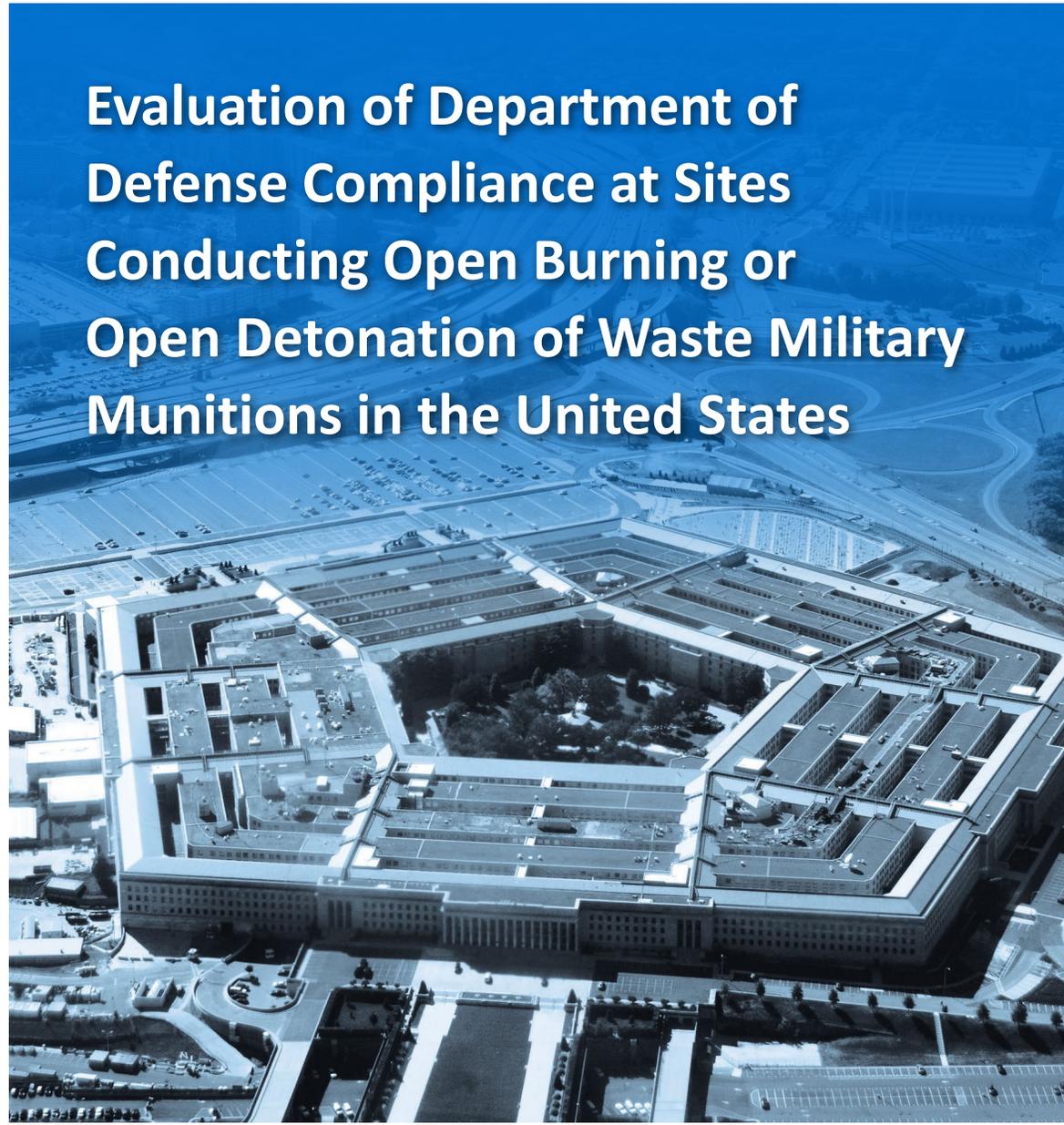


INSPECTOR GENERAL

U.S. Department of Defense

NOVEMBER 4, 2021



Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States

INTEGRITY ★ INDEPENDENCE ★ EXCELLENCE





Results in Brief

Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States

November 4, 2021

Objective

The objective of this evaluation was to determine whether the DoD complied with relevant environmental and related laws, agreements, and DoD and Military Services policies at sites where the DoD conducts, or has conducted, open burning or open detonation of waste military munitions in the United States. We also evaluated the DoD's oversight of contractors performing open burning operations at those sites.

Background

The DoD Office of Inspector General (DoD OIG) initiated this evaluation after receiving concerns from a member of Congress about the danger to public health posed by the DoD's disposal of excess conventional munitions and unexploded expressed ordnance by open burning.

As of March 2019, the DoD had 34 sites in 20 states and the U.S. territory of Guam with open burning and open detonation permits. Of those 34 sites, 5 are Government-owned, contractor-operated sites. We visited 14 of the 34 DoD sites with open burning and open detonation permits.

The DoD uses open burning and open detonation to treat or destroy waste military munitions that are damaged, past their useful life span, or are excess inventory when there are no viable resource recovery and recycling or contained disposal options. The Office of the Deputy Assistant Secretary of Defense for Environment is responsible for oversight of these operations. The DoD installations with

Background (cont'd)

open burning and open detonation sites treated or destroyed over 17 million pounds of waste military munitions per year from 2013 to 2017.

Findings

Based on information provided by the DoD installations, state environmental agencies, and the Environmental Protection Agency (EPA), open burning and open detonation operations for the 14 sites we visited generally complied with the requirements of their Resource Conservation and Recovery Act (RCRA) Subpart X permits, which were issued by states authorized by the EPA to issue RCRA Subpart X permits or by EPA regional offices. The 14 sites conducted over 9,400 open burning and open detonation events between 2013 and 2017. During that same time period, the authorized states or EPA regional offices cited 10 RCRA Subpart X permit violations at five of the sites. We reviewed the state inspection reports for the sites and supporting documentation and determined installation officials at the five sites corrected the 10 violations while the inspections were ongoing, or within 90 days. For the remaining nine sites, we did not identify any RCRA Subpart X permit violations reported by the state environmental agencies or EPA related to open burning and open detonation operations during that 5-year period. Since there were a small number of violations at the 14 sites we visited and they were reported as corrected, we did not make a recommendation related to permit violations.

However, we determined that the Joint Munitions Command did not perform adequate surveillance of contractors responsible for open burning operations at the five Government-owned, contractor-operated sites we reviewed. Specifically, administrative contracting officers relied on unappointed technical experts from various DoD installation organizations to perform surveillance functions of contractor open burning rather than appointing contracting officer representatives, as required by



Results in Brief

Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States

Findings (cont'd)

DoD Instruction 5000.72.¹ This occurred because administrative contracting officers had historically relied upon the unappointed DoD technical experts to review the contractors' overall facility maintenance and use operations.

Additionally, contracting officials did not include open burning requirements in performance work statements and quality assurance surveillance plans. Without performance work statement requirements and quality assurance surveillance plans related to open burning, the administrative contracting officers did not have clear guidance regarding how to evaluate the performance of the contractors that were conducting open burning. According to Joint Munitions Command and Army Contracting Command-Rock Island personnel, specific performance work statement requirements and quality assurance plan elements related to open burning are a routine function for the contractors.

As a result, there is an increased risk that the Army did not know whether contractors at the five Government-owned, contractor-operated sites performed open burning in accordance with the terms of the contract. Instead, the administrative contracting officers relied on state regulators and the EPA to perform recurring inspections of the Government-owned, contractor-operated sites. The administrative contracting officers also relied on contractors to self-report violations and unappointed technical experts from various DoD installation organizations to identify any potential environmental violations that resulted from the open burn operations at the sites.

Recommendations

We recommend that the Commander of Joint Munitions Command nominate contracting officer representatives to provide oversight of contractor open burning.

We recommend that the Senior Contracting Official of Army Contracting Command-Rock Island appoint the contracting officer representatives that are nominated by the Commander of Joint Munitions Command.

We recommend that the Commander of Joint Munitions Command submit clear requirements to the Commander of Army Contracting Command-Rock Island for use when developing performance work statement requirements and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items.

We recommend that the Senior Contracting Official of Army Contracting Command-Rock Island modify the existing applicable munitions performance work statements to clearly include specific requirements for evaluating contractor open burning of waste munitions and waste munition items.

Finally, we recommend that the Senior Contracting Official of Army Contracting Command-Rock Island and the Joint Munitions Command contracting officers and contracting officer's representatives develop quality assurance surveillance plans for all existing and future munitions contracts that detail how and when the appointed Army personnel will survey, observe, test, sample, evaluate, and document contractor performance of open burning.

¹ DoD Instruction 5000.72, "DoD Standard for Contracting Officer's Representative (COR) Certification," March 26, 2015, Incorporating Change 2, November 6, 2020.



Results in Brief

Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States

Management Comments and Our Response

The Commander of Army Contracting Command-Rock Island agreed with the recommendations to appoint trained contracting officer's representatives that are nominated by the Commander of Joint Munitions Command, and to modify the existing applicable munitions performance work statements to clearly include specific requirements for evaluating contractor open burning of waste munitions and waste munition items.

The Commanders of the Army Contracting Command Rock Island and the Joint Munitions Command agreed to develop quality assurance surveillance plans for all existing and future munitions contracts that detail how and when the appointed Army personnel will survey, observe, test, sample, evaluate, and document contractor performance of open burning.

The Commander of Joint Munitions Command agreed to submit clear requirements to the Commander of Army Contracting Command-Rock Island for use when developing performance work statement requirements and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items.

Planned completion dates for implementation of the recommendations are not later than the end of FY 2022. These recommendations are resolved but will remain open until we are provided with documentation showing that all agreed-upon actions to implement the five recommendations are completed.

However, the Commander of Joint Munitions Command did not agree with the recommendation to nominate contracting officer's representatives to provide oversight of contractor open burning at the Government owned, contractor operated facilities. The Commander stated that, according to DoD Instruction 5000.72, 3b, the contracting officer may, but is not required to, designate a contracting officer's representative for service contracts.

Comments from the Commander of Joint Munitions Command regarding appointment of contracting officer's representatives did not address the specifics of the recommendation. Therefore, the recommendation is unresolved and will remain open. We request additional comments from the Commander of Joint Munitions Command, in conjunction with the Commander of Army Contracting Command-Rock Island, regarding the nomination of contracting officer's representatives by December 3, 2021.

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

Recommendations Table

Management	Recommendations Unresolved	Recommendations Resolved	Recommendations Closed
Commander, Army Contracting Command-Rock Island		B.1.b, B.2.b, B.3	
Commander, Joint Munitions Command	B.1.a	B.2.a, B.3	

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**

November 4, 2021

MEMORANDUM FOR COMMANDER, ARMY CONTRACTING COMMAND-ROCK ISLAND
COMMANDER, JOINT MUNITIONS COMMAND

SUBJECT: Evaluation of DoD Compliance at Active Sites Conducting Open Burning or
Open Detonation of Waste Military Munitions in the United States
(Report No. DODIG-2022-013)

This final report provides the results of the DoD Office of Inspector General's evaluation. 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.

The Commander of Army Contracting Command-Rock Island and the Commander of Joint Munitions Command agreed to address five of the six recommendations presented in the report; therefore, we consider the five recommendations resolved and open. As described in the Recommendations, Management Comments, and Our Response section of this report, we will close the recommendations when you provide us documentation showing that all agreed-upon actions to implement the five recommendations are completed. Therefore, please provide us within 90 days your response concerning specific actions in process or completed on these five recommendations. Send your response to [REDACTED] if classified SECRET.

One recommendation remains unresolved because the Commander of Joint Munitions Command did not address the intent of recommendation B.1.a. Therefore, as discussed in the Recommendations, Management Comments, and Our Response section of this report, the recommendation remains open. We will track the unresolved recommendation until an agreement is reached on the actions that you will take to address the recommendation and you have submitted adequate documentation showing that all agreed-upon actions are completed.

DoD Instruction 7650.03 requires that all 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. Send your response to [REDACTED] if classified SECRET.

We appreciate the cooperation and assistance received during the evaluation. If you have any questions, please contact [REDACTED]

A handwritten signature in black ink, appearing to read 'Jeff Dubinok', with a long horizontal stroke extending to the right.

Jefferson Dubinok
Acting Assistant Inspector General for
Programs, Combatant Commands, and
Overseas Contingency Operations

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Introduction

Objective

The objective of this evaluation was to determine whether the DoD complied with relevant environmental and related laws, agreements, and DoD and Military Services policies at sites where the DoD conducts, or has conducted, open burning and open detonation of waste military munitions in the United States. We also evaluated the DoD's oversight of contractors performing open burning operations at those sites.

Background

The DoD uses open burning or open detonation to demilitarize, treat, or destroy waste military munitions that are damaged, past their useful life span, or are excess inventory.² DoD installations use open burning and open detonation when they do not have viable resource recovery and recycling or contained disposal options.³ DoD installations reported treating over 17 million pounds of waste military munitions by open burning and open detonation per year between 2013 and 2017.

DoD Manual 6055.09 defines open burn as “[a]n open-air combustion process by which excess, unserviceable, or obsolete munitions are destroyed to eliminate their inherent explosive hazards.”⁴ The Manual also defines open detonation as “[a]n open-air process used for the treatment of excess, unserviceable, or obsolete munitions whereby an explosive donor charge initiates the munitions being treated.” Figures 1 and 2 show examples of both treatment processes.⁵

² Section 101(e)(4), title 10, United States Code (2011), defines military munitions as “all ammunition products and components produced for or used by the armed forces for national defense and security, including ammunition products or components under the control of the Department of Defense, the Coast Guard, the Department of Energy, and the National Guard.” For this report, waste military munitions are those that have become excess, obsolete, or unserviceable.

³ Resource recovery and recycling is the evaluation of waste military munitions for reuse prior to demilitarization. Contained disposal is any method of treating the energetics from waste military munitions in a closed system.

⁴ DoD Manual 6055.09, Volume 8, “DoD Ammunition And Explosives Safety Standards: Glossary,” February 29, 2008, (Incorporating Change 2, January 24, 2018).

⁵ Section 6903(34), title 42, United States Code (1976), “Resource Conservation and Recovery Act,” defines treatment as, “any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character or composition of any hazardous waste so as to neutralize such wastes, or so as to render such waste non-hazardous, safer for transport, amenable for recovery, amenable for storage, or reduced in volume. Such term includes any activity or processing designed to change the physical form or chemical composition of hazardous waste so as to render it nonhazardous.”



Figure 1. Open Burning of Waste Military Munitions
Source: Naval Surface Warfare Center, Crane, Indiana.



Figure 2. Open Detonation of Waste Military Munitions
Source: Letterkenny Army Depot, Chambersburg, Pennsylvania.

We initiated this evaluation in response to a congressional request. In the July 3, 2018, letter to the DoD Office of Inspector General, the request expressed concern about the “danger to public health posed by the disposal of excess conventional munitions and unexploded ordnance by open burning.” The letter requested that the DoD Office of Inspector General:

examine the adequacy and robustness of DoD and DoD contractor compliance with Federal regulations, DoD policy, and other applicable provisions, at active munition or ordnance disposal sites within the continental United States where the disposal method is open burning (“burn pits”) or any other method of disposal that could endanger the public.

The letter also echoed concerns published in media articles about the DoD’s use of open burning and open detonation, as well as concerns about proper oversight of DoD contractors disposing of what the articles referred to as “toxic materials.”

The DoD Use and Oversight of Open Burning and Open Detonation for Waste Military Munitions

As of March 2019, the DoD had 34 sites in 20 states and the U.S. territory of Guam with open burning and open detonation permits for treatment of waste military munitions.⁶ The number of DoD sites that performed open burning and open detonation operations decreased from 114 sites in 1988 to only 34 sites in 2019. The DoD operates 29 of those 34 sites. The remaining 5 of the 34 sites are Government-owned, contractor-operated (GOCO) sites with a single contractor responsible for the entire munitions mission at each site, including open burning and open detonation operations.

⁶ Joint Ordnance Commanders Group, “Optimization of Department of Defense Open Burning/Open Detonation Units,” March 2019.

The Assistant Secretary of Defense for Sustainment (formerly titled the Assistant Secretary of Defense for Energy, Installations, and Environment) has authority over seven sustainment programs, including the environment. The Deputy Assistant Secretary of Defense for Environment is responsible for overseeing the DoD environmental program, which includes open burning and open detonation operations.

Procuring contracting officers (PCOs) at the Munitions and Industrial Base Contracting Directorate of the Army Contracting Command–Rock Island (ACC-Rock Island) have procurement responsibilities for the five GOCO sites. PCOs in the ACC-Rock Island Contracting Directorate award operations and maintenance and support contracts for the GOCO sites. ACC-Rock Island PCOs manage the site contracts and delegate contract administration tasks, including oversight, to a Joint Munitions Command (JMC) administrative contracting officer (ACO) at each of the five GOCO sites. The Federal Acquisition Regulation (FAR) establishes quality assurance requirements for ACOs to oversee contractor performance.⁷

DoD Installations Conducting Open Burning and Open Detonation Must Comply With the Resource Conservation and Recovery Act

DoD installations conducting open burning and open detonation operations must comply with applicable Federal and state environmental rules and regulations. The “Resource Conservation and Recovery Act” (RCRA) governs the disposal of solid waste and hazardous waste, including open burning and open detonation operations.⁸ The RCRA describes the waste management program and criteria for all aspects of the hazardous waste life cycle.⁹ The Code of Federal Regulations states that “[o]pen burning of hazardous waste is prohibited, except for the open burning and detonation of waste explosives. Waste explosives includes waste that has the potential to detonate and bulk military propellants that cannot be safely disposed of through other modes of treatment.”¹⁰

⁷ FAR Part 37, “Service Contracting,” Subpart 37.6, “Performance-Based Acquisition;” FAR Part 42 “Contract Administration and Audit Services,” Subpart 42.302, “Contract Administration Functions;” and FAR Part 46, “Quality Assurance,” Subpart 46.4, “Government Contract Quality Assurance.”

⁸ Section 6901 et. seq., title 42, United States Code (1976), “Resource Conservation and Recovery Act.”

⁹ The EPA uses the term “RCRA” interchangeably to refer to the law, Federal regulations, and related EPA policy and guidance. For this report, we apply the same usage of the term “RCRA” as the EPA.

¹⁰ Title 40, Code of Federal Regulations, section 265.382, “Open Burning; waste explosives,” (2018).

RCRA Subpart X authorizes the Environmental Protection Agency (EPA) to issue permits to miscellaneous waste management units.¹¹ The EPA delegates the primary responsibility of implementing the RCRA hazardous waste program to states. Once the state develops a program that is at least as stringent as the Federal RCRA program, the state can apply to the EPA for authorization to administer and enforce the RCRA program. Following a state's demonstration of adequate enforcement authority, the EPA vests the state with full authority to administer the permits for the RCRA program.

The 34 DoD sites conducting open burning and open detonation operations are located in 20 states and 1 U.S. territory (Guam). The EPA has authorized 19 of the 20 states with DoD open burning and open detonation operations to administer and enforce the RCRA program. Iowa and Guam have not received authorization to administer and enforce the RCRA program, so the corresponding EPA Regional Offices issue RCRA Subpart X permits to regulated entities in that state and territory.

Because RCRA Subpart X characterizes open burning and open detonation as treatment processes and not hazardous waste land disposal, the EPA regulates open burning and open detonation operations as "miscellaneous units." The RCRA requires that owners and operators of such miscellaneous units (which includes DoD installations and contractors) apply for a permit from the states or EPA regions. Owners and operators must also provide the implementing agency with detailed information on the design of the open burning and open detonation site and processes for waste treatment and the potential environmental impacts. The RCRA requires the installation to conduct human health risk, ecological risk, and other relevant assessments to establish that open burning and open detonation operations will not endanger human health and the environment. Owners and operators of miscellaneous units are required to meet the environmental performance standards of the EPA, or the state issuing the permit, during the active life of the unit and post-closure care.

¹¹ Title 40, Code of Federal Regulations, section 260.10, "Definitions," defines a miscellaneous unit as a hazardous waste management unit where hazardous waste is treated, stored, or disposed of and that is not a container, tank, surface impoundment, pile, land treatment unit, landfill, incinerator, boiler, industrial furnace, or underground injection well with appropriate technical standards.

Finding A

The DoD Generally Complied With Laws and Agreements at Active Open Burning and Open Detonation Sites Visited

The DoD open burning and open detonation operations at the 14 sites we visited generally complied with the requirements of their RCRA Subpart X permits for open burning and open detonation activities, based on information provided by the installations and permitting agencies. Specifically, the 14 sites conducted over 9,400 open burning and open detonation events from 2013 to 2017. During the same time-period, we found only 10 reported RCRA Subpart X permit violations at five sites, while the other nine sites had no reported violations. This resulted in a low RCRA Subpart X violation incidence rate. Additionally, based on state inspection reports for the sites and supporting documentation, we determined that installation officials at the five sites corrected the 10 violations while the state inspections were ongoing, or within 90 days of the inspection.

The DoD Open Burning and Open Detonation Operations Generally Complied With Relevant Environmental Laws and Agreements

The DoD open burning and open detonation operations at the 14 sites we visited generally complied with the requirements of their RCRA Subpart X permits issued by either the authorized states or EPA regional offices. We visited 14 of the 34 sites permitted to conduct open burning and open detonation, located on 13 DoD installations.¹² During site visits to eight Army, four Navy, and two Air Force sites, we discussed open burning and open detonation activities with responsible officials from the installation and the state environmental agency. The 14 site visits were to installations treating over 80 percent of the DoD's reported net explosive weight treated by open burning and open detonation resulting from demilitarization, manufacturing, and research, development, testing, and evaluation missions.

State environmental agencies issued final RCRA Subpart X permits for 11 of the 14 sites. The remaining three sites had submitted permit applications to the states they operated in and were operating under an interim permit that was granted by the state agency. We also gathered information on RCRA Subpart X permits

¹² Two sites conducting open burning and open detonation operations, Naval Surface Warfare Center Indian Head and Explosive Ordnance Technology Division Stump Neck, are both located on the Naval Surface Warfare Center Indian Head, Maryland, naval installation.

directly from installation and state environmental agency personnel at the 14 sites we visited. Representatives from all three Military Services that operated the 14 sites that we selected provided documentation showing that their Services track open burning and open detonation permits and permit violations.

During interviews with representatives from the state environmental agencies, the state environmental agency representatives generally stated that the respective DoD installations were complying with state-established RCRA Subpart X permit requirements for open burning and open detonation operations at those sites. State environmental agencies performed comprehensive inspections of the hazardous waste management system for the entire installation, of which open burning and open detonation operations are a small part. Inspections cover all aspects of permit requirements, including recordkeeping, and a list of all violations identified. The state environmental agency representatives shared the results of routine and unscheduled inspections, illustrating that open burning and open detonation operations were conducted without significant issues.

After completing each site visit, we requested documentation of all RCRA Subpart X permit violations at the 14 sites related to open burning and open detonation operations. Permit violations were identified by:

- installation environmental personnel self-reporting to their state environmental agency or the EPA, as required by their RCRA Subpart X permit, or
- state environmental agency staff during their inspections of the installation.

We further verified the completeness of the data by reviewing state environmental agency websites for any additional reports of site RCRA Subpart X permit violations not included in the installation or state environmental agency summaries.

The 14 installations we visited reported conducting over 9,400 open burning and open detonation events on their sites from 2013 to 2017. During that same period, installations and state environmental agencies reported 10 RCRA Subpart X permit violations. These violations of RCRA Subpart X permits occurred at 5 of the 14 sites we visited. For the remaining nine sites, we did not identify any reported RCRA Subpart X permit violations during the 5-year period. We describe the methodology we used to identify violations in Appendix A. Table 1 summarizes the 10 identified RCRA Subpart X permit violations and the corrective actions taken.

Table 1. Open Burning and Open Detonation Violations at Sites Visited (2013-2017)

Site	No. of Violations	Year	Nature of Violations	Corrective Actions
Blue Grass Army Depot	1	2015	Observers (spotters) improperly placed	Corrected Standard Operating Procedures for the placement of observers
Holston Army Ammunition Plant	3	2013	Uncovered burn pan	Pan covered
		2015	Chemical analysis of burn pan residue not conducted prior to removal from burn pans	Operators reminded and cautioned to follow established procedures
		2016	Sediment traps over 75 percent full	Sediment traps cleaned
Radford Army Ammunition Plant	2	2017	Exceeding permitted release levels for lead (2 occasions)	Modified procedures to review data for each sampled waste group separately
Tooele Army Depot (North)	3	2013	Exceeding maximum daily net explosive weight treatment limits for open detonation	Operators will be more observant after detonation for large remnants of treated material
		2013	Exceeding maximum daily net explosive weight treatment limits for open detonation (2nd violation)	On the operating day, planners will recalculate the Net Explosive Weight and ensure unit of issue data is correct prior to loading munitions into demolition site
		2017	Open burning of hazardous wastes outside of the open burning and open detonation permitted area without a valid treatability study or emergency permit	Procedures revised to conduct technical reviews for all test plans
Naval Surface Warfare Center/ Crane Army Ammunition Activity	1	2017	Munitions in temporary storage improperly labeled	Label corrected during inspection
Total	10			

Source: The DoD OIG.

The installations corrected the 10 permit violations while the state inspections were ongoing, or within 90 days of the inspection. For example, in September 2013, the State of Tennessee Department of Environment and Conservation conducted a site inspection at the Holston Army Ammunition Plant. The inspection was conducted to evaluate, among other aspects of hazardous waste management, the conditions of Open Burn Treatment operations under Permit TNHW-148.¹³ In October 2013, the Tennessee Department of Environment and Conservation provided the results of its September 2013 inspection. Among the violations cited by the Tennessee Department of Environment and Conservation was that a burn pan, used during open burning events, was left uncovered while not in use, which is as an RCRA Subpart X violation. The operating permit requires burn pans to be covered when not in use to prevent the entry of precipitation. In November 2013, the Tennessee Department of Environment and Conservation performed a follow-up inspection and determined that the violations reported in the October 2013 report were corrected.

Based on the information obtained from records and responsible personnel from both installations and state environmental agencies, we concluded that the 14 active sites that we visited are complying with their respective state environmental agency RCRA Subpart X permit requirements. RCRA permitting is intended to protect human health by validating processes and identifying violations, with penalties designed to minimize violations. The 10 identified permit violations over a 5-year period during which operators conducted 9,400 open burning and open detonation events resulted in a low incidence rate. We also found that each installation notified the state environmental agencies of corrective actions taken for the 10 identified permit violations and no additional corrective actions are required. Therefore, we are not making a recommendation for this finding.

¹³ Tennessee Code, Title 68 - Health, Safety and Environmental Protection, Chapter 212 - Hazardous Waste Management, Part 1 - Tennessee Hazardous Waste Management Act Of 1977; Tennessee Code, Title 68 - Health, Safety And Environmental Protection, Chapter 212 - Hazardous Waste Management, Part 3 - Tennessee Hazardous Waste Reduction Act Of 1990; Tennessee Code, Title 68 - Health, Safety and Environmental Protection, Chapter 211 - Solid Waste Disposal, Part 10 - Used Oil Collection.

Finding B

The DoD Could Improve Oversight of Contractors Performing Open Burning of Waste Munitions at Government-Owned, Contractor-Operated Sites

Although the ACC-Rock Island delegated administrative contracting functions to the JMC ACOs, the JMC ACOs did not perform adequate surveillance of contractors responsible for performing open burning of munitions operations at the five Army GOCO sites.¹⁴ The ACOs relied on DoD installation personnel that were not appointed as contracting officer representatives (CORs) to act as technical experts to perform surveillance functions of contractor open burning. This occurred because DoD installation personnel had historically reviewed the contractor's overall facility use and maintenance performance, and the ACOs stated that there was no reason to formally appoint those personnel as CORs.

In addition, the requiring activity did not prepare performance work statements and quality assurance surveillance plans (QASPs) that included oversight of contractor open burning operations. The JMC ACOs performed some contractor oversight at the five Army GOCO sites, such as meeting routinely with other DoD installation personnel to discuss contractor performance and trends related to the performance work statements. However, because they did not have performance work statement requirements and QASP procedures related to open burning, the ACOs did not perform adequate contractor surveillance of open burning operations. According to JMC and ACC-Rock Island personnel, this lack of contractor oversight occurred because the Army considered open burning of waste munitions as routine contractor functions of GOCO facility use in munitions manufacturing.

As a result, the Army did not know whether contractors conducting open burning at the five GOCO sites were performing the burning and detonation operations in accordance with the terms of the contract. Instead, the JMC ACOs relied on:

- state regulators and the EPA to perform recurring inspections,
- contractors to self-report violations, and
- non-appointed personnel from various DoD installation organizations to informally identify any potential environmental violations that resulted from the open burning sites.

¹⁴ The five GOCO munitions sites are the Hawthorne Army Depot, Nevada; Holston Army Ammunition Plant, Tennessee; Iowa Army Ammunition Plant, Iowa; Milan Army Ammunition Plant, Tennessee; and Radford Army Ammunition Plant, Virginia.

Informally relying on others to conduct contract oversight significantly reduces the ability of the Army to detect permit or contract violations. This could potentially result in a negative impact on human health, a negative environmental impact to the surrounding communities, monetary penalties, or other corrective actions by the states or the EPA against the DoD.

Contracting Officers Did Not Appoint DoD Installation Personnel as Contracting Officer's Representatives for Open Burning at Five GOCO Sites

Although the ACC-Rock Island officials delegated contracting administrative functions to the JMC ACOs, the ACOs did not perform adequate surveillance of contractors responsible for performing open burning operations of munitions at the five Army GOCO sites. The FAR states:

[t]he contracting officer normally delegates . . . contract administration functions to a [contract administration office]. The contracting officer may retain and execute any of these functions . . .¹⁵

The FAR further states that, among the contract administrative functions, the contracting officer normally delegates to a contract administrative office the requirement to ensure contractor compliance with contractual quality assurance requirements.¹⁶

The ACC-Rock Island PCOs' memorandums delegating contract administration functions to the JMC ACOs at the five GOCO sites included the requirement for the ACOs to ensure contractor compliance with contractual quality assurance requirements.

The JMC ACOs stated that they generally relied on DoD installation personnel as technical experts to perform surveillance functions of contractor open burning operations at the five GOCO sites. However, the contracting officers did not appoint those DoD installation personnel as CORs, in accordance with DoD Instruction 5000.72.¹⁷ DoD Instruction 5000.72 states:

Any individual delegated responsibilities pursuant to Federal Acquisition Regulation 1.602-2, regardless of local terminology, must be certified in accordance with this instruction. For example, local terminology can be COR, contracting officer's technical

¹⁵ FAR Part 42, "Contract Administration and Audit Services," Subpart 42.3, "Contract Administration Office Functions," Section 42.302, "Contract Administration Functions."

¹⁶ FAR subpart 42.302.

¹⁷ DoD Instruction 5000.72, "DoD Standard for Contracting Officer's Representative (COR) Certification," (Change 1, August 31, 2018).

representative, technical point of contact, technical representative, alternate COR, administrative COR, assistant COR, line item manager, task order manager, quality assurance personnel, quality assurance evaluator, or COR management.

One ACO stated that there were 17 base personnel who provide daily oversight of the contractor's operations at the facility. Another ACO stated that the ACO conducts oversight but there is a subject matter expert for every field, which also conducts oversight of operations and reports back to the ACO. However, according to Defense Pricing and Contracting officials, in accordance with DoD Instruction 5000.72, it is not allowable to ask someone else, who is not the COR or an alternate COR designated by the contracting officer, to perform technical monitoring.

Although they were not formally appointed as CORs, DoD installation personnel from the respective base Environmental Offices at the five GOCO sites generally performed surveillance of contractor open burning operations. For example, Holston Army Ammunition Plant personnel stated that the Environmental Office, Safety Office, and Public Affairs Office had observed contractor open burning operations. As another example of other DoD installation personnel performing surveillance functions of contractor open burning, at the Milan Army Ammunition Plant, the Environmental Coordinator created a Memorandum for Record documenting his observations of contractors' open burning. Specifically, the Milan Environmental Coordinator stated, "the burning ground has permitted open burning of explosive contaminated pneumatic and solid rubber tires on push carts that are classified by the Tennessee Department of Environment and Conservation as 'tires and other rubber products' and prohibited from open burning." Had the contracting officer appointed the Milan Environmental Coordinator as a COR, and provided him with other open burning requirements as part of a performance work statement and QASP, the documented surveillance of the Tennessee prohibition could have been considered as an example of adequate contractor surveillance and been inclusive of a broader and comprehensive oversight program.

The ACOs Historically Used Unappointed Installation Personnel for Contractor Oversight

The ACOs relied on DoD installation personnel who were not appointed as either CORs or alternate CORs to conduct oversight of open burning because DoD installation personnel had historically reviewed the contractor's overall installation use and operations, including open burning. We asked the ACOs why base personnel were not formally delegated contractor oversight authority for open burning. Generally, officials from the sites responded that they maintained the existing procedures that were in place for contractor oversight.

For example, one ACO stated that DoD installation personnel had historically reviewed the contractor's efforts, so there was no reason to delegate. Another ACO stated that, when she arrived at the site to assume her responsibilities, she was unsure how surveillance of the contractor was performed since there was no specific oversight measures in place for open burning. However, she accepted that the base personnel had historically performed informal oversight and would report back to her. A third ACO stated that she does not further disseminate COR delegation or appointment letters to each Government employee and that has been the practice for many years.

The JMC ACOs are responsible for ensuring contractor compliance with contractual quality assurance requirements, including the processes and means to fulfill their delegated responsibilities.

Contracting Officials Did Not Prepare Performance Work Statements and Quality Assurance Surveillance Plans That Included Open Burning Requirements

The surveillance requirements for developing the performance work statements and QASPs prepared by the Army contracting officials were not provided by the requiring activity and did not include specific elements related to open burning. The FAR states that the performance work statement must include measureable performance standards and the methodology for assessing contractor performance against those standards.¹⁸ The FAR further states that a QASP should be prepared in coordination with the performance work statement and should identify all work requiring surveillance and the type of surveillance. The surveillance can be performed at any time or location deemed necessary to verify that services conform to contract requirements.¹⁹

We reviewed the performance work statements and QASPs for the five Army GOCO sites to determine whether the Army established measureable performance standards and whether the Army established specific surveillance steps for assessing contractor performance against those standards for open burning. We did not identify any clear requirements related to open burning in the performance work statements or QASP surveillance steps for monitoring and reporting on contractor open burning.

For example, the performance work statement for Holston Army Ammunition Plant stated, “[t]he Contractor shall comply with current Federal, State...laws pertaining to the environment.” Additionally, we found that the Holston Army Ammunition

¹⁸ FAR 37.6.

¹⁹ FAR subpart 46.4.

Plant QASP did not include requirements for open burning. The Commander's Representative for Holston Army Ammunition Plant stated that, because the contract and performance work statements do not include specific requirements for open burning, Holston personnel would consult with Tennessee and EPA regulations for specific open burning requirements. Additionally, at the Holston Army Ammunition Plant, personnel stated that DoD installation personnel from various installation offices, including the Safety Office, Environmental Office, and Public Affairs Office, had observed contractor open burning operations. However, without a QASP that identifies requirements for surveilling open burning, the oversight provided by other DoD installation personnel was not assessed against measurable performance standards.

In addition, during a site visit to the Radford Army Ammunition Plant, installation technical experts stated that if they happen to be in the area during an open burning operation, they might stop and watch. The Radford Army Ammunition Plant personnel stated that, if they did watch, they did not inspect the contractor or assess compliance with any open burning requirements. Radford Army Ammunition Plant personnel also stated that they do not test contractor compliance with the contractor's standard operating procedures. For example, the Radford contractor's standard operating procedures calls for a spotter to determine that no boaters are present upstream or downstream on the river when an open burn is about to commence. Checking for boaters reduces the potential risk of boaters being exposed to health and safety risks from the planned open burning of waste munitions or waste munition items. However, Radford Army Ammunition Plant personnel stated that they do not check to determine whether the contractor performed its spotter requirements. While the responsibility to ensure boater safety is upon the contractor, the lack of Army oversight increases the risk to boaters if such safety measures are not taken.

The Army Could Develop Procedures to Improve Oversight of Contractors

The ACOs performed some contractor oversight at the five Army GOCO sites, such as meeting routinely with other DoD installation personnel to discuss contractor performance and trends related to the various performance work statement sections, including open burning. However, without clear performance work statement requirements and QASP procedures related to open burning to identify what should be surveilled, the frequency of surveillance, and the criteria used to assess performance, the ACOs' recurring meetings with other DoD installation personnel is not adequate surveillance of contractors' open burning operations.

For example, personnel at one DoD installation stated that they conducted informal oversight of contractor open burning operations, despite not having written procedures for open burning oversight. The DoD installation member stated, “I have been doing this for 37 years; it is in my head and I know what to look for.” While we do not dispute the individual’s experience and knowledge, his surveillance procedures should be clearly defined in a QASP that identifies how often inspections will occur, what will be checked during an inspection, how it will be checked, and what type of sample will be used. These details would help ensure that the information reported to the ACO during the recurring meetings is consistent and in accordance with contract requirements and environmental permit standards for open burning.

Another example, from a coordination perspective, of an existing effort that may be considered when developing open burning related QASP measures is the Holston Army Ammunition Plan procedure for contractor open burning activity. The Commander’s Representative for Holston Army Ammunition Plant stated that the operating contractor coordinates with the ACO and Army on each open burn event through e-mail notification for ACO and installation staff acknowledgement. The e-mail notification process enables the ACO and installation staff time to position, if warranted, the public affairs office staff to take pictures of the burn event, environmental office staff to confirm the operating contractor is following proper procedures that will meet state and Federal regulatory requirements, and safety office staff to ensure that the open burning processes meet safety requirements. Furthermore, the Commander’s Representative stated that, although the onsite personnel were not appointed CORs and the performance work statement and QASPs did not contain open burning requirements, the ACOs met with base personnel to obtain their input, comments, and assessment of contractor performance on overall base use and operations, including input from base environmental office personnel, and assessments on open burning. The Holston Commander’s Representative also noted that the position description of the staff requires the staff to report their findings to the ACO and Commander’s Representative.

Army Personnel Considered Open Burning Routine GOCO Facility Use

The JMC did not include specific open burning requirements in the performance work statement and QASPs because, according to JMC personnel, open burning of waste munitions was considered a routine matter of GOCO facility use in munitions manufacturing. Additionally, two JMC GOCO site officials stated that open burning is a matter between the contractor and the state or the EPA.

We do not agree that open burning should be handled as an undefined routine matter or that open burning is only between the contractor and the state or the EPA since, if performed improperly, open burning of waste munitions can result in a negative impact on human health and the environment of surrounding communities, as well as result in monetary penalties assessed against the contractor or the DoD. Furthermore, the DoD is the owner of the GOCO sites and it is the DoD's munitions that are being disposed of; therefore, the DoD has a vested interest in the contractor's proper performance of open burning on the Government's sites. A contractor mishap or incident could affect public perception and tolerance of the operations of the DoD GOCO sites.

The Army Did Not Know Whether Contractors Performed Open Burning in Accordance With the Permits

As a result of not appointing installation personnel as CORs, not establishing clear requirements for open burning in the performance work statements, and not developing QASPs for open burning, the Army generally did not know whether contractors conducting open burning at the five GOCO sites performed in accordance with the terms of the permit. Instead, the JMC ACOs relied on state regulators and the EPA to perform recurring inspections, contractors to self-report violations, and personnel from various DoD installation organizations to identify any potential environmental violations that resulted from the open burning sites.²⁰

Relying on other oversight bodies or unauthorized base oversight significantly reduces the Army's ability to detect permit violations, potentially resulting in negative impacts on the environment, monetary penalties, or other corrective actions directed by the EPA or the states against the DoD, as well as risking the health and safety of people in the area. Furthermore, performing and documenting Government oversight of the contractors' efforts may help prevent potential future environmental issues.

Although there were few violations cited against the five Army GOCO sites, if the Army had established an effective oversight program over the contractors' open burning operations, the Army may have been able to avoid some of the violations

²⁰ The contractors at the five Army GOCO sites are required to self-report any noncompliance with their respective permits. According to 40 C.F.R. § 270.30(l)(6)(iii), "a written submission shall also be provided to the Director within five days of the time the Permittees become aware of the circumstances. The written submission must contain a description of the noncompliance and its cause; the period(s) of noncompliance (including exact dates and times); whether the noncompliance has been corrected; and, if not, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance."

that were detected or at least identified them in a more timely manner. For example, the following examples are violations from state and Federal agencies that may have been detected or prevented with a consistent contract oversight program.

- In July 2017, the Radford Army Ammunition Plant contractor conducted two open burning operations using the wrong samples to calculate the amount of waste that could be burned within permit limits. This resulted in the emissions of lead that was twice the amount allowed in the permit.²¹ If an oversight program was established, the Radford Army Ammunition Plant oversight personnel could have detected that the contractor used the inappropriate sample to estimate the level of lead that would be released into the environment. Such possible detection by the Army could have prevented both planned open burning events that released more lead into the environment than the Radford Army Ammunition Plant permit allowed.
- In September 2013 it was discovered that the Holston Army Ammunition Plant contractor did not place a cover over an unused open burn pan, as required by the Holston Army Ammunition Plant permit. An uncovered burn pan increases the risk of precipitation entering the unused pan which may contain untreated waste materials or residues and wind dispersion of treatment residue. If an oversight program was established, Holston Army Ammunition Plant oversight personnel may have identified that the contractor did not cover the burn pan after its last use.
- In June 2017, the Holston Army Ammunition Plant contractor conducted an open burn of waste munition items and recorded the net explosive weight of hazardous waste in the logbook. In April 2018, about 10 months later, the Tennessee Department of Environment and Conservation completed an inspection and found that the contractor recorded a net explosive weight of hazardous waste that was more than three times the permitted amount.²² Holston installation personnel determined that the contractor did not actually burn an excess net explosive weight of hazardous waste but, instead, inaccurately recorded the net explosive weight of hazardous waste in the explosive logbook to just the one burn pan instead of the multiple burn pans used. Holston personnel stated that the contractor implemented control measures to detect future recording errors. If an oversight program was established that included a properly

²¹ The Radford Army Ammunition Plant permit limits open burning lead emissions concentration to 520 parts per million (ppm). Using the wrong samples, the contractor projected the lead emission concentration for the two open burning events would be 243.7 ppm and 429.0 ppm, respectively. However, when the contractor used the appropriate samples, the actual lead emission concentration was 1,043.6 ppm and 1,113.0 ppm, respectively; both more than twice the permitted amount.

²² The permittee is limited to treat a maximum of 1,500 pounds of net explosive weight of hazardous waste in any one pan. However, the Holston Army Ammunition Plant contractor recorded treating 4,710 pounds in one pan.

developed QASP, Holston Army Ammunition Plant oversight personnel may have detected that the contractor inaccurately recorded the net explosive weight of hazardous waste that was more than three times the permitted amount. Furthermore, if Army oversight personnel reviewed the logbook, they may have detected the violation in a timelier manner than the state regulators that detected it about 10 months later.

Recommendations, Management Comments, and Our Response

Recommendation B.1.a

We recommend that the Commander of Joint Munitions Command, nominate contracting officer representatives to provide oversight of contractor open burning at the Government owned, contractor operated facilities.

Commander of Joint Munitions Command Comments

The Commander of Joint Munitions Command disagreed with this recommendation. The Commander stated that, according to DoD Instruction 5000.72, 3b, contracting officers may, but are not required to, designate a COR for all service contracts, and that “the contracting officer always has the right to designate a COR when it is in the best interest of the U.S. Government.”

The Commander added that our report stated that Administrative Contracting Officers did not see the need to designate CORs and have that latitude, as these contracts are not service contracts. The Commander also stated that the Joint Munitions Command would work with the Commander of Army Contracting Command-Rock Island to determine the best path forward.

Our Response

Comments from the Commander of Joint Munitions Command did not address the specifics of the recommendation. We did comment in our finding that Joint Munitions Command administrative contracting officers stated that they did not see the need to designate a COR. However, we put this comment in the report because we believed it was inadequate to have DoD installation personnel review the contractor’s overall facility use and maintenance performance, instead of formally appointed contracting officer’s representatives to perform technical surveillance.

We provide the following additional supporting points:

- According to Defense Pricing and Contracting officials, DoD Instruction 5000.72 does not allow for someone who is not the COR or an alternate COR designated by the contracting officer to perform technical monitoring.
- When we met with procuring contracting officers and senior leaders from the Army Contracting Command-Rock Island's Munitions and Industrial Base Directorate in November 2020 to discuss our findings and the recommendations in this report, those senior contracting officials agreed with the recommendation to appoint contracting officer's representatives once they are nominated by the Commander of Joint Munitions Command.
- Federal facilities are required to comply with all Federal, state, interstate, and local solid and hazardous waste requirements (including statutes, regulations, permits, reporting requirements, and administrative and judicial orders and injunctions). Section 6001 of the Resource and Conservation Recovery Act subjects Federal facilities to civil penalties and confirms that Federal employees are personally liable for Resource and Conservation Recovery Act criminal violations.
- Nominating a contracting officer's representative to provide oversight of contractor open burning at the Government owned, contractor operated facilities would enhance oversight and compliance with Resource and Conservation Recovery Act laws on behalf of the DoD, as open burning and open detonation occurs on DoD facilities. Also, nominating contracting officer's representatives would assist with effectively aligning open burning and open detonation monitoring efforts with the rest of the recommendations in this report.

Therefore, the recommendation is unresolved and will remain open. We request additional comments from the Commander, in conjunction with the Commander of Army Contracting Command-Rock Island, regarding the nomination of contracting officer's representatives by December 3, 2021.

Recommendation B.1.b

We recommend that the Senior Contracting Official of Army Contracting Command-Rock Island, appoint trained contracting officer representatives that are nominated by the Commander of Joint Munitions Command.

Commander of Army Contracting Command-Rock Island Comments

The Commander of Army Contracting Command-Rock Island agreed with the recommendation and stated that appropriately trained CORs that are nominated by the Joint Munitions Command will be appointed. Planned completion dates for implementation of the recommendation are not later than the end of FY 2022.

Our Response

Comments from the Commander of Army Contracting Command-Rock Island addressed the intent of the recommendation; therefore, the recommendation is resolved and open. We will close the recommendation once we verify that trained CORs, nominated by the Commander of Joint Munitions Command, were appointed.

Recommendation B.2.a

We recommend that the Commander of Joint Munitions Command, submit clear requirements to the Commander of Army Contracting Command-Rock Island for use when developing performance work statement requirements and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items.

Commander of Joint Munitions Command Comments

The Commander of Joint Munitions Command agreed with the recommendation and agreed to work with Army Contracting Command-Rock Island and the Joint Program Executive Office to provide clear requirements to develop performance work statements and quality assurance surveillance plans.

Our Response

Comments from the Commander of Joint Munitions Command addressed the intent of the recommendation; therefore, the recommendation is resolved and open. We will close the recommendation once we verify that clear requirements for use when developing performance work statement requirements and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items were submitted to the Commander of Army Contracting Command-Rock Island.

Recommendation B.2.b

We recommend that the Senior Contracting Official of Army Contracting Command-Rock Island, modify the existing munitions performance work statements to include specific requirements for evaluating contractor open burning of waste munitions and waste munition items in recommendation B.2.a.

Commander of Army Contracting Command-Rock Island Comments

The Commander of Army Contracting Command-Rock Island agreed with the recommendation to modify existing munitions performance work statements. The Commander further stated that, while the organization responsible for changing the existing performance work statement to include specific requirements for evaluating contractor open burning of waste munitions and waste munition items is the Joint Munitions Command, the Army Contracting Command-Rock Island will incorporate the changed requirements upon receipt of the performance work statement requirements and quality assurance surveillance plans. The planned completion dates for implementation and coordination with the Joint Munitions Command are no later than the end of FY 2022.

Our Response

Comments from the Commander of Army Contracting Command-Rock Island addressed the intent of the recommendation; therefore, the recommendation is resolved and open. We will close the recommendation once we verify that the Commander of Army Contracting Command-Rock Island incorporated the changed requirements from the Commander of Joint Munitions Command for the performance work statement requirements and quality assurance surveillance plans.

Recommendation B.3

We recommend that the Senior Contracting Official of Army Contracting Command-Rock Island and the Commander of Joint Munitions Command contracting officers and the appointed contracting officer's representatives develop quality assurance surveillance plans for all existing Government-owned, contractor-operated munitions contracts that details how and when the Government will survey, observe, test, sample, evaluate, and document contractor performance according to the specific open burning requirements established in Recommendation B.2.b.

Commanders of Army Contracting Command-Rock Island and Joint Munitions Command Comments

The Commander of Army Contracting Command-Rock Island agreed with the recommendation, subject to the Joint Munitions Command submitting clear requirements in the performance work statement and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items in accordance with the applicable permit following all local, state and Federal environmental laws. Planned completion dates for implementation of the recommendation is not later than the end of FY 2022.

The Joint Munitions Command will also work with the Army Contracting Command-Rock Island and the Joint Program Executive Office that funds the performance work statements to develop detailed quality assurance surveillance plans and request to update quality assurance surveillance plans when it enters into contract competition at the sites in question. The planned completion dates for implementation of these actions are no later than the end of FY 2022.

Our Response

Comments from the Commander of Army Contracting Command-Rock Island and from the Commander of Joint Munitions Command addressed the intent of the recommendation; therefore, the recommendation is resolved and open. We will close the recommendation once we verify that the Commander of Army Contracting Command-Rock Island incorporated the changed requirements for the performance work statement requirements and quality assurance surveillance plans from the Commander of Joint Munitions Command; and that the Commander of Joint Munitions Command submitted clear requirements for use when developing performance work statement requirements and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items to the Commander of Army Contracting Command-Rock Island.

Appendix A

Scope and Methodology

We conducted this evaluation from August 2018 through August 2021 in accordance with the “Quality Standards for Inspection and Evaluation,” published in January 2012 by the Council of Inspectors General on Integrity and Efficiency. Those standards require that we adequately plan the evaluation to ensure that we meet the objectives and perform the evaluation to obtain sufficient, competent, and relevant evidence to support the findings, conclusions, and recommendations based on our objectives. We believe that the evidence obtained was sufficient, competent, and relevant to lead a reasonable person to sustain the findings, conclusions, and recommendations.

The scope of this evaluation consisted of the 34 DoD sites with permits to conduct open burning and open detonation to treat waste military munitions in the United States. We were unable to identify and assess former sites as the DoD was unable to provide a reliable list of sites for us to consider in our review. However, the congressional request was focused on sites where the DoD was conducting open burning and open detonation. Accordingly, we focused our review on the 34 sites that the DoD identified as permitted to conduct open burning and open detonation. For the number of RCRA Subpart X permit violations, we considered violations from 2013 to 2017. We considered the following activities and sites to be outside the scope of this project:

- open burning and open detonation operations outside the United States;
- open burning and open detonation operations related to items other than waste military munitions, including chemical warfare materials, chemical agents, biological agents, or radioactive materials;
- open burning and open detonation operations conducted on contractor-owned, contractor-operated sites, including land leased from the U.S. Government;
- treatment of waste military munitions using processes other than open burning and open detonation, including dumping, closed burning (incineration), and advanced and experimental techniques, other than summarizing reports of DoD efforts to replace open burning and open detonation operations by alternative technologies; and
- recovery, removal, and disposal of unexploded ordnance.

We reviewed the RCRA, DoD Directive 5160.65, and DoD Manual 6055.09 requirements for open burning and open detonation operations. We also reviewed the open burning and open detonation permits issued by the state environmental agencies or permit applications submitted by the installations to the state environmental agencies.

We reviewed relevant state environmental agency site inspection reports and reports from the EPA, the Agency for Toxic Substances and Disease Registry (of the Department of Health and Human Services), and the National Academy of Sciences to obtain information on DoD open burning and open detonation efforts.

We interviewed DoD installation personnel and staff from state environmental agencies at the installations we visited to obtain information and perspectives on DoD open burning and open detonation compliance with permit requirements. For the 14 sites we visited, we also collected data on installation open burning and open detonation operations, permit violations, environmental monitoring, health risk assessments, alternative technologies, and community interaction. For each site, we collected information on the RCRA Subpart X permit status and implementation.

We also interviewed representatives from the Office of the Deputy Assistant Secretary of Defense for Environment; the Offices of the Deputy Assistant Secretaries of the Army, Navy, and Air Force for Environment; the ACC-Rock Island; the JMC; and the EPA Office of Enforcement and Compliance Assistance.

Table 2 identifies the open burning and open detonation sites we visited. We selected 14 sites based on the following factors.

1. Scale of the open burning and open detonation operations at the site.
2. Proportional representation of each of three remaining functional missions: Demilitarization, Manufacturing, and Research, Development, Test and Evaluation
3. Proportional representation of the three responsible Military Departments—Army, Navy, and Air Force.
4. Proportional representation of GOCO sites.
5. Recommendations from EPA and the JMC personnel.
6. Community or advocacy group complaints and media reports regarding concerns about potential health impacts from the open burning and open detonation at the site.

Table 2. Open Burning and Open Detonation Sites Visited

Army Sites	Navy Sites
1 Aberdeen Proving Ground, Maryland	9 NSWC Crane, Indiana
2 Blue Grass Army Depot, Kentucky	10 NSWC Dahlgren, Virginia
3 Holston Army Ammunition Plant, Tennessee	11 NSWC EODTECHDIV Stump Neck, Maryland
4 Letterkenny Army Depot, Pennsylvania	12 NSWC Indian Head, Maryland
5 McAlester Army Ammunition Plant, Oklahoma	Air Force Sites
6 Picatinny Arsenal, New Jersey	13 Eglin Air Force Base, Florida
7 Radford Army Ammunition Plant, Virginia	14 Hill Air Force Base, Utah
8 Tooele Army Depot (North), Utah	

Source: The DoD OIG.

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EODTECHDIV Explosive Ordnance Technology Division

NSWC Naval Surface Warfare Center

We obtained and evaluated the documentation identifying the RCRA Subpart X permit violations, including state environmental agency site inspection reports, associated notices of violations, and self-reported violations. We also reviewed information available on state environmental agency and EPA web sites to verify the available data.

We obtained and evaluated contracts and contract oversight documentation from the five GOCO sites (the Hawthorne Army Depot and the Holston, Iowa, Milan, and Radford Army Ammunition Plants). We reviewed the Federal Acquisition Regulation, DoD Instruction 5000.72, and Army Regulation 70-13 to identify required contract oversight requirements for DoD personnel.

Use of Computer-Processed Data

We did not rely on computer-processed data for this evaluation.

Use of Technical Assistance

Air Force contracting officers assigned to the DoD OIG assisted us in our review of contract-related documentation provided by the DoD GOCO open burning and open detonation sites. We consulted with staff from the DoD OIG Quantitative Methods Division regarding development of our selection of sites for field visits.

Prior Coverage

The Government Accountability Office (GAO) and the DoD OIG have not issued any reports addressing open burning and open detonation operations at DoD installations in the past 5 years. 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/>.

Appendix B

DoD Sites Conducting Open Burning and Open Detonation Operations*

Service	Site Number	Service Number	Visited Site Number	Installation Name and Location	Mission	Open Burning		Open Detonation		Government or Contractor Operated
						OB usage average # times per year	OB usage average lb NEW/yr	OD usage average # times per year	OD usage average lb NEW/yr	
Air Force	1	1	1	Hill AFB, UT	Demil	5	122,824	46	861,557	Government
	2	2	2	Eglin AFB, FL	Research, Development, Test and Evaluation (RDT&E)	0	0	6	11,716	Government
	3	3		Edwards AFB, CA	RDT&E	1	160	8	2,516	Government
	4	4		Patrick AFB, FL	RDT&E	3	51	20	653	Government
	5	5		Vandenberg AFB, CA	RDT&E	NP	NP	1	5	Government
	6	6		Joint Base Charleston, SC	Self-Generation	0	0	6	278	Government
	7	7		Joint Base San Antonio, TX	Self-Generation	0	0	0	1	Government
Army	8	1	3	McAlester AAP, OK	Demil	188	2,605,535	177	1,870,836	Government
	9	2	4	Letterkenny Army Depot, PA	Demil	169	1,727,550	142	607,696	Government
	10	3	5	Blue Grass Army Depot, KY	Demil	95	850,070	53	191,348	Government
	11	4		Anniston Army Depot, AL	Demil	50	425,200	75	535,518	Government
	12	5	6	Tooele Army Depot (North), UT	Demil	64	294,323	36	245,654	Government
	13	6		Hawthorne Army Depot, NV	Demil	32	531,106	165	1,208	NP
	14	7		Tooele Army Depot (South), UT	Demil	0	0	0	0	Government
	15	8	7	Radford AAP, VA	Manufacturing	276	399,522	0	0	Contractor
	16	9	8	Holston AAP, TN	Manufacturing	68	189,207	0	0	Contractor
	17	10		Milan AAP, TN	Manufacturing	6	7,865	56	44,265	Contractor
	18	11		Iowa AAP, IA	Manufacturing	1	157	0	0	Contractor
	19	12		Yuma Proving Grounds, AZ	RDT&E	19	27,989	20	5,207	NP
	20	13	9	Aberdeen Proving Grounds, MD	RDT&E	9	5,980	20	14,197	Government
	21	14	10	Picatinny Arsenal, NJ	RDT&E	NP	7,401		621	Government

DoD Sites Conducting Open Burning and Open Detonation Operations* (cont'd)

Service	Site Number	Service Number	Visited Site Number	Installation Name and Location	Mission	Open Burning		Open Detonation		Government or Contractor Operated
						OB usage average # times per year	OB usage average lb NEW/yr	OD usage average # times per year	OD usage average lb NEW/yr	
Army (cont'd)	22	15		Dugway Proving Grounds, UT	RDT&E	0	0	0	0	NP
	23	16		Redstone Arsenal, AL	RDT&E	NP	20,470	NP	6,716	NP
	24	17		Fort Carson, CO	Self-Generation	0	0	93	777	NP
	25	18		Fort Polk, LA	Self-Generation	0	0	25	104	NP
Marine Corps	26	1		MCAS Beaufort, SC	Self-Generation	0	5	8	126	Government
	27	2		MCAS Yuma, AZ	Self-Generation	0	0	5	522	Government
Navy	28	1	11	NSWC Crane, IN	Demil	240	2,088,465	100	910,254	Government
	29	2	12	NSWC Indian Head, MD	RDT&E	150	168,647	0	NP	Government
	30	3		NAWS China Lake, CA	RDT&E	5	NP	NP	39,646	Government
	31	4	13	NSWC Dahlgren, VA	RDT&E	13	857	18	3,814	Government
	32	5	14	NSWC EODTECHDIV Stump Neck, MD	RDT&E	6	574	0	0	Government
	33	6		SUBASE Kings Bay, GA	Self-Generation	1	6	4	107	Government
	34	7		Joint Region Marianas, GU	Self-Generation	0	0	69	1,122	Government

Key:

1. Installations sorted by Military Service, then by Mission, then ranked by amount of open burning and open detonation executed per year.
2. Purple filled fields highlight the 20 installations considered for site visits.
3. Darker purple lines show the 14 installations visited by the DoD OIG team during field work.
4. NP denotes that the information was not provided and/or available.

LEGEND

NEW Net Explosive Weight

* Two sites conducting open burning and open detonation operations, Naval Surface Warfare Center Indian Head and Explosive Ordnance Technology Division Stump Neck, are both located on the Naval Surface Warfare Center Indian Head, Maryland, naval installation.

Source: The DoD OIG, based on Open Burning and Open Detonation operations data from "Optimization of Department of Defense Open Burning/Open Detonation Units," draft report, July 2018, Joint Ordnance Commanders Group, and operational responsibility information from Army Contracting Command.

Management Comments

Army Contracting Command-Rock Island



DEPARTMENT OF THE ARMY
U.S. ARMY CONTRACTING COMMAND
4505 MARTIN ROAD
REDSTONE ARSENAL, AL 35898-5000

AMCC-IG

MEMORANDUM THRU Headquarters, U.S. Army Materiel Command, Executive Deputy To The Commanding General 4400 Martin Road, Redstone Arsenal, AL 35898-5000

FOR Department of Defense, Inspector General, 4800 Mark Center Drive, Alexandria, VA 22350-1500

SUBJECT: Army Contracting Command – Rock Island (ACC-RI) Responses to the Draft Report – Evaluation of DoD Compliance at Active Sites Conducting Open Burning or Detonation of Waste Military Munitions in the US (Project No. D2018-D00SPO-0178.00)

1. Reference: DoD Inspector General Draft Report – Evaluation of DoD Compliance at Active Sites Conducting Open Burning or Detonation of Waste Military Munitions in the US (Project No. D2018-D00SPO-0178.00)

2. I have reviewed and concurred with ACC-RI responses to the recommendations in the draft report as set forth by the DoD Inspector General. The enclosed responses are sufficient and address the intent of the draft report.

3. I recommend the changes proposed by ACC-RI are incorporated into the final report of Evaluation of DoD Compliance at Active Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the US.

4. The Army Contracting Command point of contact for this memorandum is [REDACTED]

2 Encls

1. Memorandum, ACC-RI, 17 Aug 21
2. DoD IG Draft Report, 4 Aug 21

A handwritten signature in black ink, appearing to read "Christine A. Beeler".

CHRISTINE A. BEELER
Brigadier General, USA
Commanding

Army Contracting Command-Rock Island (cont'd)



REPLY TO
ATTENTION OF:

CCRI

2 September 2021

MEMORANDUM FOR Department of Defense Office of Inspector General

SUBJECT: Army Contracting Command – Rock Island (ACC-RI) Responses to the Draft Report - Evaluation of DoD Compliance at Active Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the U.S. (Project No. D2018-D00SPO-0178.00)

1. ACC-RI Comments:

a. Page ii, 1st sentence of 2nd paragraph states: Additionally, contracting officials did not include open burning requirements in performance work statements and quality assurance surveillance plans.

ACC-RI: ACC-RI wants to clarify that the contracts did require contractors to comply with applicable environmental and related laws, however, it is correct that the performance work statements and quality assurance surveillance plans did not include specific requirements or surveillance criteria with respect to open burning.

b. Page 9, 1st sentence of paragraph 2 states: In addition, ACC-RI officials did not prepare performance work statements and Quality Assurance Surveillance Plans (QASPs) that included oversight of contractor open burning operations.

ACC-RI: ACC-RI would like to clarify that drafting or preparing performance work statements or QASPs is not a duty of contracting officials, but instead a duty of the requiring activity. Per FAR 46.103(a), "the activity responsible for technical requirements is responsible for prescribing contract quality requirements, such as inspection and testing requirements or, for service contracts, a quality assurance surveillance plan." As such, respectfully request this sentence be revised to delineate the requiring activity in lieu of "contracting officials".

c. Page 12, 4th paragraph begins: Contracting Officials Did Not Prepare Performance Work Statements and Quality Assurance Surveillance Plans That Included Open Burning Requirements The performance work statements and QASPs prepared by the ACC-RI officials did not include specific elements related to open burning.

ACC-RI: ACC-RI would like to clarify that contracting officials did not prepare performance work statements or QASPs, as this is a responsibility of the requiring activity.

d. Page 13, 2nd sentence of 3rd paragraph states: Additionally, we found that the Holston Army Ammunition Plant QASP did not include requirements for open burning.

ACC-RI: There appears to be a typo in "Plant". Additionally, ACC-RI wants to clarify that a QASP does not provide requirements for contractors, but instead specifies all work requiring surveillance and the method of surveillance (FAR 46.401).

e. Page 15, 1st sentence of 2nd paragraph states: The JMC did not include specific open burning requirements in the performance work statement and QASPs because, according to JMC and ACC-Rock Island personnel, open burning of waste munitions was considered a routine matter of GOCO facility use in munitions manufacturing.

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Army Contracting Command-Rock Island (cont'd)

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-2-

CCRI

SUBJECT: Army Contracting Command – Rock Island (ACC-RI) Responses to the Draft Report

ACC-RI: ACC-RI would like to clarify that ACC-RI personnel are not the technical experts on open burning or open detonation and would defer to JMC to determine if it is considered a routine matter of GOCO facility use in munitions manufacturing.

2. Recommendations, ACC-RI Comments:

a. Recommendation B.1.b: We recommend that the Commander, ACC-RI, appoint trained alternate contracting officer representatives that are nominated by the Commander of the Joint Munitions Command (JMC).

ACC-RI: ACC-RI agrees with the recommendation. ACC-RI will appoint appropriately trained contracting officer representatives that are nominated by the JMC. Planned completion dates for implementation of the recommendation is not later than the end of FY22. Remove the word alternate. Replace "Commander, Army Contracting Command-Rock Island" with "Senior Contracting Official (SCO), Army Contracting Command-Rock Island"

b. Recommendation B.2.b: We recommend that the Commander, ACC-RI, modify the existing munitions performance work statements to include specific requirements for evaluating contractor open burning of waste munitions and waste munition items in recommendation B.2.a.

ACC-RI: The organization responsible for changing the existing performance work statement to include specific requirements for evaluating contractor open burning of waste munitions and waste munition items is the JMC. ACC-RI will incorporate the changed requirements upon receipt of the Performance Work Statement requirements and Quality Assurance Surveillance Plans. Planned completion dates for implementation coordinate with JMC is no later than the end of FY 22. Replace "Commander, Army Contracting Command-Rock Island" with "SCO, Army Contracting Command-Rock Island"

c. Recommendation B.3: We recommend that the Commander, ACC-RI, JMC contracting officers and the appointed alternate Contracting Officer's Representatives develop quality assurance surveillance plans for all existing Government-owned, contractor operated munitions contracts that details how and when the Government will survey, observe, test, sample, evaluate, and document contractor performance according to the specific open burning requirements established in Recommendation B.2.b.

ACC-RI: ACC-RI agrees with the recommendation subject to JMC submitting clear requirements in the Performance Work Statement and Quality Assurance Surveillance Plans to evaluate contractor open burning of waste munitions and waste munition items in accordance with the permit following all local, state and Federal environmental laws, if applicable. Planned completion dates for implementation of the recommendation is not later than the end of FY22. Remove the word alternate. Replace "Commander, Army Contracting Command-Rock Island" with "SCO, Army Contracting Command-Rock Island".

3. The point of contact: [REDACTED]

CARR.JAY.THOMAS
AS [REDACTED]

Digitally signed by
CARR.JAY.THOMAS
Date: 2021.09.02 15:31:34 -0500

Jay T. Carr
Executive Director

UNCLASSIFIED

Joint Munitions Command



DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY JOINT MUNITIONS COMMAND
2695 RODMAN AVENUE
ROCK ISLAND, IL 61299-6000

AMJM-IG

26 August, 2021

MEMORANDUM THRU Headquarters, U.S. Army Materiel Command, Executive Deputy To The Commanding General, 4400 Martin Road, Redstone Arsenal, AL 35898-5000

FOR Department of Defense, Inspector General, 4800 Mark Center Drive, Alexandria, VA 22350-1500

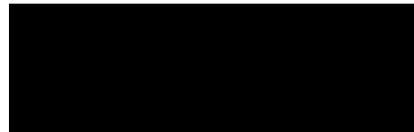
SUBJECT: Inspector General, Department of Defense, Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States (Project No. D2018-D00SPO-0178.000)

1. Reference: Project No. D2018-D00SPO-0178.000, Inspector General, Department of Defense, Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States.
2. I have reviewed and concur with the Joint Munitions Command's response to the draft of "Evaluation of Department of Defense Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States".
3. The Joint Munitions Command point of contact for this memorandum is [REDACTED]

Provide Lethality that Wins!

Encl
JMC Response

GARDNER.GAVI Digitally signed by
N.JASON [REDACTED] GARDNER.GAVIN.JASON [REDACTED]
Date: 2021.09.13 12:47:26
-05'00'
GAVIN J. GARDNER
Brigadier General, USA
Commanding



Joint Munitions Command (cont'd)

Draft Report Evaluation of Department of Defense (DoD) Compliance at Sites Conducting Open Burning or Open Detonation of Waste Military Munitions in the United States

The U.S. Army Joint Munitions Command (JMC) Comments:

-Page ii, 2nd sentence of 2nd paragraph states: Without performance work statement requirements and quality assurance surveillance plans related to open burning, the administrative contracting officers' did not have clear guidance regarding how to evaluate the performance of the contractors that were conducting open burning.

JMC: Administrative contracting officers evaluate the contractors open burning performance based on the contractors' ability to meet Federal and State Laws that govern these operations. Adding another layer of oversight would add cost to the contracts with minimal gain as only 0.1% of the operations from 2013 - 2017 resulted in a violation.

-Page 9, 2nd sentence of paragraph 1 states: The ACOs relied on DoD installation personnel that were not appointed as Contracting Officer Representatives (CORs) to act as technical experts to perform surveillance functions of contractor open burning.

JMC: The ACOs rely upon Federal and State regulators to act as the technical experts for surveilling open burning operations. The ACOs document the contractors' performance on Federal and State inspections.

-Page 9, 3rd sentence of paragraph 2 states: However, without performance work statement requirements and Quality Assurance Surveillance Plan procedures related to open burning, the ACOs did not perform adequate contractor surveillance of open burning operations.

JMC: Contractor surveillance for open burning operations is provided by Federal and State regulators. The ACOs document the contractors' performance on Federal and State inspections.

-Page 10, 1st sentence of 1st paragraph states: Informally relying on others to conduct contract oversight significantly reduces the ability of the Army to detect permit or contract violations.

JMC: The ACOs rely upon Federal and State regulators to perform their mandatory compliance inspections and identify violations.

-Page 10, 1st sentence of the last paragraph states: The JMC ACOs stated that they generally relied on DoD installation personnel as technical experts to perform surveillance functions of contractor open burning operations at the five GOCO sites.

JMC: The ACOs rely upon Federal and State regulators to act as the technical experts for surveilling open burning operations. The ACOs document the contractors' performance on Federal and State inspections.

Joint Munitions Command (cont'd)

Recommendations, JMC Comments:

Recommendation B.1.a: We recommend that the Commander, Joint Munitions Command, nominate alternate Contracting Officer Representatives to provide oversight of contractor open burning at the Government Owned, Contractor Operated facilities.

JMC: The JMC disagrees with this recommendation. Per DODI 5000.72, 3b, "Contracting officers will designate a COR for all service contracts, including construction, unless the contracting officer retains and executes contract oversight responsibilities when the conditions of subpart 201.602-2 of the DFARS Procedures, Guidance, and Information (Reference (g)) exist. The CORs may be required for any other contract when the need for a COR is determined by the contracting officer. The contracting officer always has the right to designate a COR when it is in the best interest of the U.S. Government."

It was stated in the DODIG report that ACOs did not see the need to designate CORs and have that latitude as these contracts are not service contracts.

The JMC will work with ACC-RI to determine best path forward.

Recommendation B.2.a: We recommend that the Commander, Joint Munitions Command, submit clear requirements to the Commander of Army Contracting Command-Rock Island for use when developing performance work statement requirements and quality assurance surveillance plans to evaluate contractor open burning of waste munitions and waste munition items.

JMC: The JMC will work with ACC-RI and Joint Program Executive Office to ensure we have clear requirements to develop the performance work statements and quality assurance surveillance plans.

Recommendation B.3: We recommend that the Commander, Army Contracting Command-Rock Island (ACC-RI) and the Commander, Joint Munitions Command contracting officers and the appointed alternate Contracting Officer's Representatives develop quality assurance surveillance plans for all existing Government-owned, contractor operated munitions contracts that details how and when the Government will survey, observe, test, sample, evaluate, and document contractor performance according to the specific open burning requirements established in Recommendation B.2.b.

JMC: The JMC will work with ACC-RI and Joint Program Executive Office who funds the performance of work statements to develop detailed quality assurance surveillance plans. Request to update quality assurance surveillance plans when we enter contract competition at the sites in question as changing current contracts will involve increased cost.

Acronyms and Abbreviations

ACO	Administrative Contracting Officer
ACC	Army Contracting Command
COR	Contracting Officer's Representative
EPA	Environmental Protection Agency
FAR	Federal Acquisition Regulation
GAO	Government Accountability Office
GOCO	Government-Owned, Contractor-Operated
JMC	Joint Munitions Command
PCO	Procuring Contracting Officer
QASP	Quality Assurance Surveillance Plan
RCRA	Resource Conservation and Recovery Act

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