

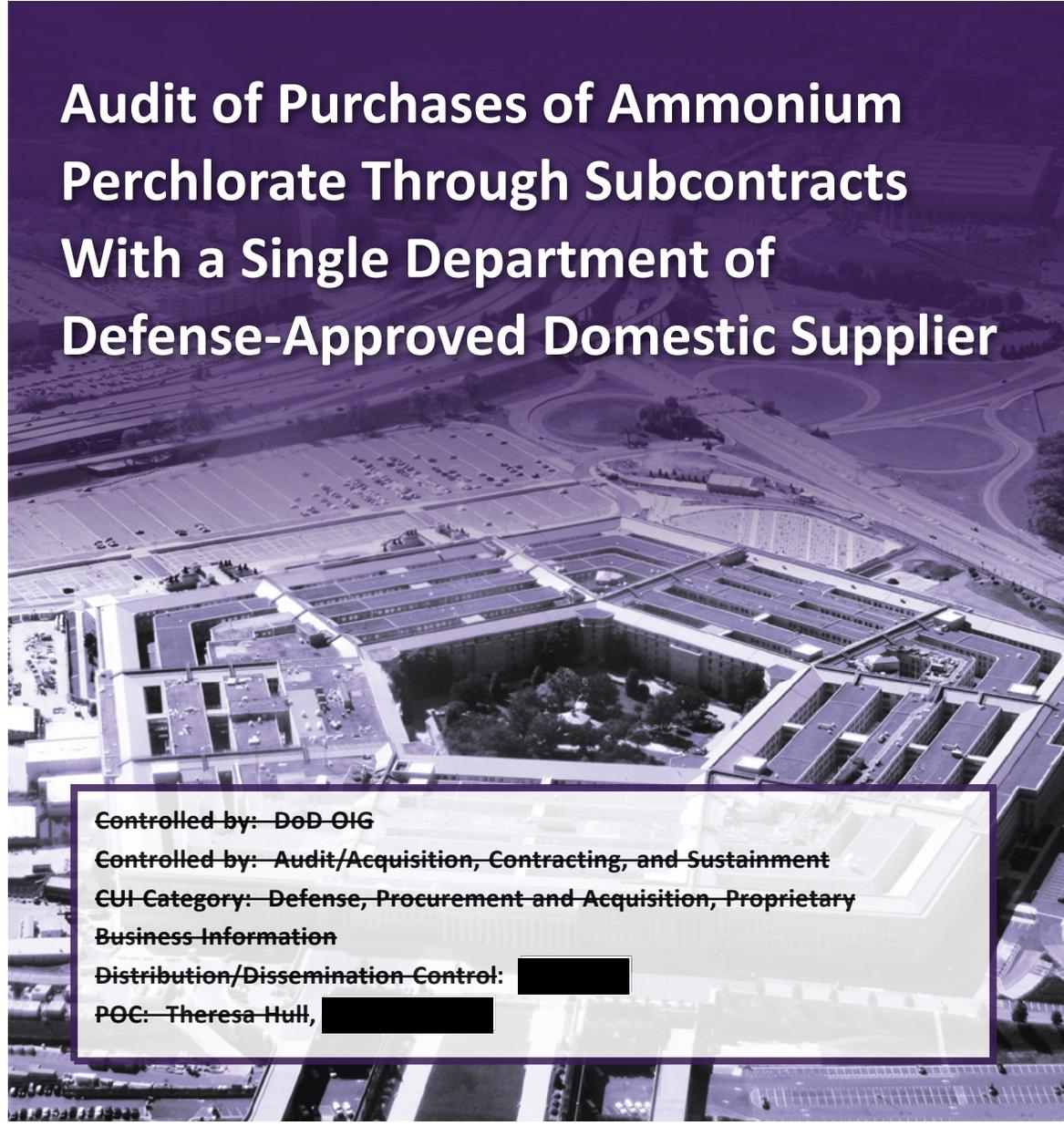


CUI

# INSPECTOR GENERAL

*U.S. Department of Defense*

JULY 9, 2020



## Audit of Purchases of Ammonium Perchlorate Through Subcontracts With a Single Department of Defense-Approved Domestic Supplier

**Controlled by:** DoD OIG

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**POC:** Theresa Hull, [REDACTED]

INTEGRITY ★ INDEPENDENCE ★ EXCELLENCE

CUI





# Results in Brief

## *Audit of Purchases of Ammonium Perchlorate Through Subcontracts With a Single Department of Defense-Approved Domestic Supplier*

July 9, 2020

### Objective

The objective of this audit was to determine whether DoD subcontractors properly evaluated the commercial item determination and whether DoD contracting officers properly evaluated fair and reasonable pricing determinations for ammonium perchlorate.

### Background

Ammonium perchlorate, grade 1 (AP1), is an oxidizer chemical used in solid rocket propellants that is sold as a commercial product. The only DoD-approved domestic AP1 supplier is the American Pacific Corporation (AMPAC). AMPAC's status as the only DoD-approved domestic source for AP1 presents a unique challenge to contracting officers who must consider both a reduced industrial supplier base and a non-competitive contracting environment. The Military Services and DoD agencies manage multiple weapons systems that use AP in solid rocket motor propellants.

For this audit, we reviewed procurements of AP1 made in support of the Army's Guided Multiple Launch Rocket System (GMLRS), the Navy's Standard Missile and Trident II D5 Missile programs. The DoD does not purchase AP1 directly from AMPAC; instead, the solid rocket motor subcontractors, ATK Launch Systems Incorporated and Aerojet Rocketdyne, purchase AP1 to support the weapon systems' prime contracts. The subcontractors' costs for AP1 are a nominal portion of the GMLRS, Standard Missile, and Trident II D5 Missile prime production contracts; however, AP1 is critical for the functionality of the weapon systems.

### Findings

ATK Launch Systems Incorporated and Aerojet Rocketdyne, first-tier rocket motor subcontractors, followed procedures and properly determined that AP1 was a commercial item. In addition, the Army and Navy contracting officers appropriately relied on the subcontractors' price analysis to determine that proposed AP1 prices supporting the GMLRS, Standard Missile, and Trident II D5 programs were fair and reasonable in accordance with the Federal Acquisition Regulation.

Army and Navy contracting officers did not evaluate the reasonableness of the AP1 subcontract cost as an individual cost element because AP1 represented a small portion of the prime production contracts and the Federal Acquisition Regulation does not require the contracting officer to evaluate every cost element of the prime contract price.

(CUI) Although less expensive AP1 sources exist in the foreign marketplace, AMPAC is the only DoD-approved AP1 source. [REDACTED]

Based on our analysis of AP1 prices subcontractors paid, with the exception of a purchase for an unplanned requirement in 2017, AP1 prices were stable from FYs 2014 to 2018. However, relying on previous prices alone presents a risk of paying excessive prices to a single supplier if the previous prices have not been substantiated through competition.

### Recommendations

The Deputy Assistant Secretary of Defense for Industrial Policy (DASD [IP]) should monitor and assess the AP1 industrial base to identify cost-effective AP1 alternative sources and assist the Military Services and Defense agencies on strategies related to AP1 pricing, capability, and capacity.



# Results in Brief

## *Audit of Purchases of Ammonium Perchlorate Through Subcontracts With a Single Department of Defense-Approved Domestic Supplier*

### **Recommendations (cont'd)**

The Executive Director of the Army Contracting Command-Redstone, Commander of the Naval Sea Systems Command, and the Director of the Navy Strategic Systems Programs should require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.

### **Management Comments and Our Response**

The DASD (IP) did not agree or disagree with the recommendation to identify and consider cost-effective AP1 alternative sources to ensure fair and reasonable long-term pricing but stated that the recommendation should not be assigned to the DASD (IP) office because they are not responsible for purchasing AP1. The DASD (IP) recommended that we redirect the recommendation to DoD program offices that use ammonium perchlorate in their systems.

We disagree that the recommendation should be redirected. We revised the recommendation for DASD (IP) to monitor and assess the AP1 industrial base to identify cost-effective AP1 alternative sources and assist the Military Services and Defense agencies on strategies related to AP1 pricing, capability, and capacity, which aligns with their role in monitoring the Defense industrial base. Therefore, the recommendation is unresolved. We request that the DASD (IP) provide comments to the final report on the actions she will take to implement the revised recommendation.

The Deputy Assistant Secretary of the Army (Procurement) responding for the the Army Contracting Command-Redstone Executive Director, Commander of the Naval Sea Systems Command, and the Navy Strategic Systems Program Director, disagreed with the recommendations to require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts to request uncertified cost data. The Deputy Assistant Secretary, Commander, and Director, stated that the subcontract price of AP1 represented a small portion of the prime contract price and submission of uncertified cost and pricing data would unlikely result in subcontract savings.

We agree that AP1 represents a small cost when compared to the total contract price; however, we disagree that the submission of uncertified cost and pricing data would have unlikely resulted in subcontract savings. As noted in the report, Army and Navy contracting officers did not analyze the reasonableness of the AP1 subcontract costs as an individual cost element. Instead, Army and Navy contracting officers relied on subcontractor price analysis to determine whether proposed AP1 subcontract prices were fair and reasonable. Relying on price analysis of previous prices alone for AP1 may result in the DoD paying excessive prices because AMPAC's previous prices have not been substantiated through competition or comparable sales data to establish a valid price baseline. Therefore, the recommendations are unresolved. We request that the Deputy Assistant Secretary, Commander, and Director provide comments on the final report that address the actions they will take to implement the recommendations.

Please see the Recommendations Table on the next page for the status of recommendations.

## Recommendations Table

Management	Recommendations Unresolved	Recommendations Resolved	Recommendations Closed
Deputy Assistant Secretary of Defense, Industrial Policy	1	None	None
Executive Director, Army Contracting Command-Redstone	2	None	None
Commander, Naval Sea Systems Command	3	None	None
Director, Navy Strategic Systems Program	4	None	None

Please provide Management Comments by August 10, 2020.

**Note:** The following categories are used to describe agency management’s comments to individual recommendations.

- **Unresolved** – Management has not agreed to implement the recommendation or has not proposed actions that will address the recommendation.
- **Resolved** – Management agreed to implement the recommendation or has proposed actions that will address the underlying finding that generated the recommendation.
- **Closed** – OIG verified that the agreed upon corrective actions were implemented.





**INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
4800 MARK CENTER DRIVE  
ALEXANDRIA, VIRGINIA 22350-1500**

July 9, 2020

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION  
AND SUSTAINMENT  
AUDITOR GENERAL, DEPARTMENT OF THE NAVY  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

**SUBJECT:** Audit of Purchases of Ammonium Perchlorate Through Subcontracts  
With a Single Department of Defense-Approved Domestic Supplier  
(Report No. DODIG-2020-095)

This final report provides the results of the DoD Office of Inspector General's audit. We previously provided copies of the draft report and requested written comments on the recommendations. We considered management's comments on the draft report when preparing the final report. These comments are included in the report.

This report contains recommendations that are considered unresolved because the Deputy Assistant Secretary of Defense, Industrial Policy, did not fully agree with the recommendations presented in the report. In addition, the Deputy Assistant Secretary of the Army (Procurement) responding for the Army Contracting Command-Redstone Executive Director; Commander of the Naval Sea Systems Command; and the Navy Strategic Systems Program Director did not agree with the recommendations presented in the report.

Therefore, as discussed in the Recommendations, Management Comments, and Our Response section of this report, the recommendations are considered unresolved and remain open. We will track these recommendations until an agreement is reached on the actions to be taken to address the recommendations, and adequate documentation has been submitted showing that the agreed-upon action has been completed.

DoD Instruction 7650.03 requires that recommendations be resolved promptly. Therefore, please provide us within 30 days your response concerning specific actions in process or alternative corrective actions proposed on the recommendations. Your response should be sent to [followup@dodig.mil](mailto:followup@dodig.mil).

If you have any questions, please contact me at [REDACTED]

A handwritten signature in black ink that reads "Theresa S. Hull".

Theresa S. Hull  
Assistant Inspector General for Audit  
Acquisition, Contracting, and Sustainment

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# Introduction

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## Objective

The objective of this audit was to determine whether the DoD properly assessed the commercial item and fair and reasonable pricing determinations for Ammonium Perchlorate (AP); however, we identified during our fieldwork that the DoD subcontractors made commercial item determinations for AP. Therefore, we revised our objective to determine whether DoD subcontractors properly evaluated the commercial item determination and whether DoD contracting officers properly evaluated fair and reasonable pricing determinations for AP. See Appendix A for the scope and methodology and prior audit coverage.

## Background

### *History of Ammonium Perchlorate*

AP is an oxidizer chemical used in the U.S. Government's solid rocket propellants and sold as a commercial product to the general public. According to the American Pacific Corporation (AMPAC), AP is sold to the general public for use in commercial munitions, explosives, pyrotechnics, and propellants. The National Aeronautics and Space Administration (NASA) and the DoD use AP, Grade 1 (AP1), in their space launch, munitions, and missile programs.<sup>1</sup> During the 1950s, AP was manufactured by several domestic manufacturing sources. However, by the late 1960s, AMPAC and Kerr McGee Corporation were the only two domestic manufacturers of AP.

In May 1988, AMPAC's production facility in Henderson, Nevada, exploded, which threatened the domestic supply of AP. As a result of the explosion, the DoD and NASA formed the Air Force-sponsored Ammonium Perchlorate Advisory Group to address concerns about the future availability of AP and the ability of AMPAC to restore the U.S. production capacity for AP. In March 1989, NASA and the DoD signed a memorandum of agreement that ensured construction financing for a new AMPAC AP production facility. In 1989, AMPAC started producing AP at its new facility in Cedar City, Utah.

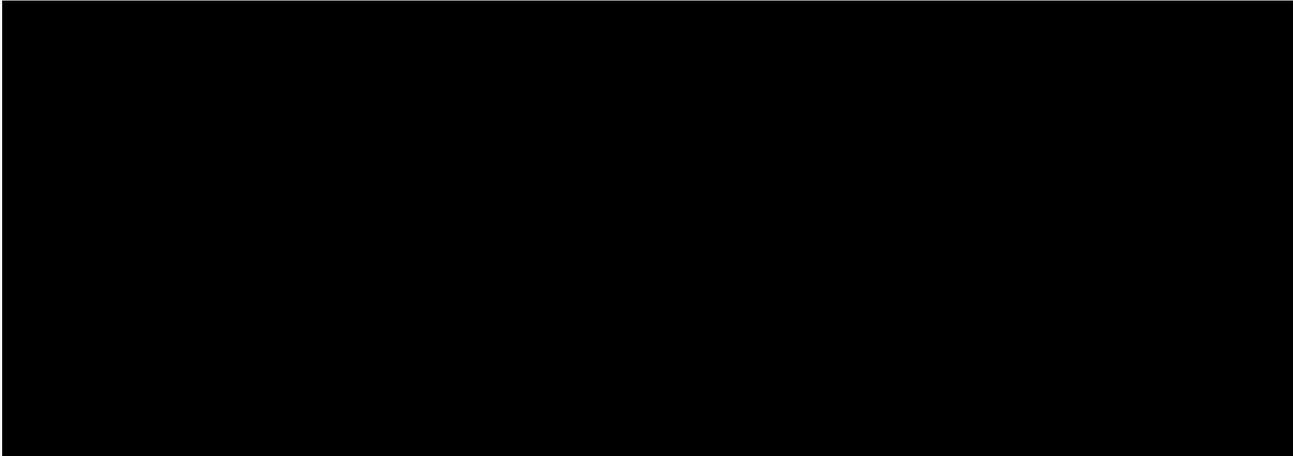
Historically, NASA and the DoD have represented the largest portion of the AP1 consumer market. NASA and the DoD AP1 demand started declining as the end of the Cold War approached in 1990. Specifically, NASA and the DoD AP1 demand decreased from 51.0 million pounds in 1990 to 41.6 million pounds

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<sup>1</sup> AP1 is the highest and purist grade of AP and is primarily sold for Government use. AP1 is manufactured in accordance with approved baselined procedures and processes and quality control methodologies.

in 1991. The Government's demand continued its steady decline and stabilized at 4.2 million pounds per year from 2012 to 2018. Figure 1 shows the history of NASA's and the DoD's annual AP1 demand from 1990 to 2018.

*(CUI) Figure 1. Annual Government Demand Volume for Ammonium Perchlorate Purchased from AMPAC and Kerr-McGee Corporation (1990 through 2018)*



*(CUI)* Source: American Pacific Corporation.

According to AMPAC, the Government's reduced AP purchase volume puts a strain on AMPAC's business because AMPAC incurs fixed operating costs even when the manufacturing facility is operating at reduced capacity. In 1997, the DoD and NASA became concerned about the sustainability of the AP suppliers at reduced capacity and requested that AMPAC and Kerr-McGee Corporation develop a plan to stabilize an AP manufacturing source in the United States. Later that year, AMPAC's solution was to purchase Kerr-McGee Corporation's AP business, effectively consolidating two reduced-capacity companies into one fully viable company. As a result, AMPAC became the only qualified manufacturer producing AP for the DoD for a wide range of programs.

*(CUI)* According to DoD Directive 5160.65, the Office of the Under Secretary of Defense for Acquisition and Sustainment has principal staff responsibility for the single manager for conventional ammunition (SMCA) activities and policies and provides guidance to the SMCA mission while ensuring compliance with the responsibilities outlined in the directive.<sup>2</sup> On [REDACTED] the Program Executive Officer for Ammunitions, as the SMCA, [REDACTED]  
[REDACTED]  
[REDACTED]

<sup>2</sup> DoD Directive 5160.65, "Single Manager for Conventional Ammunition (SMCA)," August 1, 2008, incorporating Change 1, November 16, 2017. The Deputy Assistant Secretary of Defense for Industrial Policy is a subordinate office within the Office of the Under Secretary of Defense for Acquisition and Sustainment.

(CUI) [Redacted]

[Redacted]<sup>3</sup> [Redacted]

[Redacted]

[Redacted] Public Law 105-261, Section 806 states that the official designated as the SMCA in the DoD shall limit a specific procurement of ammunition to sources within the national technology and industrial base in accordance with the authority in section 2304(c) of title 10, United States Code, if that manager determines that such limitation is necessary to maintain a facility, producer, manufacturer, or other supplier available for furnishing an essential item of ammunition or ammunition component in cases of national emergency or to achieve industrial mobilization.”<sup>4</sup>

(CUI) Requalification of a solid rocket motor, and the missile the rocket motor is a component of, is required when AP1 comes from a new source, or an existing source with a new production facility. The requalification process can take up to [Redacted] months and includes a number of tests. In addition to the time, requalification costs can be substantial depending on the size of the motor. [Redacted]

[Redacted]

[Redacted]<sup>5</sup> [Redacted]

[Redacted]

[Redacted] Currently, AMPAC is the only DoD-approved domestic source for AP1.

[Redacted]

[Redacted]

AMPAC’s status as the only DoD-approved domestic source for AP1 creates a strained industrial supplier base, which presents a unique challenge to the production lines of DoD weapon systems that use AP1.

**Ammonium Perchlorate Use Within the DoD**

The Military Services and Defense agencies manage multiple weapons systems that use AP in solid rocket motor propellants. We reviewed three of those weapons systems: the Army’s Guided Multiple Launch Rocket System (GMLRS), the Navy’s Standard Missile, and Trident II D5 Missile programs, which are the largest DoD consumers of AP1.

- The Army’s Precision Guided Munitions and Rockets Product Office manages the GMLRS program, which is a six-missile launcher designed for close-, medium-, and long-range targeting. The Lockheed Martin

<sup>3</sup> Program Executive Office, Ammunition memorandum, “Single Manager for Conventional Ammunition (SMCA) End Item/Component at Risk List,” September 28, 2011.

<sup>4</sup> Public Law 105-261, “Strom Thurmond National Defense Authorization Act for Fiscal Year 1999,” section 806, “Procurement of Conventional Ammunition.”

<sup>5</sup> (CUI) [Redacted]

Corporation (Lockheed Martin Missiles and Fire Control), located in Grand Prairie, Texas, is the prime contractor for the GMLRS program. On June 15, 2017, the Army Contracting Command-Redstone awarded contract W31P4Q-17-C-0080 to Lockheed Martin Missiles and Fire Control in support of the GMLRS program.

- The Navy Program Executive Officer of Integrated Warfare Systems manages the Standard Missile program, which is a medium-long-range shipboard missile designed to defend against enemy aircraft. Raytheon Missile Systems, located in Tucson, Arizona, is the prime contractor for the Standard Missile program. On November 25, 2015, the Naval Sea Systems Command awarded contract N00024-17-C-5409 to Raytheon Missile Systems for FYs 2017 and 2018 Standard Missile and system support equipment production.
- The Navy's Strategic Systems Program Office manages the Trident II D5 Missile program, which is a submarine missile system designed to defend against nuclear warfare. The Lockheed Martin Corporation (Lockheed Martin Space Systems Company), located in Sunnyvale, California, is the prime contractor for the Trident II D5 Missile program. On July 14, 2016, the Navy Strategic Systems Program Office awarded contract N00030-16-C-0100 to the Lockheed Martin Space Systems Company for FY 2017 Trident II D5 Missile system production.

The DoD does not purchase AP1 directly from AMPAC; instead, the prime contractors purchase the solid rocket motors from ATK Launch Systems Incorporated and Aerojet Rocketdyne (Aerojet).<sup>6</sup> ATK Launch Systems Incorporated and Aerojet purchase AP1 from AMPAC and include it in the motors during manufacturing. According to the subcontractors, the amount paid for AP1 was included in the subcontract costs paid by the prime contractors. According to the prime contractors, they passed the total subcontract costs and additional administrative fees on to the DoD through the weapon system prime production contracts.

### ***Deputy Assistant Secretary of Defense for Industrial Policy***

The Deputy Assistant Secretary of Defense for Industrial Policy (DASD [IP]) serves as the principal advisor to the Under Secretary of Defense for Acquisition and Sustainment for:

- developing DoD policies for the maintenance of the U.S. Defense industrial base,
- providing recommendations on budget matters related to the Defense industrial base,

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<sup>6</sup> Northrop Grumman purchased ATK Launch Systems Incorporated.

- anticipating and closing gaps in manufacturing capabilities for Defense systems, and
- monitoring and assessing the impact of foreign investments in the United States.

The office of the DASD (IP) also has a critical role in representing DoD interests on interagency committees regarding business and economic issues relevant to national security. The office of the DASD (IP) monitors the AP1 industry base in the United States and develops solutions to address any risks and issues that arise in this supply chain, as well as others that DoD uses.

***Impact of Rising Ammonium Perchlorate Cost***

(~~CUI~~) [Redacted]

(~~CUI~~) On November 15, 2013, the Army PEO, Missiles and Space, requested that the Program Executive Officer for Ammunitions, as the DoD’s SMCA, make a Section 806 determination for the procurement of GMLRS using an alternate source material for FYs 2014 and 2015. On [Redacted] the Program Executive Officer for Ammunitions [Redacted]

(~~CUI~~) The office of the DASD (IP) initiated several actions to address the rising cost of AP1. [Redacted]

Although a study was already performed, Public Law 115-91, Section 1694, directed the Secretary of Defense to conduct and submit a business case analysis to Congress by March 1, 2018, that explored the Government options

<sup>7</sup> (~~CUI~~) [Redacted]

(CUI) for ensuring a domestic industrial base to supply AP1 for use in solid rocket motors.<sup>8</sup> The Public Law required the analysis to include assessments of near- and long-term costs, program impacts, opportunities for competition, opportunities for redundant or complementary capabilities, and the national security implications of:

- continuing to rely on one domestic provider;
- supporting the development of a second domestic source;
- procuring AP1 as Government-furnished material and providing it to all necessary programs; and
- other options as the Secretary of Defense determines appropriate.

(CUI) [REDACTED]

**NASA Ammonium Perchlorate Procurement Strategy**

(CUI) Like DoD, NASA does not purchase AP1 directly from AMPAC. NASA’s solid rocket motor contractors purchase AP1 from AMPAC in support of its Space Launch System program. NASA’s AMPAC AP1 prices paid in support of its Space Launch System program have been stable from FY 2015 to FY 2019. From FY 2015 to FY 2019, NASA’s Space Launch System program AMPAC AP1 prices ranged from \$ [REDACTED] per pound to \$ [REDACTED] per pound. However, AMPAC AP1 prices supporting Government solid rocket motor programs are higher than comparable AP1 prices in the global marketplace. As a result, NASA’s Space Launch System program has adjusted its long-term AP1 acquisition strategy to lower AP1 cost. According to NASA officials, [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

<sup>8</sup> Public Law 115-91, “National Defense Authorization Act for Fiscal Year 2018,” section 1694, “Business Case Analysis Regarding Ammonium Perchlorate.”

<sup>9</sup> The Defense Production Act provides authority to the President to assure the ability of the domestic industrial base to supply materials and services for the national defense. Title III, “Expansion of Productive Capacity and Supply,” authorizes appropriate incentives to create, expand, or preserve domestic industrial manufacturing capabilities for industrial resources, technologies, and materials needed to meet national security requirements.

## ***Contract Pricing and Proposal Analysis Guidance***

The Federal Acquisition Regulation (FAR) requires contracting officers to determine the reasonableness for prime contracts' pricing, including subcontracting costs. The FAR also requires prime or subcontractors to conduct appropriate cost or price analyses to establish the reasonableness of proposed subcontract prices and include the results of those analyses in their price proposals. In establishing the reasonableness of the offered prices, contracting officers are required to conduct market research and obtain cost or pricing data to establish a fair and reasonable price, if necessary. In determining the reasonableness of the prime contract price, contracting officers should verify whether a contractor or subcontractor has an approved purchasing system, has performed cost or price analyses of proposed subcontractor prices, and has negotiated the subcontract prices before negotiation of the prime contract. The contracting officer should also analyze the contractor's submission, including subcontractor's cost or pricing data.<sup>10</sup>

Commercial items are not subject to the Truthful Cost or Pricing Data Act (formerly known as Truth in Negotiations Act) requirements for certified cost or pricing data because the commercial marketplace is presumed to be a competitive environment and should regulate a fair and reasonable price.<sup>11</sup> When determining a fair and reasonable price, the contracting officer should conduct market research to compare the proposed price to comparable market pricing.<sup>12</sup> According to the DoD's Guidebook for Acquiring Commercial Items, determining a fair and reasonable price is usually a straight-forward process when acquiring commercially available off-the-shelf items. The DoD Guidebook for Acquiring Commercial Items states that when the commercial market does not exist for a specific item or when market price data is not readily available, determining a fair and reasonable price can be challenging. Ultimately, the effectiveness of a price analysis will depend on what meaningful data the Government successfully obtains to conduct the price analysis.<sup>13</sup>

The DFARS sets forth a hierarchy of data to be used for pricing commercial items. According to the DFARS, the first step is conducting market research to determine price reasonableness. If the contracting officer determines that the market research was insufficient, then the contracting officer should conduct a price analysis. However, if the contracting officer determines that the information used

<sup>10</sup> FAR 15.404, "Proposal Analysis," 15.404-3, "Subcontract Pricing Considerations."

<sup>11</sup> DoD Guidebook for Acquiring Commercial Items, Part B, Pricing Commercial Items, January 2018.

<sup>12</sup> FAR 15.404-1, "Proposal analysis Techniques."

<sup>13</sup> DoD Guidebook for Acquiring Commercial Items, Part B, Pricing Commercial Items, January 2018.

for the price analysis is also insufficient, then the contracting officer should request other relevant price or cost information from the contractor, including uncertified cost data such as labor, material, and other direct and indirect cost data.<sup>14</sup>

According to the DoD's Guidebook for Acquiring Commercial Items:

Price analysis is the preferred method for determining whether prices paid for commercial items are fair and reasonable. When using price analysis, the focus is on evaluating a proposed price without evaluating its separate cost elements or profit. However, if a price cannot be determined to be fair and reasonable after exhausting price analysis techniques, contracting officers must use cost analysis to examine the separate cost elements. . . . The key to success is to select the appropriate technique, or combination of techniques, needed to evaluate whether a proposed price is fair and reasonable.<sup>15</sup>

## Review of Internal Controls

DoD Instruction 5010.40 requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of those controls.<sup>16</sup> We did not identify any internal control weaknesses. The AP1 subcontract costs are a nominal portion of the GMLRS, Standard Missile, and Trident II D5 Missile prime production contracts. The FAR does not require contracting officers to analyze every individual subcontract price when analyzing a prime contractor's proposal. We will provide a copy of the report to the senior officials responsible for internal controls.

<sup>14</sup> DFARS 212, "Acquisition of Commercial Items," 212.2, "Special Requirements for the Acquisition of Commercial Items," 212.209, "Determination of Price Reasonableness." Uncertified cost data is cost data that is not certified to the best of the offeror's knowledge and belief as accurate, complete, and current as of the date specified before contract award. When certified cost data is not required and price data is insufficient, uncertified cost data is necessary for the contracting officer to determine a fair and reasonable price or to determine cost realism.

<sup>15</sup> DoD Guidebook for Acquiring Commercial Items, Part B, Pricing Commercial Items, January 2018.

<sup>16</sup> DoD Instruction 5010.40, "Managers' Internal Control Program Procedures," May 30, 2013.

## Finding

### The DoD Subcontractors Determined Ammonium Perchlorate Was a Commercial Item and the DoD Contracting Officers Relied on Subcontractors to Evaluate Ammonium Perchlorate Prices

ATK Launch Systems Incorporated and Aerojet, first-tier rocket motor subcontractors, followed procedures and properly determined that AP1 was a commercial item. In addition, the Army and Navy contracting officers appropriately relied on subcontractors' price analysis to determine that proposed AP1 prices supporting the GMLRS, Standard Missile, and Trident II D5 programs were fair and reasonable in accordance with the Federal Acquisition Regulation.<sup>17</sup>

(CUI) Army and Navy contracting officers did not evaluate the reasonableness of the AP1 subcontract cost as an individual cost element because AP1 represented a small portion of the prime production contracts and the Federal Acquisition Regulation does not require the contracting officer to evaluate every cost element of the prime contract.<sup>18</sup> Although less expensive AP1 sources exist in the foreign marketplace, AMPAC is the only DoD-approved AP1 source. [REDACTED]

Based on our analysis of AP1 prices subcontractors paid, with the exception of a purchase for an unplanned requirement in 2017, AP1 prices were stable from FYs 2014 to 2018. However, relying on previous prices alone presents a risk of paying excessive prices to a single supplier if previous prices have not been substantiated through competition.

<sup>17</sup> FAR 15.404-3, "Subcontract Pricing Considerations."

<sup>18</sup> FAR 15.404-1, "Proposal Analysis Techniques."

## Subcontractors Followed Policy for Commercial Item Determination for AP1

ATK Launch Systems Incorporated and Aerojet, first-tier rocket motor subcontractors, followed procedures and properly determined that AP1 was a commercial item. The FAR defines a commercial item as any item of a type customarily used by the general public or by nongovernmental entities for purposes other than governmental purposes and which had been:

- sold, leased, or licensed to the general public; or
- offered for sale, lease, or license to the general public.<sup>19</sup>

The GMLRS, Standard Missile, and Trident II D5 prime production contracts and subcontracts included the FAR clause that, to the maximum extent practicable, contractors and subcontractors at all levels are required to incorporate commercial items as components of items supplied on Government contracts.<sup>20</sup> Additionally, the DFARS requires contractors to determine whether particular subcontract items meet the definition of a commercial item.<sup>21</sup> On March 2, 2016, and October 19, 2016, ATK Launch Systems Incorporated contracting and Aerojet management officials determined that AMPAC's assertion that perchlorate products, including AP1, met the FAR definition of a commercial item was accurate.

ATK Launch Systems Incorporated contracting officers and Aerojet management officials reviewed AMPAC's third-party legal assessment, redacted customer invoices, and commercial catalogs to support that AP1 was offered for sale and sold to the general public for use in commercial munitions, explosives, pyrotechnics, and propellants.

(~~CUI~~) In a memorandum, "Assessment of Commercial Item Status of Ammonium Perchlorate," dated July 28, 2014, AMPAC's attorneys affirmed that AP1 was a commercial item. According to the memorandum, the attorneys reviewed

[REDACTED]

<sup>19</sup> FAR Part 2, "Definitions of Words and Terms," Subpart 2.1, "Definitions," 2.101, "Definitions."

<sup>20</sup> FAR Part 52, "Solicitation Provisions and Contract Clauses," Subpart 52.2, "Text of Provisions and Clauses," 52.244-6, "Subcontracts for Commercial Items."

<sup>21</sup> DFARS Part 244, "Subcontracting Policies and Procedures," Subpart 244.4, "Subcontracts for Commercial Items and Commercial Components."

(CUI) [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

(CUI) Aerojet management officials also reviewed five AMPAC customer invoices dated from October 14, 2014, to September 10, 2015, which involved [REDACTED]

[REDACTED]  
[REDACTED]

The management officials accepted the invoices as evidence that AP was used for non-governmental purposes and sold as a commercial item to the general public as defined in the FAR.<sup>22</sup>

The ATK Launch Systems Incorporated contracting officers and Aerojet management officials also reviewed AMPAC’s “Commercial Perchlorates Catalog with Prices,” Revision 22, dated May 21, 2014. The subcontractor officials accepted the commercial catalog as support that AP1 was a type of perchlorate offered for sale to the general public as defined in the FAR.<sup>23</sup> Additionally, the ATK Launch Systems Incorporated contracting officer relied on previous commercial item determinations on ATK Launch Systems Incorporated, Aerojet, NASA, and DoD contracts with AMPAC for the purchase of various grades of AP. According to section 2306a(b)(4), title 10, United States Code (2018), it is appropriate to rely on previous DoD commercial item determinations for subsequent purchases of the same item.<sup>24</sup>

### The Army and Navy Relied on Price Analysis from the Subcontractors

The Army and Navy contracting officers relied on subcontractors’ price analysis to determine that proposed AP1 prices were fair and reasonable in accordance with the FAR. According to the FAR, the contracting officer should consider whether a contractor or subcontractor has performed cost or price analysis of proposed subcontractor prices in determining the reasonableness of the prime contract price. The FAR also requires the prime contractor or subcontractor to conduct appropriate cost or price analyses to establish the reasonableness of proposed subcontract prices.<sup>25</sup>

<sup>22</sup> FAR Part 2.101.

<sup>23</sup> FAR Part 2.101.

<sup>24</sup> 10 U.S.C. § 2306a(b)(4) (2018).

<sup>25</sup> FAR 15.404-3, “Subcontract Pricing Considerations.”

The prime contractors performed a cost analysis to evaluate the solid rocket motor subcontractors' proposals, which included AMPAC's proposed commercial price for AP1 and paid for by ATK Launch Systems Incorporated and Aerojet. However, AP1 represented a small portion of the overall cost of the solid rocket motor and the prime contractors did not assess the appropriateness of the AP1 cost element as part of the prime contracts. Instead, the prime contractors relied on the solid rocket motor subcontractors' determinations that the proposed AP1 prices were fair and reasonable.

The solid rocket motor subcontractors performed a price analysis of AMPAC's proposed AP1 prices based on quantity discounts from AMPAC's commercial catalog prices and escalation of previous prices paid to support their price reasonableness determinations for the GMLRS, Standard Missile, and Trident II D5 Missile prime contracts.

(CUI) Under the Army GMLRS production contract, Aerojet used the unit prices that AMPAC listed in its commercial catalog as starting points to negotiate lower pricing based on volume discounts. For example, in FY 2014, Aerojet combined its annual AP1 requirement of [REDACTED] pounds for the GMLRS's production contract to obtain a price reduction of \$ [REDACTED] per pound from AMPAC's commercial catalog price of \$ [REDACTED] per pound for AP1. Aerojet then compared the reduced price of \$ [REDACTED] it paid AMPAC to a previous price paid on a purchase order dated October 18, 2013, of \$ [REDACTED] per pound to procure [REDACTED] pounds of AP1. Aerojet's analysis showed that it adjusted the price it expected to pay for the difference in quantity and used global indices to escalate the previous unit price to account for inflation and developed a unit price range. Based on Aerojet's price analysis, it concluded that paying \$ [REDACTED] per pound for AP1 was fair and reasonable.

(CUI) Under the Navy's Standard Missile production prime contract, Aerojet used the unit prices that AMPAC listed in its commercial catalog as starting points to negotiate lower pricing based on volume discounts. For example, in 2014, Aerojet combined its annual AP1 requirement of [REDACTED] pounds for the Navy's Standard Missile production prime contract to obtain a price reduction of \$ [REDACTED] per pound from AMPAC's commercial catalog price of \$ [REDACTED] per pound for AP1. Aerojet then compared the reduced price of \$ [REDACTED] it paid to AMPAC to a previous price paid on a purchase order dated June 18, 2012, of \$ [REDACTED] per pound price to procure [REDACTED] pounds of AP1. Aerojet's analysis showed that it adjusted for the difference in quantity and used global indices to escalate the previous unit price to derive a unit price range. Based on Aerojet's price analysis, it concluded that paying \$ [REDACTED] per pound for AP1 was fair and reasonable.

(CUI) Under the Navy's Trident II D5 Missile prime contract, ATK Launch Systems Incorporated negotiated the unit prices in its long-term pricing agreement based on escalation of the previous price paid. In June 2016, ATK Launch Systems Incorporated requested assistance from the Defense Contract Management Agency to audit AMPAC proposed pricing. ATK Launch Systems Incorporated previous pricing agreement with AMPAC expired on September 30, 2016, and a new pricing agreement was established in April 2017. ATK Launch Systems Incorporated relied on its comparison of AMPAC's proposed price of \$ [REDACTED] per pound for [REDACTED] pounds to the \$ [REDACTED] average per pound price that it paid AMPAC from FYs 2013 to 2016 to acquire AP1 in the [REDACTED] pound range. ATK Launch Systems Incorporated considered the prices to be reasonable when compared to its previous long-term agreement's pricing because the price was lower per pound.

## Army and Navy Contracting Officers Followed Established Procedures for Evaluating AP1 Prices

(CUI) Army and Navy contracting officers did not evaluate the reasonableness of the AP1 subcontract cost as an individual cost element price because AP1 costs were minimal when compared to the total cost of the prime contracts. For prime contract N00024-17-C-5409, Aerojet bought [REDACTED] pounds of AP1 in FY 2018, valued at \$ [REDACTED], which represented [REDACTED] percent of the contract, valued at \$ [REDACTED], as of February 2019. For prime contract W31P4Q-17-C-008, Aerojet bought [REDACTED] pounds of AP1 in FY 2017, valued at \$ [REDACTED], which represented [REDACTED] percent of the contract, valued at \$ [REDACTED], as of May 2019.

Army and Navy contracting officers relied on subcontractors' price analysis to determine that AP1 proposed prices were fair and reasonable because AP1 represented a small portion of the prime production contracts and FAR part 15 does not require the contracting officer to evaluate every cost element of the prime contract. According to the FAR, cost analysis is the review and evaluation of any separate cost elements and profit or fee in an offeror's or contractor's proposal, as needed to determine a fair and reasonable price or to determine cost realism, and the application of judgment to determine how well the proposed costs represent what the cost of the contract should be, assuming reasonable economy and efficiency.<sup>26</sup>

<sup>26</sup> FAR 15.404-1, "Proposal Analysis Techniques."

## Risk of a Single DoD-Approved Domestic Source for Ammonium Perchlorate

(CUI) Although less expensive AP1 sources exist in the foreign marketplace, AMPAC is the only DoD-approved domestic source for AP1. [REDACTED]

According to DoD officials, maintaining a domestic AP1 capability is critical to national security. However, AMPAC operates in a non-competitive environment when contracting with the DoD, which creates risk for the DoD. According to a report issued by an Interagency Task Force, a single source risk exists when only one supplier is qualified to provide a required capability.<sup>27</sup> The fact that AMPAC is currently the only DoD-approved domestic supplier for AP1 creates challenges when contractors attempt to evaluate the fairness and reasonableness of AMPAC's proposed AP1 prices. Generally, the marketplace drives competition and prices for commercial items. However, because there are no additional AP1 suppliers or manufacturers currently approved by DoD, there is no competition for AP1, which is important to price evaluations and fair and reasonable price determinations.

### ***Ammonium Perchlorate Foreign Suppliers***

(CUI) In May 2011, the Army Contracting Command-Redstone, on behalf of the Army's Precision Guided Munitions and Rockets Product Office, contracted with Lockheed Martin Missiles and Fire Control to requalify 12 GMLRS solid rocket motors to use AP1 produced by a [REDACTED]. The Army paid Lockheed Martin Missiles and Fire Control \$1.2 million to requalify the GMLRS solid rocket motors for the alternative [REDACTED]. Each existing solid rocket motor and its missile must be requalified when AP1 is acquired from a new source or an existing source with a new production facility. According to DASD (IP) officials, the requalification cost is an upfront cost, if a secondary source is to be used. [REDACTED]

[REDACTED] According to a DASD (IP) official, [REDACTED]

[REDACTED] Also, according to the DASD (IP) officials, [REDACTED]

<sup>27</sup> Report to President Donald J. Trump by the Interagency Task Force in Fulfillment of Executive Order 13806, "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States," September 2018.

(~~CUI~~) [Redacted]

(~~CUI~~) In FY 2017, AMPAC’s price for standard AP1 was \$ [Redacted] and \$ [Redacted] per pound to Aerojet.<sup>28</sup> However, on [Redacted]

[Redacted] If the [Redacted] was an approved DoD source for AP1, Aerojet could have potentially purchased AP1 for less than what it paid AMPAC for FY 2017 requirements for the Army’s GMLRS and the Navy’s Standard Missile programs.<sup>30</sup> Relying on foreign suppliers for critical items can also present significant risks and vulnerabilities. [Redacted]

[Redacted] A single domestic approved source of AP1 creates an environment where there is no competition in the commercial market for AP1, which is important for price evaluation and fair and reasonable price determination.

Based on the risks associated with DoD having a single AP1 domestic supplier, the DASD (IP) should monitor and assess the AP1 industrial base to identify cost-effective AP1 alternative sources and assist the Military Services and Defense agencies on strategies related to AP1 pricing, capability, and capacity.

### The DoD Subcontractors Paid Stable Prices for AP1

(~~CUI~~) With the exception of a purchase for an unplanned add on requirement for the GMLRS program, the Army and Navy paid stable AP1 prices in support of the GMLRS, Standard Missile, and Trident II D5 Missile programs. Based on our analysis of AP1 subcontractors’ prices paid, we determined that AP1 prices were stable from FYs 2014 to 2018. For example, from FYs 2014 to 2018, Aerojet

<sup>28</sup> (~~CUI~~) Aerojet paid two prices in FY 2017 because, in the absence of a pricing agreement from October 1, 2016, to May 10, 2017, Aerojet agreed to pay the commercial catalog unit price of \$ [Redacted] from AMPAC’s “Commercial Perchlorate Catalog with Price,” Revision 24, October 3, 2016. Aerojet was unable to negotiate a discounted commercial catalog price because it only needed a small volume of [Redacted] pounds of AP1 to satisfy an add-on rocket motor requirement on the GMLRS production contract. On May 11, 2017, Aerojet and AMPAC finalized a pricing agreement that established a unit price of \$ [Redacted] for AP1.

<sup>29</sup> (~~CUI~~) According to NASA officials, \$ [Redacted] was the base price paid for AP1, which did not include additional cost for shipping. The audit team did not review or evaluate the costs associated with the [Redacted] production of AP1 to support NASA.

<sup>30</sup> (~~CUI~~) The GMLRS and Standard Missile programs requirements combined FY 2017 AP1 demand was [Redacted] pounds of AP1.

(CUI) paid AP1 prices ranging from \$ [REDACTED] per pound to \$ [REDACTED] per pound to support the GMLRS program and \$ [REDACTED] per pound to \$ [REDACTED] per pound to support the Standard Missile program. During the same time period, ATK Launch Systems Incorporated paid AP1 prices ranging from \$ [REDACTED] per pound to \$ [REDACTED] per pound to support the Trident II D5 Missile program. See Table 1 for AP1 purchases by Aerojet in support of the GMLRS and Standard Missile programs from FYs 2014 to 2018.

Table 1. Aerojet's AP1 Price History for the GMLRS and Standard Missile Programs from FYs 2014 to 2018

(CUI) Program	Fiscal Year	Unit Price	Percent Difference
GMLRS	2017	\$ [REDACTED]	[REDACTED]
	2017	[REDACTED]*	[REDACTED]
	2016	[REDACTED]	[REDACTED]
	2015	[REDACTED]	[REDACTED]
	2014	[REDACTED]	[REDACTED]
Standard Missile	2018	[REDACTED]	[REDACTED]
	2017	[REDACTED]	[REDACTED]
	2016	[REDACTED]	[REDACTED]
	2015	[REDACTED]	[REDACTED]
	2014	[REDACTED]	[REDACTED]

(CUI) Note: \*In 2017, the Army increased the number of production rocket motors requirement after the production contract was awarded. This caused Aerojet to purchase more AP1 in a smaller volume, at the commercial catalog price of \$ [REDACTED]. In addition, due to a GMLRS motor production delay, Aerojet combined its FYs 2017 and 2018 AP1 requirement for GMLRS and purchased the FY 2018 requirement in FY 2017.

Source: DoD OIG.

(CUI) Similarly, from FYs 2014 to 2018, ATK Launch Systems Incorporated paid AP1 prices ranging from \$ [REDACTED] per pound to \$ [REDACTED] per pound to support the Navy Trident II D5 Missile Program. See Table 2 for AP1 purchases by ATK Launch Systems Incorporated in support of the Navy Trident II D5 Missile Program from FYs 2014 to 2018.

Table 2. ATK Launch Systems Incorporated AP1 Price History for the Navy's Trident II D5 Missile Program from FYs 2014 to 2018

(CUI)	Fiscal Year	Price Paid with Adder	Percent Difference
	2018*	\$████	████
	2018	████	████
	2017	████	████
	2016	████	████
	2015	████	████
	2014	████	████

(CUI)

\* ATK Launch Systems paid two prices for AP1 in FY 2018 due to the terms of its long-term agreement with AMPAC.

Source: The DoD OIG.

### AMPAC Provided Selected Financial Information on Ammonium Perchlorate

As a commercial entity providing a commercial item to another commercial entity, AMPAC is not required to provide certified cost data for AP1 to DoD or solid rocket motor contractors. However, we requested that AMPAC provide AP1 cost or pricing data to help us determine the impact that the lack of competition had on AP1 prices paid by solid rocket motor contractors. On November 21, 2017, AMPAC provided selected financial information for its actual costs for AP1 in FY 2017 and its estimated costs for AP1 for FY 2018. However, the selected financial information did not represent the method by which AMPAC set its commercial prices and was unaudited data from AMPAC's financial systems which was not designed nor required to segregate costs for the AP1 product line. AMPAC annotated the selected financial information to specify that "as a commercial company selling commercial products, AMPAC did not establish its prices using a cost build up pursuant to FAR Parts 15 and 31, which are largely inapplicable to the pricing of commercial items." As a result, we were unable to use this data to determine whether AMPAC AP1 prices were fair and reasonable.

## Relying on Price Analysis Alone is Risky When Procuring AP1 From Single DoD-Approved Domestic Source

Price analysis of previous prices alone for AP1 may result in the DoD paying excessive prices to a single supplier if the fairness and reasonableness of the previous prices have not been substantiated through competition or comparable sales data to establish a valid price baseline. The subcontractors' purchase of AP1 from AMPAC, the DoD's single approved domestic AP1 supplier, did not involve market competition or other comparable sales data to substantiate the prices previously paid for AP1.

AMPAC, the single domestic supplier of AP1 for the DoD, operates in a non-competitive contracting environment with the DoD. Generally, when adequate price competition exists, no additional information is necessary to determine the reasonableness of price. However, for future DoD procurements for missile systems and rocket motors requiring AP1 from AMPAC, the only approved DoD supplier for AP1, challenges are created when evaluating the fairness and reasonableness of AMPAC's proposed AP1 prices.

AMPAC did not provide comparable sales data to solid rocket motor subcontractors to substantiate AP1 prices. For example, ATK Launch Systems Incorporated and Aerojet obtained commercial sales invoices from AMPAC as part of its commercial item assessment; however, the sales data provided by AMPAC redacted the quantity amount of AP1 that the commercial customers had purchased. DFARS Procedures, Guidance, and Instruction states that, if previous sales data is provided, it must be comparable in quantities and specifications as the product being proposed.<sup>31</sup> Accordingly, the commercial sales data previously provided for AP1 may not be reliable to analyze the reasonableness of the commercial prices previously paid for AP1. The Executive Director of the Army Contracting Command-Redstone, Commander of the Naval Sea Systems Command, and the Director of the Navy Strategic Systems Programs should require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request AMPAC uncertified cost data, and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.

<sup>31</sup> DFARS PGI 215.403-3, "Requiring Data Other Than Certified Cost or Pricing Data."

## Management Comments on the Background and Finding and Our Response

The DASD (IP) included technical comments on the report. For the full text of the management comments on the Background and Finding and our responses, see Appendix B of this report.

## Recommendations, Management Comments, and Our Response

### ***Revised Recommendation***

As a result of the DASD (IP) comments, we revised draft report Recommendation 1.

### ***Recommendation 1***

**We recommend that the Deputy Assistant Secretary of Defense for Industrial Policy monitor and assess the AP1 industrial base to identify cost-effective AP1 alternative sources and assist the Military Services and Defense agencies on strategies related to AP1 pricing, capability, and capacity.**

### ***Deputy Assistant Secretary of Defense for Industrial Policy Comments***

The DASD (IP) did not agree or disagree with the recommendation, stating that the recommendation should not be assigned to the DASD (IP) office because they are not responsible for purchasing anything. The DASD (IP) recommended that we redirect the recommendation to DoD program offices that use ammonium perchlorate in their systems.

### ***Our Response***

(~~CUI~~) Comments from the DASD (IP) did not address the specifics of the recommendation; therefore, the recommendation is unresolved. We disagree that the recommendation should be redirected to DoD program offices that use ammonium perchlorate in their weapon systems. As noted in the report, the DASD (IP) serves as the principal advisor to the Under Secretary of Defense for Acquisition and Sustainment and has a critical role in monitoring the Defense industrial base. In addition, the DASD (IP) develops solutions to address risk that impact the AP1 supply chain. In the past, the DASD (IP) [REDACTED]

[REDACTED] The DoD should look for opportunities to establish alternative AP1 sources to seek competitive pricing.

As a result of follow on discussions with officials from DASD (IP), we revised the recommendation to monitor and assess the AP1 industrial base to identify cost-effective AP1 alternative sources and assist the Military Services and Defense agencies on strategies related to AP1 pricing, capability, and capacity. We request that the DASD (IP) provide additional comments to the final report on the actions she will take to implement the recommendation.

## ***Recommendation 2***

**We recommend that the Army Contracting Command-Redstone Executive Director require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.**

### ***Army Contracting Command-Redstone Executive Director Comments***

The Deputy Assistant Secretary of the Army (Procurement), responding for the Army Contracting Command-Redstone Executive Director disagreed with the recommendation, stating that the subcontract price of AP1 represented a small portion of the prime contract prices and there was no evidence in the draft report that impacted the Army's ability to determine price reasonableness of AP1 under prime contracts. The Deputy Assistant Secretary also stated that the Army will continue to follow FAR and DFARS policies when considering subcontract pricing in the overall price evaluation effort.

### ***Our Response***

Comments from the Deputy Assistant Secretary did not address the specifics of the recommendation; therefore, the recommendation is unresolved. We agree that the subcontract price of AP represented a small portion of Army prime contract prices. However, Army contracting officers did not evaluate the reasonableness of the AP1 subcontract cost as an individual cost element. AP1 is a critical component to the functionality of DoD weapon systems with only a single DoD-approved domestic supplier. As a result, AP1 should require more price scrutiny. According to DoD and NASA officials, AMPAC AP1 pricing has caused concerns across the DoD and NASA.

Although AP1 prices were generally stable from FY 2014 through 2018, relying on previous prices alone presents a risk of paying excessive prices to a single supplier if fair and reasonableness of the previous prices have not been substantiated through competition or comparable sales data to establish a valid price baseline. The DoD is at risk for paying excessive prices to a single supplier if fair and reasonableness of the previous prices have not been substantiated through competition or comparable sales data to establish a valid price baseline.

We request the Deputy Assistant Secretary reconsider her position on the recommendation and provide comments on the final report that address specific actions that the Executive Director of the Army Contracting Command-Redstone will take to implement the recommendation.

### ***Recommendation 3***

**We recommend that the Naval Sea Systems Command Commander require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.**

### ***Commander of Naval Sea Systems Command Comments***

The Commander of Naval Sea Systems Command disagreed with our recommendation, stating that contracting officers determine fair and reasonable pricing for the Standard Missile with the prime contractor, motivating the prime contractor and their suppliers to control costs through the contract type and potential profit. The Commander stated that the FAR does not require the contracting officer to perform cost analysis on every cost element or participate in negotiations between the second and tertiary suppliers. The Commander stated that the Standard Missile sectional level pricing, which included AP1, were determined fair and reasonable by contracting officers by using historical subcontractor actual costs, purchase order history, and other cost or pricing data.

The Commander further stated that AP1 is a small subset of the overall cost of the missile system and submission of uncertified cost and pricing data would unlikely result in subcontract savings. The Commander recommended that DoD leverage its buying power and demand for AP1 across all of the Federal Government, and negotiate AP1 pricing for all Federal Government agencies.

### *Our Response*

Comments from the Commander did not address the specifics of the recommendation; therefore, the recommendation is unresolved. We agree that the contracting officers determined fair and reasonable pricing for the Standard Missile in accordance with the FAR, which does not require the contracting officer to perform a cost analysis on every cost element. We also agree that AP1 is a small subset of the overall cost of the missile system. We disagree that the submission of uncertified cost and pricing data would have unlikely resulted in subcontract savings.

As noted in the report, the Navy contracting officers relied on prime contractors and subcontractors' price analysis to determine whether proposed AP1 subcontract prices were fair and reasonable. The prime contractors performed a cost analysis to evaluate the solid rocket motor subcontractors' proposal, but they did not assess the appropriateness of the AP1 cost element as part of the prime contract. Instead, the prime contractor relied on Aerojet's determinations that the proposed AP1 prices were fair and reasonable.

Aerojet performed a price analysis of AMPAC's proposed AP1 prices based on quantity discounts from AMPAC's commercial catalog prices and escalation of previous prices paid to support their price reasonable determinations for the Standard Missile prime contract. However, AMPAC operates in a non-competitive contracting environment and relying on price analysis of previous prices alone for AP1 may result in the DoD paying excessive prices because AMPAC's previous prices have not been substantiated through competition or comparable sales data to establish a valid price baseline.

Contracting officers are responsible for the determination of a fair and reasonable price for the prime contract to include subcontract cost. Contracting officers should accomplish this by obtaining appropriate data on prices at which the same or similar items have been sold previously, adequate for evaluating the reasonableness. AP1 is a critical component to the functionality of DoD weapon systems with only a single DoD-approved domestic supplier. As a result, AP1 should require more price scrutiny. We request that the Commander reconsider his position on the recommendation and provide comments on the final report that address specific actions he will take to implement the recommendation.

### ***Recommendation 4***

**We recommend that the Navy Strategic Systems Program Director require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.**

### ***Navy Strategic Systems Program Director Comments***

The Navy Strategic Systems Program Director did not agree with our recommendation, stating that the time and effort to perform a cost analysis of AP1 to determine fair and reasonable prices is not justified considering the small cost relative to the overall contract price. In addition, the Director stated that the submission of uncertified cost and pricing data would have unlikely resulted in subcontract savings. The Director stated that the Strategic Systems Program needs to balance acquisition resources and schedule pressures to address risks in each contract. The Director explained that the award of contracts in a timely manner should not be impacted by non-required cost analysis.

### ***Our Response***

Comments from the Director did not address the specifics of the recommendation; therefore, the recommendation is unresolved. We agree that AP1 represents a small cost when compared to the total contract price. We also agree that the FAR does not require contracting officers to perform a cost analysis on every cost element. We disagree that the submission of uncertified cost and pricing data would have unlikely resulted in subcontract savings. As noted in the report, Navy contracting officers did not analyze the reasonableness of the AP1 subcontract costs as an individual cost element. Instead, Navy contracting officers relied on prime contractors and subcontractors' price analysis to determine whether proposed AP1 subcontract prices were fair and reasonable.

The prime contractors performed a cost analysis to evaluate the solid rocket motor subcontractors' proposal, but did not assess the appropriateness of the AP1 cost element as part of the prime contract. Instead, the prime contractors relied on ATK Launch Systems Incorporated determinations that the proposed AP1 prices were fair and reasonable. Under the Navy's Trident II D5 Missile prime contract, ATK Launch Systems Incorporated negotiated the unit prices in its long-term pricing agreement based on escalation of the previous price paid. ATK Launch Systems Incorporated considered the prices to be reasonable when compared to its previous long-term agreement's pricing because the price was lower per pound.

Relying on price analysis of previous prices alone for AP1 may result in the DoD paying excessive prices because AMPAC's previous prices have not been substantiated through competition or comparable sales data to establish a valid price baseline. Contracting officers are responsible for the determination of a fair and reasonable price for the prime contract to include subcontract cost. Contracting officers should accomplish this by obtaining appropriate data on prices at which the same or similar items have been sold previously, adequate for evaluating the reasonableness.

AP1 is a critical component to the functionality of DoD weapon systems with only a single DoD-approved domestic supplier. As a result, AP1 should require more price scrutiny. We request that the Director reconsider his position on the recommendation and provide comments on the final report that address specific actions he will take to implement the recommendation.

### *Unsolicited Management Comments*

Although not required to comment on Recommendations 2, 3, and 4, the DASD (IP) requested that we redirect the recommendations to all DoD programs that use AP1, not just the three programs we evaluated.

### *Our Response*

We appreciate the comments received by the DASD (IP). Our review was limited to the GMLRS, Standard Missile, and Trident II D5 programs. Therefore, we kept the recommendations directed to those offices that we reviewed and can confirm actions implemented in response to our recommendations. Through the Office of the Under Secretary of Defense (Acquisition and Sustainment), the Office of the Assistant Secretary of Defense for Acquisition provides oversight and policy on matters related to DoD system acquisition. As a result, these offices are uniquely positioned to impact pricing, contracting, and procurement policy. DASD (IP) should consider coordinating with the Office of the Under Secretary of Defense (Acquisition and Sustainment) to address her concerns about establishing fair and reasonable pricing across all DoD programs for contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.

# Appendix A

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## Scope and Methodology

We conducted this performance audit from June 2017 through March 2020 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

We originally announced the audit to determine whether the DoD properly assessed the commercial item and fair and reasonable pricing determinations for AP1; however, during the audit, we learned that the DoD subcontractors made the commercial item and fair and reasonable pricing determinations. We revised the objective to reflect the scope of our review.

We conducted interviews with personnel from the Office of the Under Secretary of Defense for Acquisition and Sustainment; Defense Contract Management Agency; U.S. Army Materiel Command; GMLRS program office; Trident II D5 Missile program office; and Standard Missile program office. We also interviewed contractor personnel from Raytheon Missile Systems in Tucson, Arizona; Lockheed Martin Missiles and Fire Control in Grand Prairies, Texas, and Sunnyvale, California; ATK Launch Systems Incorporated in Magna, Utah; Aerojet in Sacramento, California; and AMPAC in Cedar City, Utah.

We reviewed the FAR subpart 2 for the definition of commercial item. We also reviewed the FAR subpart 15.4, DFARS Procedures, Guidance, and Instruction 212.1, and DFARS Procedures, Guidance, and Instruction 215 for the cost and price negotiation policies and procedures for pricing negotiated prime contracts and subcontracts. We also reviewed 10 U.S.C § 2306a(b)(4) and DFARS 244.4 for guidance about commercial item determinations.

We used the Electronic Document Access system to obtain and review:

- Army contracts W31P4Q-14-C-0066; W31P4Q-15-C-0103; W31P4Q-16-C-0102; and W31P4Q-17-C-0080; and
- Navy contracts N00024-13-C-5407; N00024-15-C-5408; N00024-17-C-5409; N00030-13-C-0100; N00030-14-C-0100; and N00030-16-C-0100.

We reviewed ATK Launch Systems Incorporated and Aerojet's AP1 price history to support the GMLRS, Standard Missile, and Trident II D5 Missile programs. We reviewed ATK Launch Systems Incorporated and Aerojet's FYs 2014 to 2018 purchase orders and FYs 2017 and 2018 AP1 usage. We also reviewed documentation related to ATK Launch Systems Incorporated and Aerojet commercial item determinations of AP. Additionally, we reviewed:

- AMPAC's commercial catalogs, "Commercial Perchlorates Catalog with Prices," dated March 24, 2014; July 7, 2016; and October 3, 2016;
- memorandums of agreement between AMPAC and Aerojet, dated October 5, 2017, and May 11, 2017;
- long-term pricing and operational agreement between AMPAC and ATK Launch Systems, dated April 12-13, 2017; and
- AMPAC's FYs 2016 and 2017 AP1 sales history.

### ***Non-Statistical Sample Selection of Programs***

Personnel from the DASD (IP) provided a list of 16 weapon systems that use AP1 and the programs' projected AP1 demand from FYs 2017 to 2021. Using the cumulative AP1 demand projections from FYs 2017 to 2021, we selected three programs that were expected to use the most AP for our audit review.

### **Use of Computer-Processed Data**

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

### **Prior Coverage**

During the last 5 years, the Government Accountability Office (GAO) and the DoD Office of Inspector General (DoD OIG) issued three reports discussing commercial items and fair and reasonable pricing. Unrestricted GAO reports can be accessed at <http://www.gao.gov>. Unrestricted DoD OIG reports can be accessed at <http://www.dodig.mil/reports.html/>.

### **GAO**

Report No. GAO-15-680, "Defense Contracts, DoD's Requests for Information from Contractors to Assess Prices," August 2015

The report found that DoD contracting officials faced challenges when determining price reasonableness and contractors were reluctant to share data. DoD contracting officials requested cost or pricing information from contractors, but the contractors did not always provide all the requested

information. Therefore, contracting officials used available information to determine that the prices paid were fair and reasonable. The report did not make any recommendations.

### ***DoD OIG***

Report No. DODIG-2016-047, "Defense Logistics Agency Did Not Appropriately Determine Fair and Reasonable Prices for F108 Engine Sole-Source Commercial Parts," February 16, 2016

The report found that the contracting officer did not conduct a sufficient price analysis and accepted CFM International's proposed prices for commercial off-the-shelf parts that did not have commercial sales.

Report No. DODIG-2014-020, "U.S. Army Contracting Command Did Not Obtain Fair and Reasonable Prices for Communications Equipment," December 5, 2013

The report found that contracting officers did not obtain fair and reasonable prices for communications equipment procured from Datron World Communications, Inc. The contracting officials did not perform sufficient pre-award price analyses in accordance with DFARS Procedures, Guidance, and Instruction or properly implement contract requirements. In addition, the contracting officials did not verify prices used to negotiate quantity discounts and documents were not obtained to verify that proposed prices were fair and reasonable.

## Appendix B

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### Deputy Assistant Secretary of Defense for Industrial Policy Comments on the Background and Finding

The DASD (IP) included technical comments on the report. See below for our summarization and response to the technical comments to the report from DASD (IP).

#### *Subcontractor Renaming*

The DASD (IP) indicated that ATK Launch System Incorporated is now known as Northrop Grumman Space Systems and recommended adjusting the report to identify the organization in its current form.

#### *Our Response*

We acknowledge the current name change. However, according to Northrop Grumman officials, ATK Launch System Incorporated is the entity that subcontracts with AMPAC and has contracts with Lockheed Martin for the Trident II D5 Missile program. ATK Launch System Incorporated is a wholly owned subsidiary of Northrop Grumman Innovation Systems. Northrop Grumman Innovation Systems does not have subcontracts with AMPAC and it does not have contracts directly with Lockheed Martin for the Trident II D5 Missile program. As a result, we did not make this adjustment, but included a footnote related to the request.

#### *Classification Handling*

The DASD (IP) requested that we reassess markings of sensitive but unclassified information included in the report to ensure proper handling.

#### *Our Response*

We agree with the recommended handling of the sensitive but unclassified information stated in the report. We updated the report to accurately reflect controlled unclassified information instead of for official use only, and followed processes in place for handling this type of classification.

### ***Grammatical and Clarification Suggestions***

The DASD (IP) provided grammatical and clarification suggestions to the report to improve sentence structure, flow, and to improve readability, such as minor wording and punctuational changes.

### ***Our Response***

We agree with most of the recommended grammatical and clarification suggestions and confirmed changes made to our sentence structure and punctuation through our quality control processes.

# Management Comments

## Deputy Assistant Secretary of Defense for Industrial Policy

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ACQUISITION AND SUSTAINMENT

OFFICE OF THE UNDER SECRETARY OF DEFENSE  
3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

April 16, 2020

SUBJECT: Deputy Assistant Secretary of Defense for Industrial Policy's response to the DoD Inspector General's Report, "Audit of Purchases of Ammonium Perchlorate Through Subcontracts With a Single DoD-Approved Domestic Supplier"

I have reviewed the above referenced report and am providing my suggested edits (see comment matrix), as well as my comments on the recommendations in the report in the Table below.

Management	Recommendations Requiring
Deputy Assistant Secretary of Defense, Industrial Policy	1 - This recommendation should not be assigned to the Deputy Assistant Secretary of Defense, Industrial Policy because we are not responsible for purchasing anything – the Department of Defense (DoD) Service and Agency program offices are. Recommend changing the management to DoD program offices that use ammonium perchlorate in their systems.
Executive Director, Army Contracting Command-Redstone	2 - This recommendation should be combined with recommendations 3 and 4, and management should be assigned to all DoD programs that use ammonium perchlorate, not just these three.
Commander, Naval Sea Systems Command	3 - This recommendation should be combined with recommendations 2 and 4, and management should be assigned to all DoD programs that use ammonium perchlorate, not just these three.
Director, Navy Strategic Systems Program	4 - This recommendation should be combined with recommendations 2 and 3, and management should be assigned to all DoD programs that use ammonium perchlorate, not just these three.

Sincerely,

Jennifer S. Santos  
Deputy Assistant Secretary of Defense,  
Industrial Policy

Encl.  
Comments Matrix – Ammonium Perchlorate Inspector General Report

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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### Comments Matrix – Ammonium Perchlorate Inspector General Report

1. Comments are placed into the following distinct categories:

a. **CRITICAL (C)**. Critical comments are significant concerns. For critical comments, ensure you are indeed expressing your director's/commander's position. Input in this category should contain detailed comments on specific entries that constitute the concern. For critical comments, include the name, phone number, and e-mail of POC whom we can contact for resolution.

b. **SUBSTANTIVE (S)**. Substantive comments address information that is factually incorrect, incomplete, misleading, or confusing.

c. **ADMINISTRATIVE (A)**. Administrative comments correct inconsistencies between different sections, typographical errors, or grammatical errors.

2. Comment matrix description:

a. **Page #**: Identify the page number.

b. **Paragraph / Line #**: If the comment covers more than one line in the document, please include all of the affected lines; i.e., 1-3.

c. **Category**: Category of the comment (C, S, or A).

d. **Comments**: Explain by the proposed change. Please be specific about the changes you want made.

e. **Rationale**: Place your rationale here, supporting and explaining the necessity for making the proposed change.

f. **A/R/M**: This column is used to document the adjudication action taken on each comment. A = Accepted. R = Rejected. M = Accepted with modification. Once all comments have been adjudicated, a consolidated listing will be provided to all offices to ensure you know how your comments were processed.

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
3	3	S	ATK Launch Systems is now known as Northrop Grumman Space Systems; this should be added as "(now known as Northrop Grumman Space Systems)".	It is important that the organization be identifiable in its current form.		
3	7	A	"Based on our analysis of AP1 subcontractors prices paid" is grammatically misleading. Suggest "Based on our analysis of AP1 prices subcontractors paid"	The proposed verbiage makes it more clear that it is the AP price being analyzed, not subcontractor pricing.		
3	8	S	"The Deputy Assistant Secretary of Defense for Industrial Policy should identify and consider cost effective AP1 alternative sources ..." is misleading, and should be "The Department of Defense should identify..." instead.	DASD INDPOL is not responsible for this task, as the service program offices are responsible for all purchasing.		
3	9	S	"The Army Contracting Command-Redstone Executive Director, Naval Sea Systems Command Commander, and Navy Strategic Systems Program Director" should be written as "DoD programs" instead.	The recommendation is true for all DoD programs, not just the three mentioned here.		
10	3	S	FOUO Marking is insufficient.	[REDACTED]		
10	3	A	Delete the comma after "for conventional ammunition (SMCA) activities and policies"	The comma splices the sentence incorrectly.		
11	1	S	FOUO Marking is insufficient.	[REDACTED]		
11	2	S	"Requalification of a solid rocket motor is required..." should be replaced by "Requalification of a solid rocket motor, and the missile the rocket motor is a component of, is required..."	Substantive changes to the solid rocket motor (such as changing the primary oxidizer) require that the affected missile system be requalified.		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
11	3	A	"the Army's Guided Multiple Launch Rocket System (GMLRS), and the Navy's Standard Missile and Trident II D5 Missile programs" should be replaced by "the Army's Guided Multiple Launch Rocket System (GMLRS), the Navy's Standard Missile, and the Navy's Trident II D5 Missile programs"	List punctuation/grammar was incorrect		
12	1	S	"Grand Prairie, TX," should be removed.	The missiles are actually produced in the Camden, AR facility. As TX is not where the missiles are produced it should be removed.		
13	1	S	Replace "The office of the DASD (IP) monitors the supply, demand, and prices for the AP1 industry base in the United States" with "The office of the DASD (IP) monitors the AP1 industrial base in the United States"	OSD INDPOL does not routinely monitor supply, demand, and prices for individual materials. In the case of AP this was done at the specific request of the services.		
13	1	S	Replace "and looks at alternative solutions to address potential problems in these areas of interest." with "and helps develop solutions to address any risks and issues that arise in this supply chain, as well as others that DoD uses."	Reworded the sentence to more accurately describe what OSD INDPOL does.		
13	2	S	"Impact of Rising Ammonium Perchlorate Cost," First Paragraph should be marked as Controlled Unclassified Information (CUI)	Paragraph discusses 		
13	3	S	"Impact of Rising Ammonium Perchlorate Cost" Second paragraph should be marked as CUI and perhaps higher – verify with Army	Paragraph discusses 		
13	4	S	Replace "options that the DoD could use for reducing AP price and supply risks" with "options the DoD could use to reduce AP price and supply risks"	Reword for clarity - "for reducing" suggests there was a task in the process of being completed, "to reduce" more clearly shows that the office was looking at options before acting.		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
13	4	S	Replace "mitigation strategies would involve" with "mitigation strategies could involve"	"Would" suggests that the course of action was already decided. "Could" more accurately represents that recommendations were presented that could be used later when facts were known.		
14	2	S	Paragraph should be marked as CUI	Paragraphs discusses [REDACTED]		
14	2	S	Replace "continue to monitor opportunities to reduce AP1 pricing to introduce additional domestic AP1 sources" with "continue to monitor opportunities to reduce AP1 pricing, including introducing additional domestic AP1 sources"	Added a comma and reworded sentence to make it clear that introducing additional domestic AP1 sources is one mitigation strategy that DASD (IP) has at their disposal with respect to helping control price.		
14	3	S	Check with NASA regarding the dollar amount callouts: "\$ [REDACTED] per pound to \$ [REDACTED] per pound"	Specific pricing information may be CUI		
14 /15	3/1	S	Check with NASA regarding FOUO marking: "[REDACTED]"	[REDACTED] may be CUI.		
16	2	A	Remove ellipsis after "separate cost elements..."	This paragraph should not include an ellipsis at this point. If this is referencing that there is separate information between these sentences then it should be formatted differently to make this more clear		
17	Title	A	Remove Comma	Section Titles should not include commas		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
17	2	S	This section should be marked CUI: "[REDACTED]" in accordance with Public Law 105- 261, Section 806"	Discusses specific action taken by DAsD IP to [REDACTED]		
17	3	S	Replace "AP1 subcontractors prices paid" with "AP1 prices subcontractors paid"	The proposed verbiage makes it more clear that it is the AP price being analyzed, not subcontractor pricing.		
18	4	S	Define whether commercial quotations were for AP1 or just AP	It is not clear whether commercial quotes were for the same product as DoD quotes.		
19	2	S	Determine whether paragraph should be marked as containing proprietary info	Paragraph specific [REDACTED]		
19	2	S	Paragraph is unclear as to whether AP being discussed is AP1 or just AP	Clarify which grade of AP was being quoted for commercial customers		
20	3	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
20	4	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
21	1	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
21	2	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
21	2	S	Define use of the word "minimal" to describe costs related to program	For instance, 1% of costs on a billion dollar contract would be one million dollars, which is a lot of money.		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
22	2	S	The Army should be asked whether this information is sensitive: "In May 2011, the Army Contracting Command-Redstone, on behalf of the Army's Precision Guided Munitions and Rockets Product Office, contracted with Lockheed Martin Missiles and Fire Control to requalify 12 GMLRS solid rocket motors to use AP1 produced by a [REDACTED]. The Army paid Lockheed Martin Missiles and Fire Control \$1.2 million to requalify the GMLRS solid rocket motors for the alternative [REDACTED]."	This information discusses [REDACTED]		
22	2	S	The rest of the paragraph beginning with "[REDACTED]" is CUI and should be marked as such.	This part of the paragraph discusses [REDACTED]		
22	3	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
23	1	S	NASA may consider this sentence to be sensitive and should be consulted: "[REDACTED]"	Paragraph contains [REDACTED]		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
23	1	S	Paragraph contains CUI and should be marked as such, specifically the section as follows: [REDACTED]	Section concerns [REDACTED]		
23	2	S	Replace "DASD (IP)" with "Department of Defense"	DASD (IP) is not responsible for action being recommended as they do not buy anything.		
23	3	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
24	T1	S	Table should be marked as containing CUI and proprietary information	Table contains [REDACTED]		
24	T1	S	Clarify what "Percent Difference" is with respect to	It is unclear what the percent difference is showing. Percent difference from what?		
24	1	S	Paragraph should be marked as containing CUI and proprietary information.	Paragraph contains [REDACTED]		
24	T2	S	Table should be marked as containing CUI and proprietary information	Table contains [REDACTED]		
24	T2	S	Clarify what "Percent Difference" is with respect to	It is unclear what the percent difference is showing. Percent difference from what?		
25	T2	S	Table should be marked as containing CUI and proprietary information	Table contains [REDACTED]		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
26	2	A	Replace "However, future DoD procurements" with "However, for future DoD procurements"	Added the word "for" to make the sentence grammatically correct		
26	2	A	Replace "creates challenges when" with "challenges are created when"	Reworded sentence to make it grammatically correct		
26	3	S	Based on this statement, how do you determine that ATK and Aerojet determined their AP pricing correctly? "Accordingly, the commercial sales data previously provided for AP1 may not be reliable to analyze the reasonableness of the commercial prices previously paid for AP1."	If the data used to make the determination were not accurate, what grounds are there to say that the determination was accurate?		
26	3	S	Replace the specific program Army and Navy program offices with "DoD Programs"	The recommendations are relevant not just for these program offices but for all DoD programs.		
26	3	A	Replace "Government prime contracts, to request AMPAC uncertified cost data and perform a cost analysis of AP1 subcontract price, unless" with "Government prime contracts(remove comma) to request AMPAC uncertified cost data(add comma) and perform a cost analysis of AP1 subcontract price, unless..."	Commas were in the wrong locations to correctly parse the sentence.		
26	4	S	Replace "Deputy Assistant Secretary of Defense for Industrial Policy" with "Department of Defense"	DASD (IP) is not responsible for action being recommended as they do not buy anything.		
26	5	S	Replace "We recommend that the Army Contracting Command Redstone Executive Director" with "DoD programs should"	The recommendations are relevant not just to Army but to all DoD programs.		

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## Deputy Assistant Secretary of Defense for Industrial Policy (cont'd)

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Pg	Para	Category (C,S,A)	Comment	Rationale	Decision (A/R/M)	Lead Adjudication
26	5	A	Replace "Government prime contracts, to request AMPAC uncertified cost data and perform a cost analysis of AP1 subcontract price, unless" with "Government prime contracts(remove comma) to request AMPAC uncertified cost data (add comma) and perform a cost analysis of AP1 subcontract price, unless..."	Commas were in the wrong locations to correctly parse the sentence.  Also sentence needs to be reformatted in Word as there is an unnecessary page break between words.		

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## Assistant Secretary of the Army, Acquisition Logistics and Technology



DEPARTMENT OF THE ARMY  
OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY  
ACQUISITION LOGISTICS AND TECHNOLOGY  
103 ARMY PENTAGON  
WASHINGTON DC 20310-0103

SAAL-ZP

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL (DoDIG), ATTN: [REDACTED], PROGRAM DIRECTOR, AUDIT, ACQUISITION, CONTRACTING AND SUSTAINMENT, 4800 MARK CENTER DRIVE, ALEXANDRIA, VA 22350-1500

SUBJECT: Audit of Purchases of Ammonium Perchlorate Through Subcontracts With a Single DoD-Approved Domestic Supplier (Project No. D2017-D000AH-0163.000)

1. On behalf of the Assistant Secretary of the Army (Acquisition, Logistics and Technology), the Office of the Deputy Assistant Secretary of the Army (Procurement) reviewed the subject draft report and I am providing the official Army position on the subject report.
2. After reviewing the audit draft report, I do not concur with the recommendation addressed to the Army (Recommendation 2). The subcontract price of ammonium perchlorate has represented a small portion of Army prime contract prices, and there is no evidence in the draft audit report that the price of ammonium perchlorate has substantially impacted the Army's ability to determine price reasonableness under prime contracts. The Army will continue to follow the policies at FAR 15.404-3 and DFARS 215.404-3 when considering subcontract pricing in the overall price evaluation effort. The point of contact is [REDACTED], or e-mail: [REDACTED].

WEIRICK.REBECCA [REDACTED]  
A [REDACTED]

FOR Stuart A. Hazlett  
Deputy Assistant Secretary  
of the Army (Procurement)

## Department of the Navy, Naval Sea Systems Command



DEPARTMENT OF THE NAVY  
NAVAL SEA SYSTEMS COMMAND  
1333 ISAAC HULL AVE SE  
WASHINGTON NAVY YARD DC 20376-0001

IN REPLY REFER TO  
7502  
Ser 00/137  
14 Apr 20

From: Commander, Naval Sea Systems Command  
To: Inspector General, Naval Sea Systems Command

Subj: RESPONSE TO DOD IG DRAFT REPORT "AUDIT OF PURCHASES OF AMMONIUM PERCHLORATE THROUGH SUBCONTRACTS WITH A SINGLE DOD-APPROVED DOMESTIC SUPPLIER" (D2017-D000AH-0163.000 OF 13 MAR 20)

1. Naval Sea Systems Command (NAVSEA) has reviewed the subject report and does not concur with recommendation 3, which reads: We recommend that the Naval Sea Systems Command Commander require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 (Ammonium Perchlorate) under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable.

2. Non-concurrence to recommendation 3 is based on following reasons:

a. NAVSEA contracting officers determine fair and reasonable pricing for the SM-6 missile with the prime contractor, motivating the prime contractor and their suppliers to control costs via the contract type and potential profit. The Federal Acquisition Regulation does not require the contracting officer perform cost analysis on every cost element or participate in negotiations between secondary and tertiary suppliers. SM-6 sectional level pricing including the MK 72 Booster and MK 104 Dual Thrust Rocket Motor, which utilizes AP1, have been determined fair and reasonable by the contracting officer by relying upon historical subcontractor actual costs, purchase order history and other cost or pricing data. AP1 is a small subset of the overall cost of these section level components and the SM-6 missile (0.4%).

b. Based on our familiarity of the AP1 and the market forces, it is unlikely that the submission of uncertified cost and pricing data would result in any subcontract savings, but

## Department of the Navy, Naval Sea Systems Command (cont'd)

Subj: RESPONSE TO DOD IG DRAFT REPORT "AUDIT OF PURCHASES OF AMMONIUM PERCHLORATE THROUGH SUBCONTRACTS WITH A SINGLE DOD-APPROVED DOMESTIC SUPPLIER" (D2017-D000AH-0163.000 OF 13 MAR 20)

rather highlight that AMPAC is facilitized for a much higher rate of production than presently required due to overall business base drop.

c. NAVSEA recommends that DoD leverage the full buying power and demand for AP1 across all of the Federal Government (NASA, the Army, the NAVY, SSP, etc.) and explore negotiating and establishing AP1 pricing for all Federal agencies and industry suppliers vice requiring the NAVSEA contracting officer to perform AP1 cost analysis on an individual contract basis.

3. For questions regarding this matter, please contact [REDACTED] at [REDACTED] or via email at [REDACTED].

  
T. J. MOORE

# Department of the Navy, Navy Strategic Systems Program



DEPARTMENT OF THE NAVY  
DIRECTOR, STRATEGIC SYSTEMS PROGRAMS  
1250 10<sup>TH</sup> STREET SE, SUITE 3600  
WASHINGTON NAVY YARD, DC 20374-5127

9 Apr 20

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: Response to DoD IG Draft Report "Audit of Purchases of Ammonium Perchlorate Through Subcontracts with a Single DoD-Approved Domestic Supplier" (D2017-D000AH-0163.000 of 13 Mar 20)

Strategic Systems Programs (SSP) has reviewed the subject report and does not concur with recommendation 4, which reads "We recommend that the Navy Strategic Systems Programs Director require all contracting officers who negotiate a prime production contract for weapon systems involving AMPAC subcontracts that provide AP1 under Government prime contracts to request uncertified cost data and perform a cost analysis of AP1 subcontract price unless adequate pricing information is available to establish that the price for AP1 included in the prime contractor's proposal is fair and reasonable."

Non-concurrence to recommendation 4 is based on following reasons:

- The time and effort to treat this second-tier subcontract price uniquely in terms of the analysis of the commodity and the determination of a fair and reasonable price, is not justified considering the small relative cost of the commodity (less than 0.5% of the of the contract price).
- Based on our familiarity of the commodity and the market forces, it is unlikely that the submission of uncertified cost and pricing data would result in any subcontract savings, but rather highlight that AMPAC is facilitated for a much higher rate of production than presently required due to overall business base drop.
- SSP needs to have the flexibility to balance the acquisition resources and schedule pressures to address the unique and dynamic risks in each contract. The award of contracts in a timely manner when we determine the cost is reasonable and acceptable should not be impacted by direction to complete cost analysis on a commodity when it is otherwise not required.

If you have any questions, please contact [redacted] at [redacted] or email at [redacted]

J. R. WOLFE, JR

Attachments:  
None

cc:  
SSP IG

## Acronyms and Abbreviations

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<b>AMPAC</b>	American Pacific Corporation
<b>AP1</b>	Ammonium Perchlorate, Grade 1
<b>DASD (IP)</b>	Deputy Assistant Secretary of Defense, Industrial Policy
<b>DFARS</b>	Defense Federal Acquisition Regulation Supplement
<b>FAR</b>	Federal Acquisition Regulation
<b>GMLRS</b>	Guided Multiple Launch Rocket System
<b>NASA</b>	National Aeronautics and Space Administration
<b>SMCA</b>	Single Manager for Conventional Ammunition
<b>U.S.C.</b>	United States Code

## **Whistleblower Protection**

### **U.S. DEPARTMENT OF DEFENSE**

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## **For more information about DoD OIG reports or activities, please contact us:**

### **Congressional Liaison**

703.604.8324

### **Media Contact**

[public.affairs@dodig.mil](mailto:public.affairs@dodig.mil); 703.604.8324

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### **DoD Hotline**

[www.dodig.mil/hotline](http://www.dodig.mil/hotline)

**CUI**



DEPARTMENT OF DEFENSE | OFFICE OF INSPECTOR GENERAL

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**CUI**