managers are required to attend the Defense Acquisition University Program Manager's course before being assigned the responsibility to manage major Defense acquisition programs.

The Program Manager stated that he did not attend the Defense Acquisition University Program Manager's course as required by law. Attending this course would have provided the Program Manager with the training, knowledge, and management skills needed to manage the PCAPP project.

Section 1735, title 10, United States Code, "Education, Training, and Experience Requirements for Critical Acquisition Positions," (Defense Acquisition Workforce Improvement Act), requires that before being assigned to a position as a program manager of a major Defense acquisition program, a person must complete the program management course at the Defense Systems Management College or a management program at an accredited educational institution determined to be comparable by the Secretary of Defense.

Acquisition Lessons Learned (cont'd)

DoD Manual 5000.52-M, "Acquisition Career Development Program," November 1995, prescribes procedures for a DoD career development program for acquisition personnel. The Manual requires that program managers for Acquisition Category I programs attend either the Program Management Course or the Advanced Program Management Course and either the Executive Program Manager Course at the Defense Acquisition University or a comparable course approved by the Under Secretary of Defense (AT&L). The objectives of the Program Manager's course include learning to apply critical thinking when confronted by problems and dilemmas on a day-to-day basis, leading and integrating disparate functional groups to develop a cohesive team capable of coping with the complex problems common to program management offices, and identifying and applying best business practices to achieve win-win relationships with industry partners.

5. The Program Manager should have developed, or required Bechtel to develop, planning documentation that adequately addressed the engineering processes for the PCAPP project facility.

Specifically for the PCAPP facility, the Program Manager should have:

- Prepared a systems engineering plan for the approval of the milestone decision authority that described the program's overall technical approach, including processes, resources, metrics, and applicable performance incentives, in accordance with Under Secretary of Defense for Acquisition, Technology, and Logistics Memorandum, "Policy for Systems Engineering in DoD," February 20, 2004.

Acquisition Lessons Learned (cont'd)

- Verified that the contracting officer included requirements in the contract scope of work for Bechtel to submit and maintain planning documentation for acquisition logistics and software management.
- Verified that the contracting officer enforced the contract requirements for Bechtel to submit and maintain planning documentation for configuration management, contractor quality control, and information assurance and systems security.

Acquisition Lessons Learned (cont'd)

Contracting Officer, Army Field Support Command, Rock Island, Illinois

1. Before issuing requests for proposals, contracting officers need to obtain comprehensive legal reviews to ensure, among other things, that the terms in the request for proposals are consistent with the ADM requirements of the milestone decision authority.

A legal review was completed on the request for proposal for the PCAPP project, but it was not comprehensive in that it did not disclose that the contracting officer pursued only three of the four requirements in the ADM. The request for proposal also did not include a requirement for the contractors to include the reconfiguration of the munitions in their proposals because the State of Colorado would not approve enhanced reconfiguration without a Resource Conservation and Recovery Act Part B permit, which would have added 2 years to the schedule. The legal review also did not disclose that the contracting officer did not establish a project ceiling cost or funding profile in the request for proposal to provide the offerors a cost constraint that would limit life-cycle costs associated with design of the PCAPP project.

2. As required, contracting officers need to adequately document their price reasonableness determination when accepting contractor proposals.

FAR 15.406-3, "Documenting the Negotiation," states that the principal elements of the negotiation, significant differences between the negotiated agreement and prenegotiation objectives, and the fair and reasonable pricing must be documented. In the contract files, the contracting officer did not provide an adequate explanation of the price reasonableness when accepting Bechtel's design cost proposal of $163.9 million. The contracting officer accepted Bechtel's proposed cost without explanation despite the significant difference between Bechtel's proposed cost of $163.9 million, the losing offeror's proposal of $**.* million, and the independent Government cost estimate of $96.9 million.

*Contractor proprietary and negotiation sensitive data omitted.

Acquisition Lessons Learned (cont'd)

3. To provide contractors with the incentive to stay within approved program life-cycle costs, contracting officers need to establish requirements in the contract for the contractor to submit and maintain a program life-cycle cost estimate to verify that the program is affordable and executable.

The Defense Federal Acquisition Regulation Supplement 207.103, "Agency-Head Responsibilities," states that the life-cycle costs should be considered in all systems and equipment acquisitions. The current contract does not require Bechtel to submit and maintain a life-cycle cost estimate.

The Program Manager believed that Bechtel would not be able to prepare an accurate PCAPP life-cycle cost estimate until the contractor had completed the 30 percent design. Instead, the contracting officer stated that the Program Office used pieces of information obtained from Bechtel's cost estimates to develop the Program Office's life-cycle cost estimate. The contracting officer stated that a complete life-cycle cost estimate will be obtained from Bechtel in the future. Bechtel did not submit the life-cycle cost estimate for the PCAPP project of $2.3 billion until August 23, 2004, to the Program Manager.

4. Because of the potential for conflicts of interest, contracting officers should deny program office requests for systems contractors to handle public affairs responsibilities (outreach and involvement) in the contracts.

The FAR 1.602-2, "Contracting Officer Responsibilities," assigns the contracting officer with the responsibility for ensuring performance of all necessary actions for effective contracting, ensuring compliance with the terms of the contract, and safeguarding the interests of the Government in its contractual relationships. This duty includes trying to avoid, neutralize, or mitigate significant potential conflicts before contract award and preventing the existence of conflicting roles that might bias a contractor's judgment.

Acquisition Lessons Learned (cont'd)

Tasking public outreach and involvement to Bechtel as a pilot program created the appearance of a conflict of interest. The decision to task Bechtel with this responsibility occurred because the Program Manager, with the approval of the DATSD (CD&TR), believed that this tasking would streamline the project's contracting mechanisms and establish a more cohesive evaluation program.

Congressional Certification

What actions can be identified to ensure that the Department complies with the intent of the congressional certification required by Public Law 105-261?

Answer:

On June 28, 2004, the ATSD (NCB), by memorandum, directed the Program Manager to modify the contract statement of work to require that Bechtel revise its PCAPP design to remain within the cost objectives identified in the Under Secretary of Defense (AT&L) certification to Congress for the project. Another option, if Bechtel is unable to meet the ATSD (NCB) requirement, is for the Program Manager to award additional contracts to hold a competition through the 30 percent design phase and select the most affordable design at the end of the competition.

Congressional Certification:

The Under Secretary of Defense (AT&L) needs to recertify the cost and schedule for the PCAPP project, based on an in-depth industrial engineering analysis of the needed facility size and an updated life-cycle cost estimate.

- In January 2003, the Under Secretary of Defense (AT&L) certified to Congress that the Pueblo Chemical Depot neutralization of the assembled chemical munitions followed by bio-treatment was as safe and cost-effective as incineration.
- The Under Secretary of Defense (AT&L) stated in the certification that, based on the Program Office's analysis, the entire Pueblo stockpile could be destroyed by 2010 for $1.5 billion in FY 2002 constant dollars.

Congressional Certification (cont'd)

Current Cost Estimate:

The Under Secretary of Defense (AT&L) needs to recertify the cost and schedule using an in-depth industrial engineering analysis of the needed facility size because, as contracted, Bechtel did not design the chemical disposal facility using technology and methods similar to those used for the certification or within certified costs.

- In June 2002, the CAIG estimated that the total cost to complete the PCAPP project was $1.6 billion in then-year dollars.
- The CAIG developed that cost estimate based on an assessment of the Program Office's Fast Path neutralization option that the Under Secretary of Defense (AT&L) evaluated when making the technology decision for the PCAPP project.
- As required by Public Law 105-261, the Program Manager, through the contracting officer, awarded a contract to the National Research Council Committee on Review to provide an independent scientific and technical assessment of the proposed technologies for the PCAPP project. The National Research Council was not tasked to consider project cost and schedule.

In July 2001, the National Research Council concluded in its report to the Program Manager that, based on the results of the demonstration tests, the engineering design package, and available data, the WHEAT technology package could provide an effective and safe means of destruction for the assembled chemical weapons stored at the Pueblo Chemical Depot.

Congressional Certification (cont'd)

In October 2003, the Program Manager tasked the National Research Council to assess the process and design for the PCAPP facility that Bechtel developed for the design and construction phases of the PCAPP project. A representative stated that the National Research Council assessment of the facility design for the PCAPP project would not be completed until January 2005.

Conclusion:

Bechtel developed a design for the PCAPP facility that was not fiscally executable and did not meet the intent of the certification that the Under Secretary of Defense (AT&L) submitted to Congress in January 2003. Based on the current Program Office life-cycle cost estimate of $2.65 billion in then-year dollars, the Program Manager cannot dispose of the stockpile by 2010, and within the $1.5 billion cost as certified.

Answer to Additional Audit Objective

Is the PCAPP facility, as currently designed, at risk of not meeting the Treaty's deadline?

Answer:

The PCAPP facility design that Bechtel prepared is at risk of not completing agent destruction by the Treaty's extended destruction deadline of April 29, 2012. Additionally, the overall Chemical Demilitarization Program, including the ACWA Program, is at risk of not meeting the Treaty's destruction deadline as previously reported in Inspector General of the Department of Defense Report No. D-2003-128, "The Chemical Demilitarization Program: Increased Costs for Stockpile and Non-Stockpile Chemical Materiel Disposal Programs," September 4, 2003.

PCAPP Facility Risk Factors:

The Under Secretary of Defense for Acquisition, Technology, and Logistics issued a memorandum on "Policy for Systems Engineering in DoD," February 20, 2004, that requires program managers to develop planning documentation for the engineering processes to ensure that a project's technical approach is fully integrated. As of August 2004, the Program Manager had not ensured that Bechtel had prepared the required planning documentation.

Specifically, the Program Manager and the contracting officer did not include requirements for Bechtel to submit the following planning documentation in the contract scope of work:

- An acquisition logistics plan to integrate support considerations into the system's design requirements, to support the system cost-effectively through its life-cycle, and to identify, develop, and acquire the infrastructure elements necessary to the initial fielding and operational support of the system.

Answer to Additional Audit Objective (cont'd)

- A software management plan to adequately integrate and test the commercial off-the-shelf hardware, software, and networks.

Additionally, the Program Manager and the contracting officer included, but did not require Bechtel to adhere to, contract requirements for timely preparing and submitting a:

- Configuration management plan to ensure that the appropriate technical and administrative direction and surveillance will be practiced during all life-cycle phases of the PCAPP project.
- Quality control plan to ensure that disposal processes are adequately monitored, controlled, and improved to have a positive effect on the project cost and schedule.
- System security and information assurance plan to ensure that information systems critical to the plant's operations meet standards for confidentiality, integrity, availability, security, and reliability.

For additional information on systems engineering planning, see Attachment D.

Chemical Demilitarization Program:

At the Chemical Demilitarization Overarching Integrated Product Team Review on July 19, 2004, the CAIG presented a pre-decisional analysis of the agent disposal operations schedules for the Army (Chemical Materials Agency) and the ACWA Program.

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*Predecisional documentation omitted.

Answer to Additional Audit Objective (cont'd)

Disposal Operations Completion Schedules

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As previously reported in Inspector General of the Department of Defense Report No. D-2003-128, delays in obtaining State permit modifications for beginning disposal operations, safety incidents at operational chemical disposal facilities, and rising cost estimates for closure of disposal facilities continue to affect future program cost and the ability of DoD to meet the Treaty's schedule for disposal of chemical stockpile munitions.

Conclusion:

The PCAPP facility, * * * * * , are at risk of not meeting the Treaty's extended destruction deadline of April 29, 2012.

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*Predecisional documentation omitted.

Recommendations, Management Comments, and Audit Response

1. We recommend that the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics:

a. Submit a new certification to Congress stating that the Pueblo Chemical-Agent-Destruction Pilot Plant Project, as designed, will not meet the intent of the January 2003 certification if the life-cycle cost estimate for the project cannot be reduced to $1.5 billion.

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. The Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs, responding for the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics, concurred, stating that evaluation of a more cost-effective design was being directed. He further stated that the evaluation would be completed through the systems contractor conducting trade studies to determine a more affordable design alternative, an independent evaluation of the contractor's design and trade studies, and an industrial engineering evaluation of the independent evaluation. The Assistant to the Secretary of Defense stated that, upon conclusion of the independent evaluation in the third quarter of FY 2005, a new certification to Congress will be issued if the life-cycle cost estimate of the project cannot be reduced to $1.5 billion.

Program Manager for Assembled Chemical Weapons Alternatives Comments. Although not required to respond, the Program Manager for Assembled Chemical Weapons Alternatives nonconcurred, stating that, based on his direct communications with congressional staff, the certification was to be based on a point-in-time comparison of technologies rather than a fixed life-cycle cost estimate for the duration of the project.

Recommendations, Management Comments, and Audit Response (cont'd)

b. Revise the Acquisition Decision Memorandum to the Program Manager for Assembled Chemical Weapons Alternatives emphasizing that the Department needs to keep the Pueblo Chemical-Agent-Destruction Pilot Plant Project within the baseline costs as certified to Congress so that it will remain affordable.

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. The Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred, stating that the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics planned to complete a revised Acquisition Decision Memorandum by October 2004.

Program Manager for Assembled Chemical Weapons Alternatives Comments. Although not required to respond, the Program Manager for Assembled Chemical Weapons Alternatives nonconcurred, stating that the $1.5 billion estimate is not achievable. He stated that he will manage and hold the systems contractor accountable to a new acquisition program baseline based on a revised Acquisition Decision Memorandum.

Recommendations, Management Comments, and Audit Response (cont'd)

c. Require the Program Manager for Assembled Chemical Weapons Alternatives to take the Defense Acquisition University Program Manager's course as required by section 1735, title 10, United States Code, "Education, Training, and Experience Requirements for Critical Acquisition Positions."

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. The Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred, stating that he had directed that a waiver request to the training requirement be prepared for the Program Manager and submitted to the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics for approval, as required by DoD policy.

Program Manager for Assembled Chemical Weapons Alternatives Comments. Although not required to respond, the Program Manager for Assembled Chemical Weapons Alternatives nonconcurred, stating that because the Under Secretary of Defense for Acquisition, Technology, and Logistics, as the waiver authority to the cited statute, appointed him the Program Manager in 1997, there would appear to be an implied acceptance that the selected official satisfied the intent of all education, training, and experience requirements.

Audit Response. The Assistant to the Secretary of Defense's comments were responsive to the intent of the recommendation. Section 1737, title 10, United States Code, "Definition and General Provisions," states that the Under Secretary of Defense for Acquisition, Technology, and Logistics may waive, on a case-by-case basis, the training requirements with respect to the assignment of an individual to a particular critical acquisition position. Such a waiver may be granted only if unusual circumstances justify the waiver or if he determines that the individual's qualifications obviate the need for meeting the education, training, and experience requirements.

Recommendations, Management Comments, and Audit Response (cont'd)

2. We recommend that the Program Manager for Assembled Chemical Weapons Alternatives:

a. Use the industrial engineering analysis to be performed by the National Research Council to determine the appropriate square footage for the Bechtel National, Inc., Pueblo Chemical Agent-Destruction Pilot Plant's facility design.

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred, stating that the National Research Council is not conducting an industrial engineering analysis for the PCAPP facility, but is on contract to review the independent assessment by Mitretek Systems of Bechtel's 30 percent design submission. However, the Program Manager stated that he would consider any of the National Research Council recommendations resulting from the review.

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. Although not required to respond, the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred, stating that the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics would direct the Program Manager through a revised Acquisition Decision Memorandum to have an independent organization conduct an industrial engineering evaluation.

Audit Response. The Program Manager's comments were not fully responsive to the recommendation. However, the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics planned action will ensure that the Program Manager takes the recommended action.

Recommendations, Management Comments, and Audit Response (cont'd)

b. Remove the public outreach and involvement work for the Pueblo Chemical-Agent-Destruction Pilot Plant from Bechtel National, Inc., and return it to the Government or third-party contractor.

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives nonconcurred, stating that instead of removing the public outreach and involvement work from Bechtel, he would reinforce contract requirements and increase Government oversight of the public outreach contract by employing on-site Government personnel to directly oversee day-to-day public outreach activities. He further stated that he would review the contract statement of work and modify it as required to further increase Government control over the release of information.

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. Although not required to respond, the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred, stating that the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction would direct the Program Manager to terminate the public involvement contract with the systems contractor, and to solicit an independent, third-party company to provide public affairs services for the PCAPP project. He further stated that completion of this action would occur by November 10, 2004.

Audit Response. The Program Manager's comments were partially responsive to the intent of the recommendation. However, the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction planned action will ensure that the Program Manager takes the recommended action.

Recommendations, Management Comments, and Audit Response (cont'd)

c. Submit a systems engineering plan for the approval of the milestone decision authority that describes the Pueblo Chemical-Agent-Destruction Pilot Plant project's overall technical approach as required by the Under Secretary of Defense for Acquisition, Technology, and Logistics memorandum on "Policy for Systems Engineering in DoD," February 20, 2004.

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives concurred, stating that he would work with the Chemical Materials Agency to submit a systems engineering plan tailored specifically to the Pueblo project and focused on adding value to the chemical demilitarization project.

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. Although not required to respond, the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred, stating that he would ensure that the requirement for the Program Manager to submit a systems engineering plan for approval by the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics would be included in the revised Acquisition Decision Memorandum.

Recommendations, Management Comments, and Audit Response (cont'd)

d. Task the Contracting Officer, Army Field Support Command, Rock Island, Illinois, to:

(i) Revise the contract scope of work to require Bechtel National, Inc., to submit an acquisition logistics plan and a software management plan for approval.

(ii) Require Bechtel National, Inc., to adhere to contract requirements for timely preparing and submitting configuration management, quality management, and information assurance and systems security plans for the Pueblo Chemical-Agent-Destruction Pilot Plant project.

Program Manager for Assembled Chemical Weapons Alternatives Comments. The Program Manager for Assembled Chemical Weapons Alternatives partially concurred, stating that he would not submit an acquisition logistics plan and software management plan for approval, because those documents do not add value to the management of the program and are already addressed through other contract requirements. However, he stated that the Army Field Support Command had received the configuration management plan and quality management plan from Bechtel, and would ensure compliance with all contract requirements to include those associated with information assurance and systems security.

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments. Although not required to respond, the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs concurred, stating that the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics would direct the Program Manager to submit an acquisition logistics plan and a software management plan for his approval through the revised Acquisition Decision Memorandum.

Audit Response. The Program Manager's comments were not fully responsive to the recommendation. However, the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics planned action will ensure that the Program Manager takes the recommended actions.

Part II

Attachments

A. Scope and Methodology

The DoD Inspector General's audit team reviewed documentation from November 1985 through June 2004:

- Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics
  - Acquisition Decision Memorandum, July 16, 2002
  - PCAPP congressional certification, January 30, 2003
- Offices of the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs and the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction
  - Chemical Demilitarization Program Overarching Integrated Product Team meeting memorandum, November 7, 2003
  - Chemical Demilitarization Program Resource Review memorandum, December 11, 2003
  - Action memorandums on the PCAPP project
  - PCAPP Program Direction memorandum, April 14, 2004
- Assembled Chemical Weapons Alternatives Program
  - PCAPP alternative life-cycle cost estimates
  - Water Hydrolysis of Explosives and Agent Technology blueprints
  - Program Budget Decision, December 16, 2003
  - Performance assessment reviews
  - E-mails and miscellaneous documents on the square footage of the facility

A. Scope and Methodology (cont'd)

- Army Field Support Command, Contracting Office
  - Acquisition plan
  - Request for proposal
  - Technical and cost proposals from offerors
  - Source selection documentation
  - Legal reviews
  - Defense Contract Audit Agency reports
  - Contract, task order, and modification awards
  - Price negotiation memorandums
  - Independent Government cost estimates

- Bechtel National, Inc.
  - Weekly status reports
  - Facility square footage comparison information
  - Preliminary, initial, and intermediate designs

- State of Colorado
  - Permit certification letter, August 23, 2002
  - Phase I Research, Development, and Demonstration Permit Application letter, February 11, 2004

A. Scope and Methodology (cont'd)

We performed this audit from May 2004 through August 2004 in accordance with generally accepted government auditing standards.

Limitations:

We did not review the management control program because the Acting Under Secretary of Defense (AT&L) requested that the audit determine actions that would ensure compliance with the certification to Congress on the project; identify acquisition lessons learned; review the Government's contractual relationship with the systems contractor; determine whether the systems contractor should handle public affairs; and determine whether the contracting approach and structure contributed to growth in the PCAPP facility size, staffing level, and life-cycle costs.

Use of Computer-Processed Data:

We did not use computer-processed data to perform this audit.

Use of Technical Assistance:

Engineers from the Technical Assessment Division, Office of the Deputy Inspector General for Auditing of the Department of Defense participated in the review of the PCAPP project. Specifically, the engineers evaluated the PCAPP facility design and the systems engineering planning for the PCAPP project.

Government Accountability Office High-Risk Area:

The Government Accountability Office (GAO), formerly the General Accounting Office, has identified several high-risk areas in DoD. This report provides coverage of the DoD Contract Management and DoD Acquisition high-risk areas.

A. Scope and Methodology (cont'd)

Personnel Contacted During the Audit:

- Office of the Assistant to the Secretary of Defense for Nuclear, Chemical, and Biological Defense Programs
  - Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs
  - Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction
  - Senior Program Analyst (DATSD [CD&TR])

- Assembled Chemical Weapons Alternatives Program, Headquarters, Aberdeen Proving Ground
  - Program Manager
  - Deputy Program Manager
  - Program Analyst
  - Headquarters Pueblo Lead
  - Public Affairs Officer

- Assembled Chemical Weapons Alternatives Program, Pueblo Chemical Depot
  - PCAPP Site Project Manager
  - PCAPP Site Deputy Project Manager
  - Administrative Contracting Officer, Army Corps of Engineers

A. Scope and Methodology (cont'd)

- Pueblo Chemical Depot
  - Commander
  - Public Affairs Officer
  - Chemical Stockpile Emergency Preparedness Project Coordinator

- Army Field Support Command, Rock Island, Illinois
  - Chemical Demilitarization Division Chief
  - Chemical Demilitarization Branch Chief
  - Procuring Contracting Officer

- FOCIS Associates, Government Support Contractor
  - FOCIS Site Support Manager for PCAPP

- OSD Cost Analysis Improvement Group
  - Director, Operations Analysis and Planning Procurement Division
  - Cost Analyst, Operations Analysis and Planning Procurement Division

- Bechtel National, Inc.
  - PCAPP Project Manager
  - PCAPP Public Involvement Manager

B. Prior Audit Coverage

Within the last year, the Inspector General of the Department of Defense (IG DoD) issued one report on the potential for cost escalation at the chemical disposal facility at Pueblo, Colorado.

IG DoD Report No. D-2003-128, "The Chemical Demilitarization Program: Increased Costs for Stockpile and Non-Stockpile Chemical Materiel Disposal Programs," September 4, 2003

The IG DoD report discussed issues affecting the ability of the Director, Chemical Materials Agency to effectively control the cost estimate of the Chemical Stockpile Disposal Program, including the:

- delays in obtaining State permit modifications needed to begin disposal operations,
- monetary effects of decisions on the type of technology to be employed at two Assembled Chemical Weapons Assessment facilities,
- escalation in costs and safety incidents at operational chemical disposal facilities, and
- rising cost estimates for closure of disposal facilities.

The report stated that when the September 2001 program cost estimate was prepared, the Director, Chemical Materials Agency based the cost estimate for the Pueblo facility on the Army Chemical Materials Agency's employing the incineration technology. In June 2002, the ACWA Program Manager submitted the cost estimate for the Pueblo disposal facility to the CAIG for review and approval. The CAIG assessed and revised the program estimate.

In addition, the CAIG determined that the full cost might escalate after the contractors completed the final disposal facility designs, which would result in future cost growth of the overall Chemical Demilitarization Program. The report further stated that program cost growth might also lead to additional program baseline cost breaches that would require the Under Secretary of Defense (AT&L) to recertify the program's cost and schedule to the Congress.

B. Prior Audit Coverage (cont'd)

During the last 4 years, the GAO and the Army Audit Agency have issued four additional reports related to demilitarizing chemical weapons at the Pueblo Chemical Depot within the overall Chemical Demilitarization Program.

Government Accountability Office (GAO)

GAO Report No. 04-634T, "Chemical Weapons: Destruction Schedule Delays and Cost Growth Continue to Challenge Program Management," April 1, 2004

GAO Report No. 04-221T, "Chemical Weapons: Better Management Tools Needed to Guide DoD's Stockpile Destruction Program," October 30, 2003

GAO Report No. 02-890, "Chemical Weapons: Lessons Learned Program Generally Effective but Could be Improved and Expanded," September 10, 2002

Army Audit Agency

Army Audit Agency Report No. 00-346, "Engineering Change Process for the Chemical Stockpile Disposal Project; Aberdeen Proving Ground, MD," August 14, 2000

C. Request from the Acting Under Secretary of Defense for Acquisition, Technology, and Logistics

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* Predecisional documentation omitted.

D. Detailed Background Information

Chemical Demilitarization Program

In 1985, DoD established the Chemical Demilitarization Program to comply with statutory direction. Specifically, because of congressional concerns for the stockpiles' deterioration, section 1521, title 50, United States Code, "Destruction of Existing Stockpile of Lethal Chemical Agents and Munitions," (Public Law 99-145), directed DoD to oversee the destruction of the stockpile of lethal chemical agents and munitions. The Congress, as part of the same legislation, designated the Army as the Military Department responsible for the destruction of the stockpile. The technology employed for the destruction of the chemical weapons stockpile was baseline incineration.

Public Law 104-208

Public Law 104-208, "National Defense Appropriations Act for Fiscal Year 1997," September 30, 1996, directed that a pilot program be conducted to identify and demonstrate not less than two alternatives to the baseline incineration process for the demilitarization of assembled chemical weapons, and that a program manager who is not, nor has been, in direct or immediate control of the baseline reverse assembly incineration demilitarization program carry out the pilot program. As a result, the Office of the Secretary of Defense established the position of ACWA Program Manager.

D. Detailed Background Information (cont'd)

Public Law 105-261

Public Law 105-261, "National Defense Authorization Act for Fiscal Year 1999," October 17, 1998, states that:

(a) The program manager for the Assembled Chemical Weapons Assessment shall continue to manage the development and testing of technologies for the destruction of lethal chemical munitions that are potential or demonstrated alternatives to the baseline incineration program independently of the program manager for Chemical Demilitarization and shall report to the Under Secretary of Defense for Acquisition and Technology.

(b) The program manager for the Assembled Chemical Weapons Assessment shall carry out those activities necessary to ensure that an alternative technology for the destruction of lethal chemical munitions can be implemented immediately after-- (A) the technology has been demonstrated to be successful; and (B) the Under Secretary of Defense for Acquisition and Technology has submitted a report on the demonstration to Congress.

(c) The Under Secretary of Defense for Acquisition and Technology shall provide for an independent evaluation of the cost and schedule of the Assembled Chemical Weapons Assessment, which shall be performed and submitted to the Under Secretary not later than September 30, 1999. The evaluation shall be performed by a nongovernmental organization qualified to make such an evaluation.

(d) (1) The Under Secretary of Defense for Acquisition and Technology shall determine whether to proceed with pilot-scale testing of a technology referred to in paragraph (2) in time to award a contract for the design, construction, and operation of a pilot facility for the technology to the provider team for the technology not later than December 30, 1999. If the Under Secretary determines to proceed with such testing, the Under Secretary shall (exercising the acquisition authority of the Secretary of Defense) award a contract not later than such date.

D. Detailed Background Information (cont'd)

Public Law 105-261 (cont'd)

(2) Paragraph (1) applies to an alternative technology for the destruction of lethal chemical munitions, other than incineration, that the Under Secretary certifies in writing to Congress is--(i) as safe and cost-effective for disposing of assembled chemical munitions as incineration of such munitions; and (ii) is capable of completing the destruction of such munitions on or before the latter of the date by which the destruction of the munitions would be completed if incineration were used or the deadline date for completing the destruction of the munitions under the Chemical Weapons Convention.

(3) The Under Secretary shall consult with the National Research Council in making determinations and certifications for the purpose of paragraph (2).

Chemical Weapons Convention

On April 25, 1997, the United States became one of 164 parties to ratify the "Convention on the Prohibition of the Development, Production, Stockpiling, and Use of Chemical Weapons and on Their Destruction," also known as the Treaty. The Treaty established provisions by which all parties would declare their chemical weapons and destroy them in accordance with the principles and methods established in the Treaty no later than 10 years after entry into force of the Convention, or April 29, 2007, for the United States. The Treaty is a Major Arms Control and Nonproliferation Treaty which, among other obligations, requires parties to the Treaty to restrict and monitor international trade in certain toxic chemicals and precursors to ensure that they are not used to develop chemical weapons, and to report industrial activities involving these chemicals to the Organization for the Prohibition of Chemical Weapons. The Treaty allows the parties to request a one-time extension to the deadline, not to exceed 15 years after entry into force of the Convention (5-year extension), which would extend the destruction deadline to April 29, 2012, for the United States.

E. Evolution of Events for the Pueblo Chemical-Agent-Destruction Pilot Plant Project

June 2001. As directed by Public Law 104-208, the Program Office evaluated four technologies under the Defense Acquisition Board review process:

- Baseline incineration
- Modified baseline incineration
- Neutralization followed by biological-treatment (neut-bio), also known as the WHEAT design
- Neutralization followed by Super Critical Water Oxidation, also known as the General Atomics Total Solution design

February 2002. The Program Office submitted cost and schedule estimates to the Defense Acquisition Board prior to 2002 that could not be certified as meeting the Treaty requirements. As a result, the CAIG recommended that the Program Office develop Fast Path estimates to show that the neutralization technology could be accelerated. Accordingly, the Program Office developed several Fast Path estimates based on a combination of Neut-Bio and Neut-SCWO technologies. The FY 2004-2009 budget and schedule that the Defense Acquisition Board approved for the PCAPP resulted from the CAIG assessment of the Fast Path estimates. The CAIG assessment of the Neutralization followed by Super Critical Water Oxidation, neut-bio, and Fast Path estimates follow:

	Prior to 2001 DAB[1] Neut-SCWO[2] Concept w/CAIG Risk	**Prior to 2001 DAB[1] Neut-Bio Concept w/CAIG Risk**	**2002 DAB[1]-Approved Fast Path Concept w/CAIG Risk**
Overall schedule	17 years	17 years	9 years, 5 months
Operations complete	April 2015	September 2015	April 2010
Cost (then-year dollars)	$2.1 billion	$2.1 billion	$1.6 billion
Main process buildings	approximately 122,000 square feet	approximately 110,000 square feet	approximately 110,000 square feet
Staffing	approximately 580	approximately 550	approximately 740

[1] Defense Acquisition Board

[2] Neutralization followed by Super Critical Water Oxidation

E. Evolution of Events for the Pueblo Chemical-Agent-Destruction Pilot Plant Project (cont'd)

March 2002. The Under Secretary of Defense (AT&L) approved neut-bio as the preferred alternative technology.

June 2002. The Program Manager stated that he briefed his acquisition approach to the ATSD (NCB).

July 2002. The Under Secretary of Defense (AT&L) signed the ADM approving neut-bio as the technology to safely dispose of the chemical weapons stockpile at Pueblo, Colorado. He also directed the Army and the Program Manager to accelerate the stockpile destruction process by:

- expediting source selection,
- optimizing the environmental permit process,
- reconfiguring the munitions, and
- working with the community and the Federal, State, and local governments.

The Program Manager issued a request for proposal for the PCAPP design phase through the closure of the PCAPP facility. The request for proposal stated that a task order contract would be awarded with most of the tasks awarded on a cost-reimbursable basis. The request for proposal included a performance-based statement of work that required the systems contractor to develop a PCAPP design that implemented the selected neut-bio technology for demilitarizing and disposing of mustard agents stored at the Pueblo Chemical Depot. The request for proposal stated that the systems contractor would determine the requirements for the rate of processing of the munitions and all related materials. The request for proposal did not specify limitations on the size, staffing level, or cost of the facility.

E. Evolution of Events for the Pueblo Chemical-Agent-Destruction Pilot Plant Project (cont'd)

August 2002. The Program Office received two contractor proposals in response to the request for proposal. As requested, the contractors proposed costs only for the design phase of the PCAPP contract. Costs for the construction-through-closure phases were to be negotiated at a later date. Bechtel proposed a cost of $163.9 million and * * * * *, which the Source Selection Evaluation Board later adjusted to $**.* million because the prospective systems contractor had not fully considered the design requirements in the request for proposal. The independent Government cost estimate for the design phase was $96.9 million. Bechtel's proposal also included a total square footage estimate of 55,000 square feet for the main processing buildings.

September 2002. The contracting officer awarded the basic contract to Bechtel, along with task order one for the design build plan, based on a best value selection that ranked technical approach as the most important evaluation factor and cost as the least important factor. However, the Program Manager did not inform the Under Secretary of Defense (AT&L) through OSD officials that the awarded contract did not include accelerated reconfiguration as required by the ADM.

October 2002. The losing contractor, Pueblo Environmental Solutions, filed a protest on the contract award and the GAO issued a stop work order to evaluate the protest.

December 2002. The GAO denied the protest and lifted the stop work order.

January 2003. The Under Secretary of Defense (AT&L) certified to Congress that the neutralization of the assembled chemical munitions followed by bio-treatment at the Pueblo Chemical Depot was as safe and cost effective as incineration. He also certified that for $1.5 billion, the entire Pueblo stockpile would be destroyed by 2010.

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*Contractor proprietary and negotiation sensitive data omitted.

E. Evolution of Events for the Pueblo Chemical-Agent-Destruction Pilot Plant Project (cont'd)

March 2003. The contracting officer awarded Task Order Three for special studies.

April 2003. The contracting officer awarded Task Order Two for completion of the design phase.

May 2003. Bechtel completed the design build plan.

June 2003. The Program Manager developed a life-cycle cost estimate based on Bechtel's technical proposal. The June 2003 life-cycle cost estimate was $1.9 billion based on an overall project schedule of 9 years with the completion of operations scheduled for November 2009. Bechtel estimated approximately 297,000 square feet of main processing buildings, and employment of approximately 780 staff members. According to the Program Manager, the estimate was larger than the estimate that the Defense Acquisition Board approved in 2002 because Bechtel's proposal contained:

- concurrent enhanced reconfiguration;
- munitions washout rather than cryofracture; and
- increased square footage for the main processing buildings to meet the Treaty's schedule requirement and to improve operational effectiveness.

November 2003. The contracting officer awarded Task Order Four for project services (public involvement and outreach).

December 2003. The ATSD (NCB) issued a memorandum to the Program Office directing an analysis of the design alternatives for the PCAPP facility because the contractor's PCAPP design plans were not fiscally executable within FY 2004-2009 funding levels.

E. Evolution of Events for the Pueblo Chemical-Agent-Destruction Pilot Plant Project (cont'd)

January 2004. Representatives from the OSD, ACWA Program, U.S. Army Corps of Engineers, Bechtel Pueblo Team (Bechtel and Government site personnel), and FOCIS Associates (Government support contractor) submitted information for the PCAPP design plans to the CAIG for analysis. Also, Bechtel submitted the PCAPP design at 30 percent completion to the Program Manager for review and approval.

March 2004. The CAIG provided the results of its analysis to the DATSD (CD&TR). The CAIG analysis focused on reducing the size of the facility and resulted in reduced capital construction costs.

The Program Manager accepted Bechtel's design at 30 percent completion which did not include reconfiguration.

April 2004. The ATSD (NCB) issued a memorandum to the Program Manager directing him to pursue a revised design for the PCAPP and conduct supporting analyses.

May 2004. In response to the ATSD (NCB) memorandum, the Program Manager, through the contracting officer, awarded a task to Mitretek Systems to perform an independent technical review of the 30 percent design, tasked a National Research Council subcommittee to review the Mitretek effort, and requested a proposal from Bechtel to address potential design changes.

On May 28, 2004, the Program Manager submitted a Program Office life-cycle cost estimate of $2.65 billion based on Bechtel's 30 percent design submission. Bechtel's design provided for an overall schedule of 11 years and 2 months, with the completion of operations scheduled for August 2011. Bechtel estimated approximately 273,000 square feet for main processing buildings, and employment of approximately 890 staff members.

Bechtel submitted the PCAPP design at 60 percent completion to the Program Manager for review and approval.

E. Evolution of Events for the Pueblo Chemical-Agent-Destruction Pilot Plant Project (cont'd)

June 2004. On June 10, 2004, the Program Manager submitted his plan for the PCAPP project to the ATSD (NCB). He proposed to suspend further contractor work to complete the three-line design, accelerate trade studies previously planned to reduce life-cycle cost through facility size, equipment, and operating personnel reductions, and initiate an effort to develop a two-line design that would incorporate positive trade study outputs. The Program Manager stated that his proposed path forward would minimize the impact of the ongoing design review on the PCAPP project and determine within what fiscal parameters the project should be maintained.

On June 28, the ATSD (NCB) issued direction to the Program Manager to clarify the path forward for the PCAPP project. He directed the Program Manager to work towards maintaining costs of the PCAPP facility within the acquisition program baseline objective cost and completing destruction of the Pueblo stockpile before the Treaty's completion date of April 29, 2012.

August 2004. With the approval of the Under Secretary of Defense (AT&L), the Program Manager planned to award Task Order Five for the construction phase of the PCAPP project.

F. Systems Engineering

Systems engineering management for the PCAPP project should include planning documentation for the following six engineering areas: systems engineering, acquisition logistics, software management, configuration management, quality control, and information assurance and systems security.

Systems Engineering Management. Military Standard-499A, "Engineering Management," May 1974, which was canceled in February 1995, stated that systems engineering is a logical sequence of activities and decisions that transforms an operational need into a description of system performance parameters and a preferred system configuration. In January 2001, to provide DoD program managers with continuing systems engineering guidance, the Defense Acquisition University prepared a manual on systems engineering fundamentals as supplementary text. The Manual provides program managers with a basic framework for planning and assessing system development. In February 2004, the Under Secretary of Defense (AT&L) noted the absence and importance of systems engineering policy in DoD acquisition policy. Because of the importance of systems engineering in the acquisition process, the Under Secretary of Defense (AT&L) issued a memorandum in February 2004 to reinstate systems engineering policy in the DoD acquisition process. The memorandum directed that systems engineering planning be fully integrated into program managers' acquisition strategies.

Based on the maturity of the technology that will be used for the PCAPP facility, the project is considered to be in the systems development and demonstration phase of the acquisition process. Accordingly, the Program Manager should have already developed planning documentation for the engineering processes. As stated earlier, the Program Manager did not prepare or obtain documentation from Bechtel to adequately address systems engineering planning for the PCAPP project. Specifically, the Program Manager did not have a systems engineering plan, and the contracting officer did not include requirements in the contract scope of work for Bechtel to submit planning documentation for acquisition logistics and software management. Additionally, the Program Manager and the contracting officer included, but did not require Bechtel to adhere to, contract requirements for preparing and submitting configuration management, quality management, and information assurance and systems security plans.

F. Systems Engineering (cont'd)

Based on a review of the systems engineering planning for the PCAPP project facility, engineers from the Inspector General DoD Technical Assessment Division concluded that the Program Manager did not adequately address the following systems engineering planning areas.

1. Systems Engineering:

The Defense Acquisition University Manual states that systems engineering planning is an activity that has a direct effect on acquisition planning decisions and establishes the feasible methods needed to achieve the acquisition objectives. The Manual further states that program managers use it to ensure that all technical activities are identified and managed; communicate the technical approach to the broad development team; document decisions and technical implementation; and establish the criteria to judge how well the systems development is meeting customer and management needs.

Criteria:

The Under Secretary of Defense for Acquisition, Technology, and Logistics memorandum on "Policy for Systems Engineering in DoD," February 20, 2004, and the Interim Defense Acquisition Guidebook (the Guidebook), October 30, 2002, provide policy for systems engineering for acquisition programs.

The Under Secretary of Defense (AT&L) memorandum requires program managers to develop a systems engineering plan for milestone decision authority approval that describes the program's overall technical approach, including processes, resources, metrics, and applicable performance incentives. The memorandum also requires program managers to detail the timing, conduct, and success criteria of technical reviews.

The Guidebook states that program managers shall implement a sound systems engineering approach, consisting of a top-down, iterative process of requirements analysis, functional analysis and allocation, design synthesis and verification, and system analysis and control.

F. Systems Engineering (cont'd)

Why the Program Manager did not prepare a Systems Engineering Plan for the PCAPP Project

A representative for the ACWA Program stated that the Program Manager did not prepare a systems engineering plan for the PCAPP project because he relied on the systems contractor to perform all planning for the management of the design and the chemical agent destruction processes needed to dispose of the chemical munitions at the Pueblo Chemical Depot. In the PCAPP project acquisition strategy and acquisition plan that were submitted to the Office of the ATSD (NCB), the Program Manager reported the intent to award a performance-based contract that placed total project responsibility with the systems contractor. The Program Manager believed that placing total responsibility with the systems contractor, without establishing management oversight of the contractor processes in a systems engineering plan, was appropriate because he had not received any specific comments on the acquisition strategy that he submitted to the Office of the ATSD (NCB) for review and approval in August 2002.

Conclusion:

Without a systems engineering plan, the Program Manager does not have a planning document that provides the integrating technical processes to define and balance system performance, cost, schedule, and risk. As of August 2004, Bechtel completed 60 percent of the design for the PCAPP project. Because the construction and systemization phases have not started, the Program Manager still has the opportunity to document his plans for systems engineering to ensure that he can exercise proper oversight of the processes that Bechtel uses to construct, systemize, pilot test, and operate the PCAPP facility in a cost-effective manner.

F. Systems Engineering (cont'd)

2. Acquisition Logistics:

Integrated logistics support planning and support analysis are essential for coordinating total systems support for chemical disposal plants because the availability, maintainability, and logistic supportability of the processing plant equipment affects the rate at which munitions are destroyed. IG DoD Report No. D-2003-088, "Acquisition of the Chemical Demilitarization Program," May 12, 2003, reported on the importance of failure analysis and reporting, preventive maintenance, and supply support logistics functions to the Tooele, Utah and Anniston, Alabama chemical disposal facilities.

Criteria:

The Interim Defense Acquisition Guidebook and the Military Handbook-502, "Acquisition Logistics," May 1997, provide guidance for program managers to use in planning acquisition logistics.

The Guidebook states that program managers shall conduct acquisition logistics management activities throughout the life cycle of the program.

Military Handbook-502 states that the principal objectives of acquisition logistics are to ensure that support considerations are an integral part of the system's design requirements, that the system can be cost-effectively supported through its life-cycle, and that the infrastructure elements necessary for initial fielding and operational support of the system are identified, developed, and acquired.

Why the Program Manager did not require an Acquisition Logistics Plan for the PCAPP Project

The Program Manager stated that he did not require Bechtel to submit an acquisition logistics plan for the PCAPP project because his acquisition strategy required logistics to be the total responsibility of Bechtel. Accordingly, the Program Manager relied on Bechtel under the performance-based contract to determine when to address PCAPP logistics issues.

F. Systems Engineering (cont'd)

Conclusion:

The Program Manager can avoid future schedule delays in systemization, pilot testing, and operations if Bechtel adequately plans for failure analysis and reporting, planned and preventive maintenance, and timely supply support for PCAPP facility plant equipment.

3. Software Management:

Reliable software and hardware are essential to the operation of chemical disposal facilities. The PCAPP project design integrates the use of commercial and standard software applications and commercial hardware to operate the system's equipment and control the safety systems. DoD guidance states that program managers should manage and engineer software intensive systems through best processes and practices that reduce cost, schedule, and performance risks. Program managers are required to engineer, develop, integrate, test, evaluate, deliver, sustain, and manage the overall systems development when using commercial hardware and software.

Criteria:

The Interim Defense Acquisition Guidebook provides specific guidance for program managers to use in managing and engineering software intensive systems. Specifically, program managers should:

- Base software systems design and development on systems engineering principles that include using commercial-off-the-shelf computer system products, and allowing incremental improvements based on modular, reusable, and extensible software.
- Work with the user to define and modify requirements to facilitate the use of commercial and non-developmental items that include requirements for hardware, software, interoperability, and data interchange.

F. Systems Engineering (cont'd)

- Prepare for life-cycle software support or maintenance by developing or acquiring the necessary documentation and by structuring a software development process that recognizes that emerging requirements will require software to be modified over the life cycle of the system.
- Engineer the system architecture and establish a rigorous change management process for life-cycle support. Systems that integrate multiple commercial items require extensive engineering to facilitate the insertion of planned new commercial technology. Failure to address changes in commercial items and the marketplace will potentially result in a system that cannot be maintained as vendors drop support for obsolete commercial items.

Why the Program Manager did not require a Software Management Plan for the PCAPP Project

The Program Manager stated that he did not place a specific requirement in the contract scope of work for Bechtel to prepare a software management plan because he believed that Bechtel would accomplish software planning requirements under the performance-based contract. During the review, the Design Build Manager for Bechtel stated that there was no need for software development planning because Bechtel planned to use standard software applications and commercial systems that were previously verified and validated. However, engineers from the DoD Inspector General's Technical Assessment Division determined that Bechtel needed to plan for the integration, testing, evaluation, and sustainment of hardware and software for the PCAPP project facility because the standard software applications and commercial systems had not previously been integrated, verified, and validated in the configuration planned for the PCAPP project facility.

F. Systems Engineering (cont'd)

Conclusion:

Because the construction phase has not begun, the Program Manager and contracting officer should modify the contract scope of work to require Bechtel to implement software management planning to effectively manage the PCAPP software and hardware systems.

4. Configuration Management:

An effective configuration management process will ensure that the PCAPP project facility is constructed as designed. Configuration management is a management process that identifies and documents the functional and physical characteristics of a configuration item, controls changes to those characteristics, and records and reports changes.

PCAPP Configuration Management Plan's Contract Requirement:

The contract required Bechtel to submit a final configuration management plan within 135 days after contract award; that is, September 27, 2002, to maintain the plan throughout the life of the contract, and to update it annually. Further, the contract required Bechtel to demonstrate the processes described in the configuration management plan during the design phase of the PCAPP project facility.

Criteria:

Military Handbook-61A, "Configuration Management Guidance," February 7, 2001, provides guidance and information to DoD acquisition managers, logistics managers, and other individuals who are assigned responsibility for configuration management to assist them in planning and implementing configuration management activities and practices during all life-cycle phases of defense systems.

F. Systems Engineering (cont'd)

Handbook-61A states that a configuration management plan should be developed as early as the concept and technology development phase of the acquisition process. Additionally, the Handbook states that a configuration management plan should focus on program definition and risk reduction, and development, production, and support activities.

Status of Bechtel's Configuration Management Plan:

The PCAPP Government Site Project Manager stated that as of August 2004, Bechtel's final configuration management plan was scheduled to be completed before the start of construction on the PCAPP facility.

Conclusion:

The absence of a configuration management process for the PCAPP project facility may lead to:

- equipment failures because of incorrect installation or replacement of parts;
- schedule delays and increased cost because of unanticipated changes; and
- maintenance problems, operational delays, and increased cost because of inconsistencies between equipment and its maintenance instructions.

Because the PCAPP project facility is approaching the construction decision, the Program Manager and the contracting officer need to enforce the contract requirement for Bechtel to immediately submit a configuration management plan and perform the annual updates as required to ensure that Bechtel has planned for effective DoD configuration management activities and practices during the life of the PCAPP project.

F. Systems Engineering (cont'd)

5. Quality Control:

It is essential for the Program Manager to ensure that Bechtel uses effective quality control procedures when designing and constructing the PCAPP project facility. Quality control is defined as a system for verifying and maintaining a desired level of quality in a product or process by careful planning, use of proper equipment, continued inspection, and corrective action as required.

PCAPP Contractor Quality Control Plan Contract Requirement:

The PCAPP contract required Bechtel to submit a final contractor quality control plan for design activities within 60 days of the contract award; that is, September 27, 2002.

Criteria:

The Interim Defense Acquisition Guidebook and the U. S. Army Engineering Support Center, Huntsville, Specification 01451, "Contractor Quality Control," February 2002, provide guidance on quality assurance and quality control activities for quality management systems.

The Guidebook states that program managers shall establish a quality management system to monitor, control, and improve performance processes. The Guidebook further states that program managers shall allow contractors to define and use a preferred quality management process that meets required support capabilities of the program.

F. Systems Engineering (cont'd)

Specification 01451 requires systems contractors to provide and maintain an effective quality management system for design activities that ensures all services provided meet professional architectural and engineering quality standards. Specification 01451 further requires systems contractors, as part of the contractor quality control plan, to define internal quality assurance and quality control practices used to ensure that the design is technically acceptable, constructible, maintainable, and operable. For design activities, Specification 01451 requires that the contractor's quality control plan define and provide the following:

- the processes and procedures used to manage design activities;
- the design products to be prepared to support and construct the design;
- for each design product, the reviews to be performed (for example, administrative and drafting checks, discipline and interdiscipline technical reviews, independent reviews, and specialized reviews);
- the general criteria for acceptability and the method of documenting that acceptability; and
- any qualification requirements applicable to the reviewers.

Status of Bechtel's Quality Control Plan:

The PCAPP Government Site Project Manager stated that, as of August 2004, Bechtel's final quality control plan was scheduled to be completed before the start of construction of the PCAPP facility.

F. Systems Engineering (cont'd)

Conclusion:

Without a contractor quality control plan, the Government will not be able to monitor Bechtel's internal quality assurance and quality control practices, which are needed to ensure the design is technically acceptable, constructible, maintainable, and operable.

The Program Manager and the contracting officer need to enforce the contract requirement for Bechtel to immediately submit a final quality control plan for the design phase to ensure that Bechtel has effectively planned for quality management activities.

6. Information Assurance and Systems Security:

Information assurance for the PCAPP project facility will provide the means to ensure the confidentiality, integrity, and availability of information processed by information-based systems. Implementing information assurance requirements is necessary to provide a measure of confidence that the security features, practices, procedures, and architecture of the systems accurately enforce DoD security policy and protect information systems against unauthorized access.

PCAPP Automated Information Systems:

The PCAPP project includes an automated facility control system, which operates the plant system equipment and controls plant safety systems, and an automated facility protection system, which prevents agent release. The systems include workstations, servers, communication networks, software, and hardware.

F. Systems Engineering (cont'd)

Criteria:

The scope of work in the PCAPP contract required Bechtel to use Army Regulation 25-1, "Army Information Management," February 15, 2000, as guidance and to comply with Army Regulation 380-19, "Information System Security," February 27, 1998.

Army Regulation 25-1 suggests that developers of systems include information assurance and security requirements in the design, development, and acquisition of the systems. Regulation 25-1 states that all information systems and networks be subjected to an established certification and accreditation process, which verifies that required levels of information assurance are achieved and sustained according to DoD Instruction 5200.40, "Defense Information Technology Security Certification and Accreditation Process," December 30, 1997. The certification and accreditation process considers the system's mission, environment, and architecture while it assesses the impact of the system's operations on the information infrastructure.

Army Regulation 380-19 lists systems security and accreditation requirements for automated information systems. Regulation 380-19 states that security policy and requirements for automated information systems defined at concept development, be considered throughout the life cycle. Further, Regulation 380-19 requires information systems security officers to:

- prepare, distribute, and maintain plans, instructions, guidance, and standard operating procedures for the security of systems operations.
- conduct threat and vulnerability assessments to enable the manager to properly analyze the risks to information and determine appropriate measures to effectively manage those risks.
- prepare or oversee the preparation of the certification and accreditation documentation and maintain a certification or accreditation statement for current network or automated information systems.

F. Systems Engineering (cont'd)

PCAPP Design Documentation:

The engineers from the DoD Inspector General's Technical Assessment Division determined that Bechtel's technical proposal, design criteria, intermediate design plan, and engineering specifications document for the plant control system did not include requirements for:

- systems security planning,
- a risk assessment plan for determining systems security measures, or
- Defense Information Technology Security Certification and Accreditation Process systems security certification and accreditation.

Conclusion:

The Program Manager and the contracting officer need to enforce the contract requirement for Bechtel to implement information assurance and systems security as required by Regulation 25-1 and Regulation 380-19 to assure the milestone decision authority that the PCAPP automated information systems will accurately enforce DoD information assurance and security policy.

G. Acquisition Decision Memorandum

THE UNDER SECRETARY OF DEFENSE

3010 DEFENSE PENTAGON
WASHINGTON, DC 20301-3010

ACQUISITION, TECHNOLOGY AND LOGISTICS

JUL 16 2002

MEMORANDUM FOR SECRETARY OF THE ARMY
PROGRAM MANAGER, ASSEMBLED CHEMICAL WEAPONS ASSESSMENT PROGRAM

SUBJECT: Disposal of the Chemical Weapons Stockpile at Pueblo, Colorado (CO) – Acquisition Decision Memorandum (ADM)

Based on the recommendation from the Chemical Demilitarization Overarching Integrated Product Team, I approve neutralization (hydrolysis) followed by biotreatment as the technology to safely dispose of the chemical weapons stockpile at Pueblo, Colorado. As stated in the Final Environmental Impact Statement (FEIS), *Destruction of the Chemical Agents and Munitions Stored at Pueblo Chemical Depot, Colorado*, this technology shall initially be operated as a pilot test facility before beginning full-scale operations. I am familiar with the potential environmental impacts of the various alternatives identified and analyzed in the FEIS, and have taken this analysis into consideration in making this technology selection.

Due to increased security concerns, I also direct the Army and the Program Manager for Assembled Chemical Weapons Assessment (PM ACWA) to accelerate destruction of the chemical weapons stockpile at Pueblo. The program shall complete the source selection as expeditiously as practicable and pursue an optimized environmental permitting process. In addition, I direct the Army and PM ACWA to complete as quickly as practicable, any additional National Environmental Policy Act (NEPA) analyses necessary for reconfiguration of the munitions and other acceleration efforts. No acceleration efforts that require additional NEPA analysis may be commenced until I receive the results of that analysis and provide express authorization to proceed. Also, the program shall be executed in a manner that is compliant with the Chemical Weapons Convention.

The Army shall fully fund the Pueblo portion of the Chemical Demilitarization Program to the Cost Analysis Improvement Group (CAIG) cost estimates presented to me on June 24, 2002. Acceleration options approved during the current Defense Planning Guidance Review that require additional funding will also be programmed in the FY 04-09 Army Budget Estimate Submission. The Army and PM ACWA shall continue to work with the community and federal, state, and local government to execute this accelerated program, and identify additional options to further reduce costs and schedule.

After consultation with me, any associated acquisition documentation may be streamlined to meet management needs.

E.C. Aldridge Jr.

H. Public Law 104-208

ending June 30, 1934, and for other purposes", approved March 3, 1933 (41 U.S.C. 10a et seq.).

(b) If the Secretary of Defense determines that a person has been convicted of intentionally affixing a label bearing a "Made in America" inscription to any product sold in or shipped to the United States that is not made in America, the Secretary shall determine, in accordance with section 2410f of title 10, United States Code, whether the person should be debarred from contracting with the Department of Defense.

(c) In the case of any equipment or products purchased with appropriations provided under this Act, it is the sense of the Congress that any entity of the Department of Defense, in expending the appropriation, purchase only American-made equipment and products, provided that American-made equipment and products are cost-competitive, quality-competitive, and available in a timely fashion.

SEC. 8063. None of the funds appropriated by this Act shall be available for a contract for studies, analyses, or consulting services entered into without competition on the basis of an unsolicited proposal unless the head of the activity responsible for the procurement determines—

(1) as a result of thorough technical evaluation, only one source is found fully qualified to perform the proposed work, or

(2) the purpose of the contract is to explore an unsolicited proposal which offers significant scientific or technological promise, represents the product of original thinking, and was submitted in confidence by one source, or

(3) the purpose of the contract is to take advantage of unique and significant industrial accomplishment by a specific concern, or to insure that a new product or idea of a specific concern is given financial support:

Provided, That this limitation shall not apply to contracts in an amount of less than $25,000, contracts related to improvements of equipment that is in development or production, or contracts as to which a civilian official of the Department of Defense, who has been confirmed by the Senate, determines that the award of such contract is in the interest of the national defense.

SEC. 8064. Funds appropriated by this Act for intelligence activities are deemed to be specifically authorized by the Congress for purposes of section 504 of the National Security Act of 1947 (50 U.S.C. 414).

50 USC 1521 note.

SEC. 8065. Notwithstanding section 142 of H.R. 3230, the National Defense Authorization Act for Fiscal Year 1997, as passed by the Senate on September 10, 1996, of the funds provided in title VI of this Act, under the heading "Chemical Agents and Munitions Destruction, Defense", $40,000,000 shall only be available for the conduct of a pilot program to identify and demonstrate not less than two alternatives to the baseline incineration process for the demilitarization of assembled chemical munitions: *Provided*, That the Under Secretary of Defense for Acquisition and Technology shall, not later than December 1, 1996, designate a program manager who is not, nor has been, in direct or immediate control of the baseline reverse assembly incineration demilitarization program to carry out the pilot program: *Provided further*, That the Under Secretary of Defense for Acquisition and Technology shall evaluate the effectiveness of each alternative chemical munitions

demilitarization technology identified and demonstrated under the pilot program to demilitarize munitions and assembled chemical munitions while meeting all applicable Federal and State environmental and safety requirements: *Provided further*, That the Under Secretary of Defense for Acquisition and Technology shall transmit, by December 15 of each year, a report to the congressional defense committees on the activities carried out under the pilot program during the preceding fiscal year in which the report is to be made: *Provided further*, That section 142(f)(3) of H.R. 3230, the National Defense Authorization Act for Fiscal Year 1997, as passed by the Senate on September 10, 1996, is repealed: *Provided further*, That no funds may be obligated for the construction of a baseline incineration facility at the Lexington Blue Grass Army Depot or the Pueblo Depot activity until 180 days after the Secretary of Defense has submitted to the congressional defense committees a report detailing the effectiveness of each alternative chemical munitions demilitarization technology identified and demonstrated under the pilot program and its ability to meet the applicable safety and environmental requirements: *Provided further*, That none of the funds in this or any other Act may be obligated for the preparation of studies, assessments, or planning of the removal and transportation of stockpile assembled unitary chemical weapons or neutralized chemical agent to any of the eight chemical weapons storage sites within the continental United States.

50 USC 1521 note.

SEC. 8066. (a) None of the funds made available by this Act may be obligated for design, development, acquisition, or operation of more than 47 Titan IV expendable launch vehicles, or for satellite mission-model planning for a Titan IV requirement beyond 47 vehicles.

(b) $59,600,000 made available in this Act for Research, Development, Test and Evaluation, Air Force, may only be obligated for development of a new family of medium-lift and heavy-lift expendable launch vehicles evolved from existing technologies.

SEC. 8067. None of the funds available to the Department of Defense in this Act may be used to establish additional field operating agencies of any element of the Department during fiscal year 1997, except for field operating agencies funded within the National Foreign Intelligence Program: *Provided*, That the Secretary of Defense may waive this section by certifying to the House and Senate Committees on Appropriations that the creation of such field operating agencies will reduce either the personnel and/or financial requirements of the Department of Defense.

SEC. 8068. Notwithstanding section 303 of Public Law 96–487 or any other provision of law, the Secretary of the Navy is authorized to lease real and personal property at Naval Air Facility, Adak, Alaska, pursuant to 10 U.S.C. 2667(f), for commercial, industrial or other purposes.

10 USC note prec. 2161.

SEC. 8069. Notwithstanding any other provision of law, for resident classes entering the war colleges after September 30, 1997, the Department of Defense shall require that not less than 20 percent of the total of United States military students at each war college shall be from military departments other than the hosting military department: *Provided*, That each military department will recognize the attendance at a sister military department war college as the equivalent of attendance at its own war college for promotion and advancement of personnel.

I. Public Law 105-261

PUBLIC LAW 105–261—OCT. 17, 1998

STROM THURMOND NATIONAL DEFENSE
AUTHORIZATION ACT FOR FISCAL YEAR 1999

"(B) No assistance may be provided under this paragraph after the completion of the destruction of the United States' stockpile of lethal chemical agents and munitions.

"(C) Not later than December 15 of each year, the Director shall transmit a report to Congress on the activities carried out under this paragraph during the fiscal year preceding the fiscal year in which the report is submitted.". Reports.

(b) PROGRAM FUNDING.—Section 1412(f) of such Act (51 U.S.C. 1521(f)) is amended— 50 USC 1521.

(1) by striking out "IDENTIFICATION OF FUNDS.—Funds" and inserting in lieu thereof "IDENTIFICATION OF FUNDS.—(1) Funds"; and

(2) by adding at the end the following new paragraph:

"(2) Amounts appropriated to the Secretary for the purpose of carrying out subsection (c)(4) shall be promptly made available to the Director of the Federal Emergency Management Agency.".

(c) PERIODIC REPORTS.—Section 1412(g) of such Act (50 U.S.C. 1521(g)) is amended—

(1) in paragraph (2)(B)—

(A) by striking out "and" at the end of clause (v);

(B) by striking out the period at the end of clause (vi) and inserting in lieu thereof "; and"; and

(C) by adding at the end the following new clause:

"(vii) grants to State and local governments to assist those governments in carrying out functions relating to emergency preparedness and response in accordance with subsection (c)(3).";

(2) by redesignating subparagraph (B) (as amended by paragraph (1)) and subparagraph (C) of paragraph (2) as subparagraphs (C) and (D), respectively; and

(3) by inserting after paragraph (2)(A) the following new subparagraph (B):

"(B) A site-by-site description of actions taken to assist State and local governments (either directly or through the Federal Emergency Management Agency) in carrying out functions relating to emergency preparedness and response in accordance with subsection (c)(3).".

SEC. 142. ALTERNATIVE TECHNOLOGIES FOR DESTRUCTION OF ASSEMBLED CHEMICAL WEAPONS. 50 USC 1521 note.

(a) PROGRAM MANAGEMENT.—The program manager for the Assembled Chemical Weapons Assessment shall continue to manage the development and testing (including demonstration and pilot-scale testing) of technologies for the destruction of lethal chemical munitions that are potential or demonstrated alternatives to the baseline incineration program. In performing such management, the program manager shall act independently of the program manager for Chemical Demilitarization and shall report to the Under Secretary of Defense for Acquisition and Technology.

(b) POST-DEMONSTRATION ACTIVITIES.—(1) The program manager for the Assembled Chemical Weapons Assessment may carry out those activities necessary to ensure that an alternative technology for the destruction of lethal chemical munitions can be implemented immediately after—

(A) the technology has been demonstrated to be successful; and

I. Public Law 105-261 (cont'd)

(B) the Under Secretary of Defense for Acquisition and Technology has submitted a report on the demonstration to Congress that includes a decision to proceed with the pilot-scale facility phase for an alternative technology.

(2) To prepare for the immediate implementation of any such technology, the program manager may, during fiscal years 1998 and 1999, take the following actions:

(A) Establish program requirements.

(B) Prepare procurement documentation.

(C) Develop environmental documentation.

(D) Identify and prepare to meet public outreach and public participation requirements.

(E) Prepare to award a contract for the design, construction, and operation of a pilot facility for the technology to the provider team for the technology not later than December 30, 1999.

(c) INDEPENDENT EVALUATION.—The Under Secretary of Defense for Acquisition and Technology shall provide for an independent evaluation of the cost and schedule of the Assembled Chemical Weapons Assessment, which shall be performed and submitted to the Under Secretary not later than September 30, 1999. The evaluation shall be performed by a nongovernmental organization qualified to make such an evaluation.

(d) PILOT FACILITIES CONTRACTS.—(1) The Under Secretary of Defense for Acquisition and Technology shall determine whether to proceed with pilot-scale testing of a technology referred to in paragraph (2) in time to award a contract for the design, construction, and operation of a pilot facility for the technology to the provider team for the technology not later than December 30, 1999. If the Under Secretary determines to proceed with such testing, the Under Secretary shall (exercising the acquisition authority of the Secretary of Defense) so award a contract not later than such date.

(2) Paragraph (1) applies to an alternative technology for the destruction of lethal chemical munitions, other than incineration, that the Under Secretary—

(A) certifies in writing to Congress is—

(i) as safe and cost effective for disposing of assembled chemical munitions as is incineration of such munitions; and

(ii) is capable of completing the destruction of such munitions on or before the later of the date by which the destruction of the munitions would be completed if incineration were used or the deadline date for completing the destruction of the munitions under the Chemical Weapons Convention; and

(B) determines as satisfying the Federal and State environmental and safety laws that are applicable to the use of the technology and to the design, construction, and operation of a pilot facility for use of the technology.

(3) The Under Secretary shall consult with the National Research Council in making determinations and certifications for the purpose of paragraph (2).

(4) In this subsection, the term "Chemical Weapons Convention" means the Convention on the Prohibition of Development, Production, Stockpiling and Use of Chemical Weapons and on their

Destruction, opened for signature on January 13, 1993, together with related annexes and associated documents.

(e) PLAN FOR PILOT PROGRAM.—If the Secretary of Defense proceeds with a pilot program under section 152(f) of the National Defense Authorization Act for Fiscal Year 1996 (Public Law 104–106; 110 Stat. 214; 50 U.S.C. 1521(f)), the Secretary shall prepare a plan for the pilot program and shall submit to Congress a report on such plan (including information on the cost of, and schedule for, implementing the pilot program).

(f) FUNDING.—(1) Of the amount authorized to be appropriated under section 107, funds shall be available for the program manager for the Assembled Chemical Weapons Assessment for the following:

(A) Demonstrations of alternative technologies under the Assembled Chemical Weapons Assessment.

(B) Planning and preparation to proceed from demonstration of an alternative technology immediately into the development of a pilot-scale facility for the technology, including planning and preparation for—

(i) continued development of the technology leading to deployment of the technology for use;

(ii) satisfaction of requirements for environmental permits;

(iii) demonstration, testing, and evaluation;

(iv) initiation of actions to design a pilot plant;

(v) provision of support at the field office or depot level for deployment of the technology for use; and

(vi) educational outreach to the public to engender support for the deployment.

(C) The independent evaluation of cost and schedule required under subsection (c).

(2) Funds authorized to be appropriated under section 107(1) are authorized to be used for awarding contracts in accordance with subsection (d) and for taking any other action authorized in this section.

(f) ASSEMBLED CHEMICAL WEAPONS ASSESSMENT DEFINED.—In this section, the term "Assembled Chemical Weapons Assessment" means the pilot program carried out under section 8065 of the Department of Defense Appropriations Act, 1997 (section 101(b) of Public Law 104–208; 110 Stat. 3009–101; 50 U.S.C. 1521 note).

TITLE II—RESEARCH, DEVELOPMENT, TEST, AND EVALUATION

Subtitle A—Authorization of Appropriations

Sec. 201. Authorization of appropriations.
Sec. 202. Amount for basic and applied research.

Subtitle B—Program Requirements, Restrictions, and Limitations

Sec. 211. Management responsibility for Navy mine countermeasures programs.
Sec. 212. Future aircraft carrier transition technologies.
Sec. 213. Manufacturing technology program.
Sec. 214. Sense of Congress on the Defense Science and Technology Program.
Sec. 215. Next Generation Internet Program.
Sec. 216. Crusader self-propelled artillery system program.
Sec. 217. Airborne Laser Program.
Sec. 218. Enhanced Global Positioning System program.

J. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
- Deputy Assistant to the Secretary of Defense for Chemical and Biological Defense
- Director, Defense Procurement and Acquisition Policy
- Program Manager, Assembled Chemical Weapons Alternatives

Under Secretary of Defense (Comptroller)/Chief Financial Officer
- Deputy Chief Financial Officer
- Deputy Comptroller (Program/Budget)

Director, Program Analysis and Evaluation

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller)
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J. Report Distribution (cont'd)

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Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
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House Subcommittee on National Security, Emerging Threats, and International Relations, Committee on Government Reform
House Subcommittee on Technology, Information Policy, Intergovernmental Relations, and the Census, Committee on Government Reform

Part III

Management Comments

Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs Comments

ASSISTANT TO THE SECRETARY OF DEFENSE
3050 DEFENSE PENTAGON
WASHINGTON, DC 20301-3050

NUCLEAR AND CHEMICAL AND BIOLOGICAL DEFENSE PROGRAMS

SEP 10 2004

MEMORANDUM FOR INSPECTOR GENERAL OF THE DEPARTMENT OF DEFENSE

THROUGH: DIRECTOR, ACQUISITION RESOURCES AND ANALYSIS 9/15/04

SUBJECT: Response to DoD-IG Draft Report #D2004AM-0180, *Pueblo Chemical-Agent-Destruction Pilot Plant Project*, August 27, 2004

As requested, attached are responses to recommendations, acquisition lessons learned, and statements of actions being taken regarding the findings and conclusions of your audit of the Pueblo Chemical Agent-Destruction Pilot Plant. If you have any questions, my point of contact is Mr. Patrick J. Wakefield, the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction, at (703) 588-1983.

Dale Klein

Attachments:
As stated

DOD-IG DRAFT REPORT – DATED AUGUST 27, 2004
DOD-IG REPORT #D2004AM-0180

Pueblo Chemical-Agent-Destruction Pilot Plant Project

RECOMMENDATIONS

Recommendation 1a: [Acting USD (AT&L) should] submit a new certification to Congress stating that the Pueblo Chemical-Agent-Destruction Pilot Plant Project, as designed, will not meet the intent of the January 2003 certification if the life-cycle cost estimate for the project cannot be reduced to $1.5 billion.

ATSD (NCB) Response: Concur. We are taking action to evaluate a more cost effective design. This will be conducted through (1) the systems contractor conducting trade studies to determine a more affordable design alternative, (2) an independent evaluation of the contractor's design and trade studies, and (3) an industrial engineering evaluation of the independent evaluation. We project these actions to be completed in the 3rd Quarter of Fiscal Year 2005. Upon conclusion of the independent evaluation, a new certification to Congress will be issued if the life-cycle cost estimate of the project cannot be reduced to $1.5 billion.

Recommendation 1b: [Acting USD (AT&L) should] revise the Acquisition Decision Memorandum to the Program Manager for Assembled Chemical Weapons Alternatives emphasizing that the Department needs to keep the Pueblo Chemical-Agent-Destruction Pilot Plant Project within the baseline costs as certified to Congress so that it will remain affordable.

ATSD (NCB) Response: Concur. The preparation of a new Acquisition Decision Memorandum is underway with a projected completion by October 2004.

Recommendation 1c: [Acting USD (AT&L) should] require the Program Manager for Assembled Chemical Weapons Alternatives to take the Defense Acquisition University Program Manager's course as required by section 1735, title 10, United States Code, "Education, Training, and Experience Requirements for Critical Acquisition Positions."

ATSD (NCB) Response: Concur. We are taking steps to ensure that a DD Form 2595, DEPARTMENT OF DEFENSE PROGRAM MANAGER/ DEPUTY PROGRAM MANAGER - WAIVER REQUEST, is completed and submitted for approval for the Program Manager for Assembled Chemical Weapons Alternatives.

Recommendation 2a: [PM ACWA should] use the industrial engineering analysis to be performed by the National Research Council to determine the appropriate square footage

for the Bechtel National, Inc., Pueblo Chemical Agent-Destruction Pilot Plant's facility design.

ATSD (NCB) Response: Concur. We are taking steps to have the program manager conduct an industrial engineering evaluation by an independent organization through the new Acquisition Decision Memorandum as described in our response to recommendation 1b.

Recommendation 2b: [PM ACWA should] remove the public outreach and involvement work for the Pueblo Chemical Agent-Destruction Pilot Plant from Bechtel National, Inc., and return it to the Government or third party contractor.

ATSD (NCB) Response: Concur. The DATSD (CD&TR) is taking steps to direct the Program Manager to terminate the public involvement contract with the systems contractor and solicit an independent, third party company to provide public affairs services for the PCAPP project as well as for the Blue Grass Chemical Agent-Disposal Pilot Plant project. The contractor chosen shall be better equipped to safeguard the interests of the U.S. Government and able to provide a high quality public affairs service while ensuring public outreach and involvement. Completion of this action is anticipated to occur within 60 days.

Recommendation 2c: [PM ACWA should] submit a systems engineering plan for the approval of the milestone decision authority that describes the Pueblo Chemical Agent-Destruction Pilot Plant project's overall technical approach as required by the Under Secretary of Defense for Acquisition, Technology and Logistics memorandum on "Policy for Systems Engineering in DoD," February 20, 2004.

ATSD (NCB) Response: Concur. We will ensure the requirement to submit a systems engineering plan for Acting USD (AT&L) approval is included in the new Acquisition Decision Memorandum as described in our response to recommendation 1b.

Recommendation 2d: [PM ACWA should] task the Contracting Officer, Army Field Support Command, Rock Island, Illinois, to: (i) Revise the contract scope of work to require Bechtel National, Inc., to submit an acquisition logistics plan and a software management plan for approval; and (ii) Require Bechtel National, Inc., to adhere to contract requirements for timely preparing and submitting configuration management, quality management, and information assurance and systems security plans for the Pueblo Chemical Agent-Destruction Pilot Plant project.

ATSD (NCB) Response: Concur. We will direct the PM ACWA to require the contractor to provide an acquisition logistics plan and a software management plan for approval by the Acting USD (AT&L) in the new Acquisition Decision Memorandum as described in our response to recommendation 1b. The PM will also be directed to ensure all plans are received.

ACQUISITION LESSONS LEARNED

Lesson 1: Program oversight and communications with the Program Office would have been improved if the ATSD (NCB) designated a program manager to be solely responsible for the ACWA Program and encouraged the Army to designate a separate director for the Chemical Materials Agency, in accordance with Public Law 104-208. Also, the ATSD (NCB) should have recommended that the ACWA Program be established as a separate Category I program as provided for in DoD Instruction 5000.2.

ATSD (NCB) Response: OSD submitted a legislative proposal to merge the Program Manager for Assembled Chemical Weapons Alternatives under the Chemical Materials Agency. This proposal was accepted by the House Armed Services Committee, not included in the Senate Armed Services Committee report, and will now be considered at the Armed Services Committee Conference. Once the proposal is accepted or rejected, we will consider the DoD-IG recommendation.

Lesson 2: The ATSD (NCB) could have influenced the Program Office's acquisition strategy had his office timely reviewed and provided direction on the adequacy of the Program Manager's acquisition strategy and acquisition plan.

ATSD (NCB) Response: Concur. On August 4, 2004, we requested the Program Manager to provide these documents for approval. They were previously provided to my organization at the action officer level for preliminary comment of the drafts only. The Program Manager did not provide these documents to the DATSD (CD&TR) in August 2002 for an official or formal review and approval. They were received on September 9, 2004, and we anticipate it will take 30 days to review and approve.

MANAGEMENT COMMENTS – SUBSTANTIVE

Page 1, para 1, sentence 3, change to read "In July 2002, the Defense Acquisition Executive directed an accelerated[2] concept to dispose of munitions at Pueblo. The accelerated concept was based on a…"

Rationale: Accuracy. The term "Fast Track" was briefly used while conducting the evaluation of design alternatives for PCAPP. However, it created the impression that an additional design path had been pursued. Recommend use of the original terminology, which was "accelerated".

Page 1, footnote 2, change to read "[2] The accelerated concept is a combination of…"

Rationale: Accuracy. The term "Fast Track" was briefly used while conducting the evaluation of design alternatives for PCAPP. However, it created the impression that an additional design path had been pursued. Recommend use of the original terminology, which was "accelerated".

Page 2, para 1, sentence 1, change to read "In January 2003, the Under…used the accelerated estimate to certify to Congress…"

Rationale: Accuracy. The term "Fast Track" was briefly used while conducting the evaluation of design alternatives for PCAPP. However, it created the impression that an additional design path had been pursued. Recommend use of the original terminology, which was "accelerated".

Page 7, para 1, bullet 1, sentence 2, change to read "Specifically, the Program Manager stated that he did not require the enhanced reconfiguration concept…"

Rationale: Accuracy. "Reconfiguration" and "Enhanced Reconfiguration" are different.

Page 7, para 1, bullet 1, sentence 3, delete.

Rationale: Accuracy. The request for proposal was approved by the PM, not OSD.

Page 10, para 1, sentence 1, change to read "In the same month, October 2003, the Program Manager obtained approval to initiate a pilot program to evaluate the efficacy of using the systems contractor for the public involvement contract to fulfill the intent of Public Law 107-248, which mandated separate management of the PCAPP program by PM ACWA. The existing public involvement contract was managed by the Army. Therefore, after bringing the matter to the attention of the Assistant to the Secretary of Defense for Nuclear and Chemical and Biological Defense Programs, the Assistant Secretary of the Army for Acquisition, Logistics and Technology, and the Deputy Assistant to the Secretary of Defense for Chemical Demilitarization and Threat Reduction, this pilot program was initiated to evaluate its viability. The Program Manager subsequently increased Bechtel's responsibility for public involvement activities in Task Order Four of the contract."

Final Report Reference

Rationale: Accuracy. This was intended to be a pilot program on a term basis to evaluate the system contractor's public involvement approach. This was to be independently assessed one year after the contract was awarded.

Page 11, paragraph 1, note. The DATSD (CD&TR) is taking steps to direct the Program Manager to terminate the public involvement contract with the systems contractor and solicit an independent, third party company to provide public affairs services for the PCAPP project as well as for the Blue Grass Chemical Agent-Disposal Pilot Plant project. The contractor chosen shall be better equipped to safeguard the interests of the U.S. Government and able to provide a high quality public affairs service while ensuring public outreach and involvement. Completion of this action is anticipated to occur within 60 days.

Page 23, para 2, change to read "In August 2002, the Program Manager submitted a draft acquisition plan to the Office of the Deputy Assistant to the Secretary of Defense (Chemical and Biological Defense Programs), ODATSD (CBD), for preliminary review, and a draft acquisition strategy to the Army for inclusion in the Chemical Demilitarization Program Acquisition Strategy, which the Army initially sent to ODATSD (CBD) for comment but redacted soon after. On August 4, 2004, the DATSD (CD&TR) requested the Program Manager to provide this information and received it on September 9, 2004."

Rationale: Accuracy.

Page 59

Page 52, para 2, sentence 2, change to read "As a result, the CAIG recommended that the Program Office develop accelerated estimates to…"

Rationale: Accuracy. The term "Fast Track" was briefly used while conducting the evaluation of design alternatives for PCAPP. However, it created the impression that an additional design path had been pursued. Recommend use of the original terminology, which was "accelerated".

MANAGEMENT COMMENTS – ADMINISTRATIVE

Page 2, para 2, sentence 5, change to read "Subsequently, on June 28, 2004, the Acting…to work toward keeping costs of the PCAPP facility within the level that the Under…"

Program Manager for Assembled Chemical Weapons Alternatives Comments

DEPARTMENT OF THE ARMY
PROGRAM MANAGER FOR ASSEMBLED CHEMICAL WEAPONS ALTERNATIVES
5183 BLACKHAWK ROAD
ABERDEEN PROVING GROUND, MARYLAND 21010-5424

REPLY TO
ATTENTION OF:

AMSCM-ACW

SEP 13 2004

MEMORANDUM FOR Office of the Inspector General of the Department of Defense, 400 Army Navy Drive, Arlington, VA 22202-4704

SUBJECT: Draft Report on the Pueblo Chemical Agent-Destruction Pilot Plant Project (Project No. D2004AM-0180), 27 August 2004

1. Enclosed is my response to your request for comments on the draft report.

2. My point of contact for this action is Mr. Joseph Novad, (410) 436-5691.

Encl

MICHAEL A. PARKER
Program Manager

DoD IG DRAFT REPORT - DATED August 27, 2004
Project No. D2004AM-0180

"Pueblo Chemical Agent-Destruction Pilot Plant Project"

PM ACWA Response to the Conclusions and
Recommendations to the Draft Report

Program Manager General Comments

The following report is the Program Manger for Assembled Chemical Weapons Alternatives (PM ACWA) response to the September 2004 Department of Defense Inspector General (DoD IG) report on the Pueblo Chemical Agent-Destruction Pilot Plant Project. General comments are presented first, followed by the PM's response to the six questions the DoD IG investigated per request of the Acting Under Secretary of Defense for Acquisition, Technology and Logistics (USD (AT&L)). Lastly, the PM provides comments to DoD IG's recommendations.

The Pueblo project, one element of the overall chemical demilitarization program, is a very non-traditional acquisition program requiring non-traditional management approaches. The acquisition tools that do apply require significant tailoring to bring value to the management of the overall program and to specific projects. The users and requirements drivers are, to a great degree, outside of DoD requiring project specific management processes and procedures to be developed to effectively move each project forward. The PM believes the DoD IG review has taken too narrow a view of all of the factors that have brought the Pueblo project to where it is today. Over the 35-year history of the chemical demilitarization project, safety, environment and schedule have been the priorities of DoD and placed in statute by Congress and administration. While cost is always a consideration, safety, environment and schedule remain the priorities. The manner in which the Pueblo project has been managed and executed in the terms of the Pueblo ADM reflects this approach. If cost is to be treated as a priority, a policy change and a revised ADM reflecting the same are necessary.

The Urgency of the Requirement. The Acquisition Decision Memorandum (ADM) for the disposal of the chemical weapons stockpile at Pueblo, CO was signed by the USD (AT&L) on 16 July 2002, just ten months into the shadow of September 11th. Consequently, the ADM acknowledges "the increased security concerns" and directs the acceleration of the destruction of the stockpile at Pueblo. The ADM also directs, "the program shall be executed in a manner that is compliant with the Chemical Weapons Convention (CWC)." The sense of urgency to destroy the stockpile in Pueblo was a priority for the nation.

Performance-Based Contract. A performance-based contract was established, as directed by the Office of the Secretary of Defense (OSD), that allowed those experts from

industry, who have or are in the process of designing, building, operating, and closing all existing demilitarization facilities, to design a plant that incorporates lessons learned. Further, based on their extensive chemical demilitarization experience, the design meets the CWC milestones along with the long-standing chemical demilitarization priorities of safety and environmental compliance. Consistent with the direction in the May 12, 2003 DoD Directive 5000.1, Section E1.16, subject: Performance Based Acquisition, that states "To maximize competition, innovation, and interoperability, and to enable greater flexibility in capitalizing on commercial technologies to reduce costs, acquisition managers shall consider and use performance-based strategies for acquiring and sustaining products and services whenever feasible." the PM wanted to place ownership and accountability on the systems contractor throughout all phases of the program.

The Army awarded a task order contract to design, construct, equip, systemize, pilot test, operate, and close the Pueblo Chemical Agent-Destruction Pilot Plant (PCAPP). The intent of the contract is to establish a fully integrated, long-term contractual relationship with the systems contractor for this multi-phased project. The task order approach is used to ensure that Government obligations to pursue progressive phases of the project are only entered into at the appropriate point in time when requirements are reasonably well defined and associated costs/fees mutually agreed upon. The use of the task contract allows for stronger management of program costs.

The task contract structure gives the Government the flexibility it needs to properly manage, provide collaborative input, and exercise appropriate oversight to deal with the requirements and budgetary issues that need to be addressed on a continuing basis.

Enhanced Reconfiguration. Reconfiguration is the removal of propellant from the munition. Enhanced reconfiguration, which involves the removal of the propellant and all energetic components including fuzes and bursters, was first considered in 2001 as a potential acceleration option that would be performed prior to the start of main plant operations. The concept for enhanced reconfiguration relies upon limited blast isolation rather than full containment in the event of a catastrophic explosion.

The DoD IG states that the PCAPP July 2002 ADM directs reconfiguration of the munitions. The ADM actually directs the Army and PM ACWA "to complete as quickly as practicable, any additional National Environmental Policy Act (NEPA) analysis necessary for reconfiguration of the munitions and other acceleration efforts." Because the PM was involved with the many Integrated Product Team (IPT) meetings that ultimately led to the issuance of the ADM, the PM understood the information/background that was used to develop the ADM. The PM's position is the ADM does not direct reconfiguration, but instead, directs the NEPA analysis for reconfiguration.

Enhanced reconfiguration was presented during the IPT meetings as one potential acceleration option for PCAPP. After discussions with the Colorado Department of Public Health and the Environment (CDPHE), enhanced reconfiguration was no longer considered an acceleration option since the CDPHE required a full Resource

Conservation and Recovery Act (RCRA) Part B permit to implement, resulting in an extension of schedule. Also, state regulators required full containment negating any cost advantage of enhanced reconfiguration. However, enhanced reconfiguration was still an option available to the systems offerors to use in their proposals if the offerors found an innovative approach that provided cost and schedule advantages.

The source selection process began within one month of the ADM; oral presentations by the offerors were held within two months. A representative from the Office of the Assistant to the Secretary of Defense (Nuclear and Chemical and Biological Defense Programs) (ATSD (NCB)) was on the Pueblo Source Selection Advisory Council. During the oral presentations in September 2002, the ATSD (NCB) representative was present when Bechtel briefed their proposal that did not include enhanced reconfiguration.

Cost Growth. The PM does not agree with how the term cost growth has been used in the DoD IG report. This current contract has incurred minimal growth; the systems contractor has maintained cost and schedule within the negotiated tasks on the contract. The issue is why budget estimates have increased.

The Government's first life cycle cost estimate (LCCE) developed in 2002 was based on a concept. It was used as a point of comparison in the technology decision between a neutralization-based technology and incineration technologies. The PM never intended this LCCE to be used as an absolute value since it was based on a design concept and intended to serve as a placeholder in the budget process until a more accurate and complete estimate based on a mature design could be developed. This intent was clearly conveyed during the multiple Working Integrated Product Team (WIPT) meetings, the multiple Overarching Integrated Product Team (OIPT) meetings, and during the Defense Acquisition Board (DAB). The PM's intent was to baseline the program on a mature design that became available in 2004. Cost growth in this context does not reflect the agreed-upon approach.

The Government's current 2004 LCCE, based on the system contractor's complete initial design and elements (as made available) of their intermediate design, has a high level of confidence for which the systems contractor can be managed to and held accountable. The PM believes the chemical stockpile at the Pueblo Chemical Depot cannot be destroyed as directed in the ADM within the current budget for PCAPP that was based on the 2002 LCCE.

PM Comments to the IG Conclusions

1. Has the Government's contractual relationship with the systems contractor contributed to the growth in the life-cycle cost of the facility?

IG Conclusion: The Program Manager and the contracting officer awarded a contract to Bechtel that did not emphasize cost in the design development. As a result, Bechtel did not consider cost constraints in designing the facility, which caused the current life-cycle

cost estimate to escalate to $2.65 billion from the $1.5 billion that was certified to Congress in January 2003.

PM Response: Non-concur with DoD IG Conclusion. Cost was one of the five major factors considered in the best value source selection. However, pursuant to the Congressional mandate to maximize the protection of the workforce, public, and environment, and the 16 July 2002 USD (AT&L) ADM direction to accelerate destruction of the Pueblo stockpile, cost was not considered the most important factor. At the close of the technology decision DAB, the PM advised the USD (AT&L) that the budget based on the CAIG placeholder estimate would not be adequate to accelerate the Pueblo project. The USD (AT&L) responded, "the money will have to be found."

Public Law 105-261 states "that the Under Secretary-- (A) certifies in writing to Congress is-- (i) as safe and cost effective for disposing of assembled chemical munitions as is incineration of such munitions; and (ii) is capable of completing the destruction of such munitions on or before the later of the date by which the destruction of the munitions would be completed if incineration were used or the deadline date for completing the destruction of the munitions under the Chemical Weapons Convention." The PM's position is that the $1.5 billion was a point of comparison and placeholder based on assumptions considered during the DAB process that resulted in certification. The certification to Congress that included the $1.5B cost reference was not coordinated with the PM. The PM would have non-concurred with the cost reference.

PM Supporting Comments:

a. The Pueblo contract was awarded based on the following evaluation factors: Technical Approach, Management Approach, Past Performance, Small Business Utilization, and Cost/Price. Cost/Price was considered in the award decision, but it was the least important factor. This is consistent with 50 U.S.C. 1521, Destruction of existing stockpile of lethal chemical agents and munitions, which provides as follows:

"(c) Environmental protection and use of facilities

(1) In carrying out the requirement of subsection (a) of this section, the Secretary shall provide for -

(A) maximum protection for the environment, the general public, and the personnel who are involved in the destruction of the lethal chemical agents and munitions referred to in subsection (a) of this section; and

(B) adequate and safe facilities designed solely for the destruction of lethal chemical agents and munitions."

b. For the PCAPP acquisition, the statute mandate and the ADM directed that enhanced protection of the workforce, the public, the environment, and acceleration of the stockpile destruction should be paramount considerations with cost, while being properly evaluated

and monitored, not the primary focus. This philosophy has been carried forward in the acquisition planning and execution for the PCAPP project. The solicitation and the resulting contract require the contractor to design a facility that accelerates the stockpile destruction and is compliant with the CWC milestones.

c. Bechtel and the Government focused the design on safe and environmentally sound approaches to allow accelerated destruction of the stockpile at Pueblo. Significant lessons learned from other chemical destruction facilities are being incorporated into the design to maximize safety and accelerate destruction.

d. The contract required that the systems contractor develop and submit a project LCCE 60 days after the Government acceptance of the initial design. The initial design was submitted on schedule in January 2004. The Government review was completed and the design was accepted on 31 March 2004. Given this time frame the systems contractor's LCCE should have been delivered in June 2004. During the months of February - August 2004 the systems contractor was redirected by the Government to support the USD (AT&L) directed design alternatives analysis, the DoD IG audit, and the Mitretek independent assessment of the Bechtel intermediate design. As a result of the Government directed actions, the LCCE was not completed and submitted until August 2004, two months behind schedule. During the development of their LCCE, the systems contractor provided portions of their LCCE backup information to PM ACWA. PM ACWA reviewed this information in the development of the program office estimate.

e. The ADM states, "I direct the Army and PM ACWA to complete as quickly as practicable, any additional National Environmental Policy Act (NEPA) analysis necessary for reconfiguration of the munitions and other acceleration efforts." As the PM worked with the State of Colorado regulators to understand the environmental requirements for enhanced reconfiguration, the PM determined potential cost and schedule benefits could not be realized. A lengthy RCRA Part B permitting process would negate schedule savings while full blast containment would negate cost savings.

2. Was the systems contractor's handling of the public affairs (outreach and involvement) contract proper?

IG Conclusion: By directing the contracting officer to award the public outreach and involvement responsibility in the PCAPP contract to Bechtel, the Program Manager created a conflict of interest and provided inadequate safeguards to protect the interests of the Government. Assigning those responsibilities to Bechtel also created a perception that the contractor had control over information released and generated a situation that might bias the contractor's judgment.

PM Response: Non-concur with the DoD IG Conclusion. The PM does not share the interpretation that a conflict of interest or a perception of a conflict of interest exists. Public Outreach, distinct from Public Affairs, has been previously determined suitable for out-sourcing. As such, the PM has placed controls on the systems contractor to specifically protect the interests of the Government. Excerpts from the contract statement

of work state as follows: "The contractor shall coordinate public outreach activities with the installation commander or his designated representative and the PM ACWA public affairs office. The contractors shall not discuss Army policy matters nor represent themselves as an official Army spokesperson on any matter. To ensure the accuracy and consistency of the messages, information provided by the contractor staff to the general public shall be coordinated with the PM ACWA public affairs office and/or by the installation public affairs office."

PM Supporting Comments:

a. The PM fully supports appropriate separation of duties between Government Public Affairs and contractor public outreach-related responsibilities and has communicated this verbally and in writing to the systems contractor. Further, the PM has directed its Government public affairs officer to provide continuous oversight of the contractor's public-related activities, in full coordination with Pueblo Chemical Depot Government public affairs assets. The PM's position is that the systems contractor adheres to the terms of the contract that specifically restrict Bechtel public involvement representatives from discussing Army policy matters or providing any information to the public not previously cleared by Government officials. Further, the contractor public outreach representatives have been made well aware of the boundaries of their positions and fully comprehend the requirements. It is the position of the PM that the systems contractor performs this requirement of the contract in a fully compliant manner, while providing cleared information on the PCAPP project with innovation and creativity.

b. All eight of the Government's systems contracts for chemical demilitarization facilities require the systems contractor to develop a public outreach program. Under the PCAPP, the PM extended those outreach responsibilities to include management of the outreach office to streamline the outreach process. The PM is not clear from this conclusion whether the Inspector General is recommending that all public outreach responsibilities be removed from the systems contractor or merely the task associated with outreach office management. The PM believes that having the systems contractor conduct public outreach reduces cost through elimination of redundant overhead.

c. The purpose of public outreach is to address community concerns in a timely and accurate manner. Most Pueblo community questions are focused on specifics of the Pueblo project and its unique design. As such, the systems contractor is in the best position to respond to the public's concerns in a timely and accurate manner. A third-party contractor would have to coordinate with the systems contractor to answer many of the public's questions, thus generating additional systems contractor costs, third-party contractor costs, and delays in addressing public questions and concerns.

3. Has the accelerated contracting approach used for the facility been effective in controlling cost growth?

IG Conclusion: The accelerated contract structure that the Program Manager used was not effective in controlling cost growth because it allowed Bechtel to prepare a design for the facility with more square footage and that required a larger staff, which led to an increase in the estimated life-cycle cost for the PCAPP project.

PM Response: Non-concur with DoD IG Conclusion. While acquisition reform initiatives were implemented that allowed the contract for design of the PCAPP to be awarded three months after issuance of the 16 July 2002 USD (AT&L) ADM, there has been no substantive contract cost growth. The accelerated contract structure allowed the Program Manager to develop a mature cost estimate based on the systems contractor's actual design and lessons learned from all previous efforts of the chemical demilitarization program. This cost estimate was available two months after the start of design work and was available to affect budgetary processes as directed in the ADM. The contract structure gives the Government the flexibility it needs to deal with the ever-changing requirements and budgetary issues that need to be addressed on a continuing basis.

PM Supporting Comments:

a. The Army awarded a task order contract to design, construct, systemize, pilot test, operate, and close the PCAPP. A detailed statement of work (SOW) was included, which identified mandatory codes, regulations, and standards with which the contractor must comply. The solicitation also included the funding profile for the first two years of the project. To the maximum practicable extent, the requirements were stated in performance-based terms to encourage innovation in design and other performance concepts, pursuant to Federal Acquisition Regulation (FAR) 34.005-2, Office of Management and Budget (OMB) Circular A-109 and OSD direction.

b. The task order approach ensures the Government obligations to pursue progressive phases of the project are only entered into at the appropriate point in time when requirements are well defined and associated costs/fees mutually agreed upon. This approach is consistent with the requirements of FAR 34.005-4 for contractors to submit, by the end of each phase, priced proposals. This has worked well with the design phase of the PCAPP contract, where the estimated cost growth at completion of the task is minimal. This is quite a success considering that the task started with a minimal design (less than 10%), the significant safety and acceleration lessons learned that have been built into the design, and the added USD (AT&L) requirement of assessing more cost effective design solutions.

c. A smaller sized or less costly facility is of little value if it increases safety risks or life cycle costs. PCAPP represents a first-of-a-kind facility using neutralization and biotreatment to destroy mustard agent and energetics. The directive to accelerate destruction while maximizing the protection to the workforce, the public, and the

environment increases the complexity of the task. The development of cost caps or facility size limitations prior to development of a mature facility and process design is unreasonable due to the uncertainties and inherent risks of the design concept. For that reason, cost reimbursable contracts with incentive and/or award fees are being used.

d. Incentives for the Design Task were structured with both schedule acceleration and cost control in mind. Since timely receipts of environmental permits are critical to the project, several schedule incentives were established to focus on those milestones. If permits are obtained early, the potential to reduce life cycle costs increases. Additionally, the importance of substantive cost incentives was not overlooked in the incentive structure employed. While schedule incentivization (which itself can generate cost savings or at least cost avoidance) does not comprise the larger portion of the incentivization approach, direct cost incentivization accounted for 25% of the design phase incentivization structure. This combined incentivization package provides a holistic approach for schedule adherence with necessary cost controls.

e. Currently, the Government and Bechtel are negotiating the construction phase of the project, based on mature design packages that were not in existence in September 2002, when the contract was awarded. The fee arrangement for this task will be negotiated to focus on critical milestones and cost performance. Additionally, the Government expects to tie a substantive portion of these incentives to systemization performance, to ensure an emphasis on the integrated requirements of the project.

f. Throughout the design effort, Bechtel has applied state-of-the-art tools to optimize the design within the ADM parameters, while minimizing life cycle cost. An informal assessment conducted by several NRC members, as individuals and not as agents of the NRC, confirmed the Bechtel approach would yield an optimal design including life cycle cost.

4. Did the structure of this performance-based contract inadvertently provide the contractor with an incentive to propose a larger and more heavily staffed facility?

IG Conclusion: The contract structure gave Bechtel the opportunity to prepare a facility design with more square footage and that required a larger staff. Before awarding performance-based contracts, contracting officers need to include adequate requirements, reviews, and approvals to provide the Government with controls over facility design and cost growth. The contracting officer has not defined or negotiated the fixed- and incentive-fee structure for the construction phase yet, but with increased construction costs, the fee amount would also most certainly increase.

PM Response: Non-concur with the DoD IG Conclusion. As of September 2004, the design requirements have been placed on contract for this first-of-a-kind neutralization and biotreatment facility to destroy mustard agent munitions at Pueblo. The complexity of the design task is increased by the direction to accelerate destruction while maximizing the protection to the workforce, the public, and the environment. The uncertainties and inherent risks make it unreasonable to establish facility size or personnel limitations prior

to development of the facility and process designs. Such premature limitations could result in increased safety risk or protracted operations. There has been no substantive cost growth associated with the PCAPP contract.

PM Supporting Comments:

a. The SOW requires government review and acceptance of Bechtel's design. For internal control purposes, three separate reviews will be conducted during the development of the design with the submittal of the initial, intermediate, and final design packages. Reviews of the initial and intermediate designs generated over 1100 and 1600 Government comments, respectively. Government acceptance of the final design packages will be required prior to the start of construction. Additionally, an informal assessment conducted by several NRC members, as individuals and not as agents of the NRC, confirmed the Bechtel approach would yield an optimal design including life cycle cost.

b. The PCAPP requires specialized process and facility designs. The world's technical experts in designing, constructing, systemizing, operating, and closing every chemical demilitarization facility comprise Bechtel's design team. The systems contractor has also conducted numerous trade studies in concert with risk mitigation under the PCAPP contract.

c. The PCAPP design incorporates numerous lessons learned from prior chemical demilitarization projects to reduce safety risks, to enhance performance of maintenance, to increase the availability of the facility, and to accelerate closure of the facility. Additionally, the 3-line design minimizes time consuming and costly changeovers, accelerates operations, and provides buffer capacity to ensure efficient operations.

d. The design task started with a minimal design (less than 10%), and the estimated cost growth at completion of the task is less than 1 percent. In contrast, the incineration sites started with a Government furnished facility design and a firm-fixed priced construction contract, yet have incurred 100-400% budget increases.

e. The DoD IG states that the "fee amount would also most certainly increase" with respect to "increased construction costs." The construction requirements have yet to be fully negotiated and placed on contract. The fee and incentives will be consistent with the degree of risk and the complexity of the requirements. The task contract allows each task to be tailored with respect to fee structure in order to apply the most appropriate fee to the work to be completed. The negotiated prices for these tasks will also be more accurate based on using the most recent information to control cost growths under the contract.

5. Did this contracting approach operate to eliminate Department-approved acceleration efforts?

IG Conclusion: The Program Manager and the contracting officer included the requirements for accelerating the permit process and working with the community and the Federal, State, and local governments as contract incentives in the request for proposal, but they did not include the requirement for reconfiguring the munitions because the environmental laws of the State of Colorado did not support both accelerated permits and reconfiguration. Before the Program Manager approved the exclusion of the process for reconfiguring the munitions in the facility design, he did not obtain approval from or advise the Under Secretary of Defense (AT&L) of the potential effect of the exclusion on the life-cycle costs of the facility.

PM Response: Non-concur with DOD IG Conclusion. The 16 July 2002 USD (AT&L) ADM did not explicitly require reconfiguration. The ADM states: "I direct the Army and PM ACWA to complete as quickly as practicable, any additional National Environmental Policy Act (NEPA) analyses necessary for reconfiguration of the munitions and other acceleration efforts." This statement refers to the NEPA actions and acknowledges that there are several other acceleration efforts ongoing. The ADM does not direct that reconfiguration be included in the solicitation.

Representatives of the Office of the USD (AT&L) were briefed on the contracting approach and were present during the proposal evaluation process (July – September 2002) in which the acceleration options being pursued and not being pursued (such as enhanced reconfiguration) were discussed.

PM Supporting Comments:

a. The decision not to pursue enhanced reconfiguration of munitions was neither in conflict with ADM directives nor did it require notification to the USD (AT&L) as long as the overall strategy complied with the direction to accelerate the destruction of the Pueblo stockpile.

b. The decision not to pursue enhanced reconfiguration eliminated the very lengthy RCRA Part B permitting process early in the schedule, which was in keeping with the ADM direction to accelerate the stockpile destruction process.

c. The PM's position is that the program is in full compliance with the ADM in the approach that was taken with acceleration options and with respect to the contracting approach to meet the ADM direction with respect to compliance with the CWC milestones.

6. What are the reasons for the growth in staffing levels and processing area?

IG Conclusion: Although Bechtel proposed a 55,000 square foot design for the main processing buildings in its technical proposal, the Program Manager stated that he did not

consider the proposed facility square footage in making the decision to award the contract and did not require Bechtel to maintain that square footage when designing the facility. In addition, the Program Office and Bechtel did not substantiate their proposed facility square foot estimates with an in-depth industrial engineering analysis.

PM Response: Non-concur with the DoD IG Conclusion. Facility square footage was not a requirement of the proposal because of the maturity level anticipated at that stage of the process. The PM expected details, such as square footage, would be established as an evolution of executing the design task. The solitary mention of square footage in the Bechtel proposal, thought as inaccurate, was considered but with inconsequential weight placed upon it. The PM's position is that the current square footage and staffing levels are appropriate taking into account all the considerations that went into the design. This includes safety, environmental considerations, lessons learned, risk reduction, maintenance and the direction of the ADM to accelerate and comply with the CWC.

PM Supporting Comments:

a. Many factors influenced the current design. Bechtel proposed the three-line design to maintain an accelerated schedule processing the 780,000 munitions. Dunnage is co-processed to lessen impacts of waste on closure. PCAPP is the only demilitarization facility required to process everything on-site (propellant, dunnage, etc.). Lesson learned from all phases of the demilitarization program are incorporated, to include recognition that space requirements for operations, maintenance and closure were inadequate at other sites.

b. Bechtel has completed, as part of the design process, Technical Risk Reduction Program (TRRP) studies to manage technical risk, process hazardous analysis to manage safety risk, trade studies to mange equipment risks, space analysis to manage worker risk and throughput analysis to manage operational risk. The Bechtel design takes into account operational requirements, laboratory needs and closure activities. The PCAPP facility is the first demilitarization plant designed to expedite closure efforts. The basis for the facility size is therefore based on sound engineering judgment and experience.

c. The PM felt the 55,000 square foot estimate was unrealistic, and therefore an inaccurate assumption in the Bechtel proposal, since the estimate is about half the size of currently built chemical demilitarization facilities. In addition, square footage was not a requirement of the proposal and therefore it was not considered.

d. No industrial engineering standards for facility size or equipment layout for a chemical demilitarization facility exist. To the degree industrial engineering standards could be used as a frame of reference, the systems contractor designers would have to apply engineering judgment factors to have an applicable tool.

PM Responses to the DoD IG Recommendations

1a. IG Recommendation to the Acting USD (AT&L):
Submit a new certification to Congress that the Pueblo Chemical Agent-Destruction Pilot Plant Project, as designed, will not meet the intent of the January 2003 certification if the life-cycle cost estimate for the project cannot be reduced to $1.5 billion.

PM Response: Non-concur.
PM ACWA met the certification requirement of Public Law 105-261 in December 2002. Based on direct communications with Congressional staff on the certification requirement, certification was to be based on a point in time to compare technologies rather than a continuum of comparison.

1b. IG Recommendation to the Acting USD (AT&L):
Revise the Acquisition Decision Memorandum to the Program Manager for the Assembled Chemical Weapons Alternatives emphasizing that the Department needs to keep the Pueblo Chemical-Agent-Destruction Pilot Plant Project within the baseline costs as certified to Congress so that it will remain affordable.

PM Response: Non-concur.
The current budget estimate of $1.5 billion is not achievable. The PM will manage and hold the systems contractor accountable to a new Acquisition Program Baseline (APB) based on the ADM or an APB based on a revised ADM redirecting the project.

1c. IG Recommendation to the Acting USD (AT&L):
Require the Program Manager for Assembled Chemical Weapons Alternatives to take the Defense Acquisition University Program Manager's course as required by section 1735, title 10, United States Code, "Education, Training, and Experience Requirements for Critical Acquisition Positions."

PM Response: Non-concur.
The USD (AT&L) appointed the PM ACWA in 1997 from a number of candidates. The USD (AT&L) had the full resume of the incumbent PM prior to making the PM selection. The USD (AT&L) also notified Congress of the selection. As the USD (AT&L) is the waiver authority to the cited statute and the Congress is the author of the legislation, there would appear to be an implied acceptance that the selectee satisfied the intent of all requirements. Additionally, on 19 February 2003, the PM ACWA was officially designated by the USD (AT&L) as the Director of the United States Army Chemical Materials Agency. This designation recognized that Director's high level of expertise met the qualifications in Title 50 USC 1521 that require "Such [general] officer [or civilian equivalent] shall have (A) experience in the acquisition, storage and destruction of chemical agents and munitions; (B) training in chemical warfare defense operations; and (C) outstanding qualification regarding safety and handling chemical agents and munitions." The USD (AT&L) stated that "I am satisfied Mr. Parker possesses all of the qualifications specified in 50 U.S.C. 1521." The PM's qualifications and experience meet the requirements of the Program Manager position.

2a. IG Recommendation to the PM ACWA:
Use the industrial engineering analysis to be performed by the National Research Council to determine the appropriate square footage for the Bechtel National, Inc., Pueblo Chemical Agent-Destruction Pilot Plant's facility design.

PM Response: Non-concur.
The NRC is not conducting an industrial engineering analysis for the PCAPP facility. The NRC will be reviewing the Mitretek assessment. However, the PM ACWA will consider any NRC recommendations.

2b. IG Recommendation to the PM ACWA:
Remove the public outreach and involvement work for the Pueblo Chemical-Agent-Destruction Pilot Plant from Bechtel National, Inc., and return it to the Government or third-party contractor.

PM Response: Non-concur.
The PM will reinforce contract requirements and increase government oversight of the public outreach contract. These options include employing on-site government personnel to directly oversee day-to-day public outreach activities. Further, the contract statement of work will be reviewed and modified as required to further increase government control of the release of information.

2c. IG Recommendation to the PM ACWA:
Submit a systems engineering plan for the approval of the milestone decision authority that describes the Pueblo Chemical Agent-Destruction Pilot Plant project's overall technical approach as required by the Under Secretary of Defense for Acquisition, Technology, and Logistics memorandum on "Policy for Systems Engineering in DoD," February 20, 2004.

PM Response: Concur.
The PM ACWA will work with the Chemical Materials Agency to submit a systems engineering plan tailored specifically to the Pueblo project and focused on adding value to a chemical demilitarization project.

2d i. IG Recommendation to the PM ACWA:
Task the Contracting Officer, Army Field Support Command, Rock Island, Illinois to: Revise the contract scope of work to require Bechtel National, Inc., to submit an acquisition logistics plan and a software management plan for approval.

PM Response: Non-concur.
These documents do not add value to the management of this program as these requirements are already addressed by other contract requirements tailored to the chemical demilitarization program. The chemical demilitarization program is a non-traditional acquisition program requiring non-traditional management approaches.

2d ii. IG Recommendation to the PM ACWA:
Task the Contracting Officer, Army Field Support Command, Rock Island, Illinois to: Require Bechtel National, Inc., to adhere to contract requirements for timely preparing and submitting configuration management, quality management, and information assurance and systems security plans for the Pueblo Chemical Agent- Destruction Pilot Plant.

PM Response: Concur.
The Army Field Support Command (AFSC) is in receipt of the configuration management plan and quality management plan from Bechtel. AFSC will ensure compliance with all requirements of the contract to include those associated with information assurance and systems security.

Summary

Historically, the chemical demilitarization program has been plagued by tremendous schedule delays accompanied by abundant cost growths. The PM pursued a different approach for the ACWA program to avoid these historical results. PM ACWA has pursued a holistic approach intended to invest funds upfront to save money over the project lifecycle (i.e., design includes closure considerations).

PM ACWA established a performance-based contract as directed by OSD to allow those experts from industry, who have designed, built, operated and closed all existing demilitarization facilities, to design the Pueblo facility. PM ACWA intended for this type of contract to place ownership and accountability on the systems contractor throughout all phases of the program.

PM ACWA has executed the PCAPP project within the mandates of the ADM. PM ACWA and the systems contractor have worked to accelerate the destruction of the Pueblo stockpile while pursuing ways to reduce cost and schedule risk to the program.

Accordingly, the many IPTs that led to the DAB technology decision agreed that the Pueblo project would be formally baselined after a mature design was available. This would avoid the prior experience at other demilitarization projects of doubling to quadrupling cost and schedule based on a premature APB. Arguably, these demilitarization projects, working from a mature government furnished design, should have been more cost/schedule stable. Based on this experience, a decision was made that Pueblo, implementing a new technology and yet-to-be-developed design, should avoid a premature formal APB until a mature design is available and critically reviewed by the government. The Pueblo project is now at the point where it can be formally baselined. If leadership determines that the project being executed in compliance with the current ADM is unaffordable, then a new ADM based on appropriate policy changes should be issued and the project will be redirected accordingly.

Team Members

The Office of the Deputy Inspector General for Auditing of the Department of Defense, Acquisition and Technology Management prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

Bruce A. Burton
John E. Meling
Rodney D. Britt
Shelly M. Farber
Melinda M. Oleksa
Jennifer Jezewski
Roberta C. Dameron
Kenneth H. Stavenjord
Peter C. Johnson
Chandra P. Sankhla
Jamie A. Bobbio
Jacqueline N. Pugh