



**OFFICE OF INSPECTOR GENERAL**

U.S. Department of Energy

# AUDIT REPORT

DOE-OIG-19-30

May 2019

**DEPARTMENT OF ENERGY'S QUALITY  
ASSURANCE: COMMERCIAL GRADE  
DEDICATION OF ITEMS RELIED  
ON FOR SAFETY**



**Department of Energy**  
Washington, DC 20585

May 8, 2019

MEMORANDUM FOR THE SECRETARY

A handwritten signature in cursive script, appearing to read "Teri L. Donaldson".

FROM: Teri L. Donaldson  
Inspector General

SUBJECT: INFORMATION: Audit Report on “Department of Energy’s Quality Assurance: Commercial Grade Dedication of Items Relied on for Safety”

BACKGROUND

The Department of Energy is responsible for the construction and operation of nuclear facilities across its complex. To ensure these facilities operate safely, the Department and many of its contractors are required to develop and implement a quality assurance program (QAP) in accordance with the American Society of Mechanical Engineers’ *Quality Assurance Requirements for Nuclear Facility Applications* (NQA-1). However, the Department and its contractors had experienced difficulty finding suppliers that were NQA-1 qualified, which required the Department to increasingly depend on a process known as “commercial grade dedication” (CGD). CGD is a procurement process performed in accordance with NQA-1, which provides reasonable assurance that a commercial item or service will perform its intended safety function and is equivalent to an item or service provided under a NQA-1 QAP.

In 2009 and in 2015, the Department’s Office of River Protection reported significant issues with the implementation of CGD by Bechtel National, Inc. (Bechtel) on the Waste Treatment and Immobilization Plant (WTP) project. Bechtel is the contractor responsible for construction and commissioning of the \$16.8 billion WTP project. The mission of WTP is to process, separate, and immobilize by vitrification 56 million gallons of radioactive waste from decades of plutonium production at the Hanford Site. The Department has another facility with a similar mission at its Savannah River Site. Parsons Government Services, Inc. (Parsons) is the contractor responsible for construction and commissioning of the \$2.3 billion Salt Waste Processing Facility (SWPF). The SWPF will separate concentrated strontium, cesium, and actinides from bulk salt waste solutions in the Savannah River Site waste tanks. Since both WTP and SWPF are nuclear facilities, the Department required its contractors to apply NQA-1 during construction. Due to the importance of nuclear safety, we initiated this audit to determine if the implementation of CGD of commercial items and services at the Department’s WTP and SWPF projects was effective.

## RESULTS OF AUDIT

Our review identified weaknesses in the implementation of CGD procurements at the Department's WTP and SWPF projects. Specifically, our review identified weaknesses in the dedication acceptance process performed in accordance with NQA-1 and the Department's guidance. The CGD process includes two parts, the completion of a technical evaluation and the implementation of a method(s) of acceptance.

During the design process, the contractors and/or subcontractors, such as Bechtel or Parsons, are required to perform a technical evaluation in order to determine the safety function of the item or service. The technical evaluation also determines the credible failure modes of an item in its operating environment and the effects of these failure modes on the safety function. This information is used for the selection of the critical characteristics and acceptance criteria for the CGD package<sup>1</sup>. During our audit, we judgmentally selected 20 CGD procurements for review, 10 from Parsons and 10 from Bechtel. We identified weaknesses with Parsons' and Bechtel's technical evaluations. Specifically:

- In three CGD packages reviewed, critical characteristics and acceptance criteria were not identified;
- In two instances, the verification of critical characteristics was removed;
- In one instance, acceptance activities were performed prior to the technical evaluation; and
- In five instances, a technical evaluation was not fully performed.

Additionally, we identified weaknesses in Parsons' and Bechtel's selection and/or implementation of the methods of acceptance to verify critical characteristics. According to NQA-1, the selection of the methods of acceptance is part of the technical evaluation and is documented in the CGD package. The methods of acceptance provide, either individually or in combination, a means to reasonably assure that the commercial item or service will perform its safety function. In our review of 20 judgmentally selected CGD procurements, we identified weaknesses in 12 instances in 10 CGD packages regarding the application of the methods of acceptance that were independent from the issues identified with technical evaluations.

We concluded that the issues identified with implementation of CGD at WTP and SWPF were the result of weaknesses in Department oversight to ensure the contractors followed NQA-1 standards. In particular, the Department did not ensure consistent oversight across its complex. Additionally, we identified that the contractors did not effectively implement contractor QAPs.

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<sup>1</sup> A commercial grade dedication package is an auditable collection of documents that is the result of the commercial grade dedication process for a specific item and its documented safety function(s). These documents contain the technical and quality basis for satisfying the commercial grade item dedication process, and provide the objective evidence to reasonably ensure that the dedicated commercial grade item will perform its required safety function(s).

While our findings are specific to the WTP and the SWPF, insufficient oversight may be a problem at other Department sites. In a previous Office of Inspector General (OIG) report, *Quality Assurance Management at the Waste Isolation Pilot Plant* (DOE-OIG-17-07, September 2017), we identified similar weaknesses in the implementation of the Department's CGD at the Waste Isolation Pilot Plant. Also, as noted in Appendix 2, we issued multiple reports identifying weaknesses in quality assurance at a number of projects within the complex. For example, we identified weaknesses in CGD at the Waste Isolation Pilot Plant, as well as inadequate attention to quality assurance at the Savannah River Site, which included the Mixed Oxide Fuel Fabrication Facility, the Tritium Extraction Facility, and the Interim Salt Processing Project. Additionally, we identified ineffective communication of quality assurance concerns between several Departmental program elements operating at the Savannah River Site. Finally, at WTP, we found that the Department's oversight of Bechtel's quality assurance program lacked focus. In our view, the depth and breadth of the Department's oversight was not sufficient to identify weaknesses in the implementation or adequacy of Bechtel's procedures. Weaknesses in the Department's CGD program limit its ability to provide reasonable assurance that items and services meet the requirements for safe operation. Specifically, this could lead to subcontractors supplying parts and services that do not meet regulatory requirements or quality assurance expectations. Commercial grade dedicated items are relied upon to prevent or mitigate a release of radioactive material in an accident scenario. The safety function of the items dedicated are necessary to achieve safe, reliable, and effective utilization of nuclear material processing. Therefore, an ineffective CGD program can impact the safety of the facility, the worker, and the public, as well as result in additional costs to resolve issues or concerns.

## MANAGEMENT RESPONSE

Management concurred with each of the report's recommendations. The Office of Environmental Management (Environmental Management) agreed that there are always opportunities to strengthen CGD processes and improve the CGD program. Environmental Management also stated that it will continue to work on improving the CGD programs at its sites to ensure items and services are safe for nuclear operations. Environmental Management, however, stated that it provided comments regarding the factual accuracy and other concerns with the report that were not accepted by the OIG and were not subsequently incorporated into the draft report.

Management's comments are responsive to our recommendations. We are pleased that Environmental Management firmly stands behind the safety of the items and services at the WTP and SWPF. Environmental Management stated that there was no information in the draft report to indicate that the items and services in the reviewed CGD packages failed to meet requirements for safe operation or that those items and services were not suitable, safe, or durable for their intended nuclear operations. Once Environmental Management completes the extent of condition review recommended in this report, it will have more complete information available to determine whether the CGD packages for these facilities continue to provide adequate information to document reasonable assurance that each item and service will perform its intended safety function. Until then, we are concerned that without adequate documentation in CGD packages, the Department may not be able to provide reasonable assurance that a commercial item or service will perform its intended safety function, as required.

We are also pleased that Environmental Management is committed to improving the CGD process at its sites to ensure items and services are safe for nuclear operations. However, we disagree with Environmental Management's statements regarding the factual accuracy of the report and that we did not accept or incorporate its comments into the report. Environmental Management provided 23 technical comments on the coordination draft report, and the OIG considered all comments provided and made subsequent changes to the report based on 16 of the 23 comments. In the other seven technical comments, Environmental Management did not provide a proposed change to the report or provide sufficient evidence to change the OIG's opinion. Further, the OIG held several meetings with Environmental Management, Office of River Protection, and SWPF Project Office officials to discuss our disposition to comments and proposed changes to the report.

#### Attachments

cc: Deputy Secretary  
Chief of Staff  
Under Secretary for Science  
Assistant Secretary for Environmental Management  
Associate Under Secretary for Environment, Health, Safety and Security

# DEPARTMENT OF ENERGY'S QUALITY ASSURANCE: COMMERCIAL GRADE DEDICATION OF ITEMS RELIED ON FOR SAFETY

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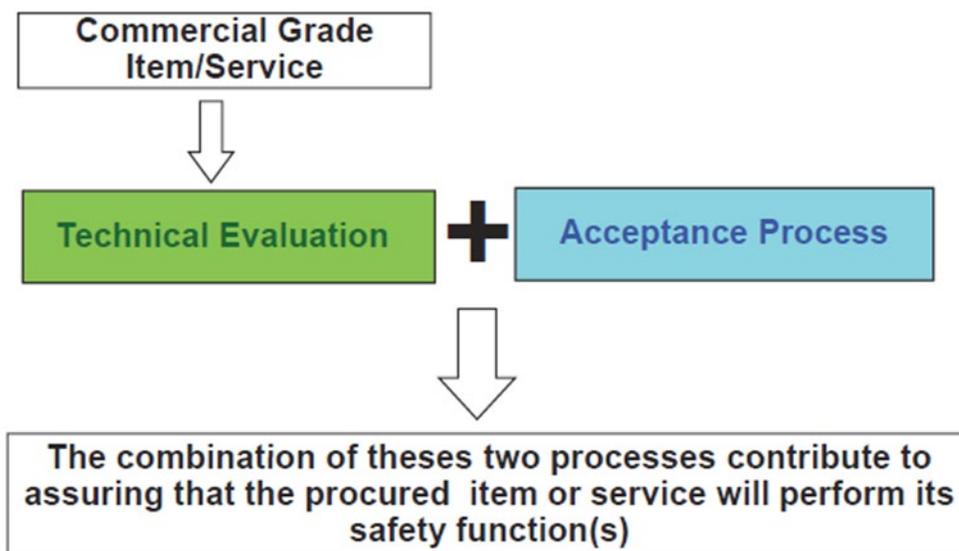
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# DEPARTMENT OF ENERGY'S QUALITY ASSURANCE: COMMERCIAL GRADE DEDICATION OF ITEMS RELIED ON FOR SAFETY

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## Background

“Commercial grade dedication” (CGD) is a procurement process performed in accordance with American Society of Mechanical Engineers’ *Quality Assurance Requirements for Nuclear Facility Applications* (NQA-1), which provides reasonable assurance that a commercial item or service will perform its intended safety function and is equivalent to an item or service provided under an NQA-1 quality assurance program (QAP). The Department of Energy’s Office of Environmental Management (Environmental Management) *Guidance for Commercial Grade Dedication*, dated September 2011, states that early in the CGD process, a CGD plan must be developed by the entity procuring the item or service. The CGD plan should identify how selected critical characteristics will be verified.



## Details of Findings

During the CGD process, the dedicating entities, Parsons Government Services, Inc. (Parsons) and Bechtel National, Inc. (Bechtel), are required to perform a technical evaluation to determine the safety function of the item or service. The technical evaluation also determines the credible failure modes of an item in its operating environment and the effects of these failure modes on the safety function. The technical evaluation documents the critical characteristics selected for acceptance. Next, the selection of the methods of acceptance for the verification of the critical characteristics is performed. The four methods of acceptance, either individually or in combination, are used to verify the critical characteristics of a commercial item or service and provide reasonable assurance that it will perform its safety function.

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## **Weaknesses Implementing Commercial Grade Dedication**

Our review identified weaknesses in the implementation of CGD procurements at the Department's Waste Treatment and Immobilization Plant (WTP) and Salt Waste Processing Facility (SWPF) projects. In our review of 20 judgmentally selected CGD procurements at Parsons and Bechtel, we identified weaknesses with technical evaluations in 11 instances in the CGD packages. Specifically:

- In three CGD packages we reviewed, critical characteristics and acceptance criteria were not identified for items that had a safety function;
- In two instances, the verification of critical characteristics was removed without justification or revisions to the CGD plan;
- In one instance, acceptance activities were performed prior to the technical evaluation needed to establish the critical characteristics to be verified; and
- In five instances, a technical evaluation was not fully performed.

### **Weaknesses in Identifying and Dedicating Critical Characteristics**

Parsons and Bechtel did not always identify critical characteristics or acceptance criteria for items that had a safety function. This occurred in 3 of the 20 CGD procurements we reviewed. According to Environmental Management's *Guidance for Commercial Grade Dedication*, after determining the suitability of a commercial item to be used, the dedicating entity is required to identify the safety function of the individual components, as well as the failure modes of the components. Once these are established, the dedicating entity selects those critical characteristics to verify, via the methods of acceptance, that the characteristics will provide reasonable assurance that the item will perform its intended safety function.

In one of the CGD packages we reviewed, Parsons did not dedicate the chemical attributes of gaskets for centrifugal pumps used to transport a radioactive caustic solution to the feed tanks. The safety function of the pumps was to confine the waste. Parsons' technical evaluation determined that the loss of the mechanical seal could lead to structural failure or a leak of radioactive waste. As such, the gasket was required to be made of a specific material to withstand the radiological environment for 5 years. While Parsons tested the metal casing of the pumps to ensure it was constructed of stainless steel, it failed to consider the chemistry of the gasket as a critical characteristic to verify. SWPF Project Office officials stated that the gasket's chemical composition was proprietary; therefore, Parsons did not have access to the manufacturer's data on the chemical properties. However, according to NQA-1, in cases where there are critical characteristics that cannot be verified, the dedicator or design organization should perform additional evaluations to identify the appropriate critical characteristics or procure the item from a qualified NQA-1 supplier. Despite these requirements, Parsons did not perform additional evaluations or procure the item from a qualified NQA-1 supplier.

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In one of the CGD packages at Bechtel, we identified that the silicone sealant used to repair a leak on air velocity sensors in the ventilation system for the WTP Low Activity Waste facility was not dedicated. During the initial acceptance testing, one of the two sensors being dedicated did not pass the leak test. Subsequently, the supplier submitted a design change requesting to use a silicone sealant to prevent leaking. Bechtel approved the request and required the supplier to use a specific silicone sealant to seal the source of the leak on the sensors but did not require the supplier to dedicate the sealant. Further, our review of the quality record package identified that the supplier did not use the correct silicone sealant required by Bechtel, nor did the supplier submit an additional design change request for Bechtel's approval, as required, for the sealant used. When we brought this to Bechtel's attention, Bechtel subsequently issued a non-conformance report to change the design requirements to accept the silicone sealant used. When we discussed this with the Office River Protection (River Protection), the Department officials agreed that the silicone sealant should have been dedicated.

### **Removal of Verification of Critical Characteristics**

Contrary to the requirements of NQA-1, we identified instances where Parsons and Bechtel removed the verification of critical characteristics without justification or revisions to the CGD plan. Critical characteristics for acceptance are required to be identifiable and measurable attributes based upon functional complexity and the application and performance of the item or service. According to NQA-1, when a critical characteristic cannot be verified by the dedication method selected, the contractor may select another dedication method or combination of dedication methods to verify the critical characteristic.

In our review of 10 CGD packages at Parsons, we identified 1 instance where Parsons did not require its subcontractor to revise the technical evaluation to identify another method of acceptance when it claimed it could not test the chemistry of an O-ring used in the cross-flow filters at SWPF. In this instance, the subcontractor requested that Parsons remove the requirement to test the gasket material because the information was proprietary. Parsons agreed with the subcontractor rather than revising the technical evaluation to use another method of acceptance. In contrast, we noted that a Bechtel subcontractor dedicated O-rings from the same manufacturer by performing a commercial grade survey of the manufacturer in order to ensure the controls were sufficient to accept the gasket. While Parsons' management did not believe that verification of the chemical characteristics was necessary for acceptance of the O-rings, Parsons acknowledged that the removal of this verification should have been dispositioned through a formal change control process. After we brought this to Parsons' attention, Parsons subsequently developed a nonconformance report to address the informal design change.

Similarly, in our review of 10 CGD packages at Bechtel, we identified 1 package in which a Bechtel subcontractor changed the acceptance criteria for a critical characteristic to verify the material composition of a plastic bushing used in a glove box. The critical characteristic of this bushing was to ensure it was plastic and contained no metallic properties. The method of acceptance was to test the plastic bushing with a positive material identification (PMI) device. Upon initial review of the dedication package, Bechtel determined that the PMI test identified that the plastic bushing did in fact contain metallic properties.

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Despite this test result, Bechtel allowed its vendor to change the acceptance test from PMI to a visual inspection of the plastic bushing. In response to Bechtel's comments on the PMI reports for the plastic bushings, the subcontractor (designer and dedicating entity) revisited the technical evaluation and determined that PMI testing was neither necessary nor the best method to provide reasonable assurance that the item would perform its function. The item's function was to prevent fretting of the wires pulled through the conduit upon which the cap is placed. As such, the subcontractor concluded that the verifications performed appeared to be sufficient to ensure reasonable assurance. However, this change was not documented through a formal change control process as required by NQA-1, nor was the reasoning for this change fully discussed or documented in the comment resolution in the dedication package.

### **Performing CGD Activities Prior to Performing a Technical Evaluation**

In our review of judgmentally selected CGD packages, we found one instance where Parsons performed commercial grade surveys prior to developing a technical evaluation. When using a commercial grade survey as a method of acceptance, a technical evaluation would normally be conducted first to identify the commercial controls related to the critical characteristics of the item being purchased.<sup>1</sup> Department guidance on CGD requires the dedicating entity to develop a technical evaluation to identify and document the safety function of each item/service based on a review of the approved safety analysis and supporting data. This includes identifying the critical characteristics of the item to be verified during survey and documenting acceptance criteria for those characteristics. Department officials agreed that there is an inherent risk when conducting a CGD survey before completing a technical evaluation to determine if all of the appropriate critical characteristics for acceptance have been selected. In one example, Parsons performed a commercial grade survey on a pump manufacturer prior to performing a technical evaluation to identify the critical characteristics to be evaluated. As a result, Parsons' commercial grade survey of its pump manufacturer did not identify the appropriate code year of the American Society of Mechanical Engineers' standard that should be applied during the CGD of the pumps. According to Department officials, without identifying the specific code year of the required American Society of Mechanical Engineers' standard, it would be difficult to determine whether the intended requirements were invoked because the different code years can rescind or tighten engineering requirements, allowances, and tolerances.

### **Identifying Critical Characteristics for Subcontractors**

Parsons and Bechtel did not always document the performance of a technical evaluation to identify the critical characteristics to be verified by subcontractors. For example, in 1 of the 10 packages we reviewed, Parsons flowed down only the specifications to a NQA-1 qualified sub-tier subcontractor performing the CGD activities for High Efficiency Particulate Air (HEPA) filter housings in lieu of performing a technical evaluation. The HEPA filters were designed to remove radionuclides and other contaminants prior to being exhausted into the environment. According to NQA-1 and Department guidance, the critical characteristics selected for

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<sup>1</sup> According to Department guidance, the purpose of a commercial grade survey is to dedicate the item or service based on approval of the subcontractor's implementing process and commercial controls as related to the item's critical characteristics when NQA-1 is not invoked by contract.

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verification must be documented, along with an explanation of how the critical characteristics relate to associated safety functions. According to Department officials, even though Parsons approved the subcontractor's selected critical characteristics to dedicate, without a subcontractor's fully documented technical evaluation, it would be difficult to determine if the correct critical characteristics were selected. Department officials agreed that sub-tier subcontractor CGD is a challenge for the Department and its contractors.

We found similar weaknesses at WTP in the procurement of safety related commodities from qualified suppliers in 4 of the 10 CGD packages reviewed. In these instances, Bechtel had flowed down the specifications and code requirements for commercial commodities such as piping, rebar, and flanges. However, Bechtel did not formally document technical evaluations to determine the critical characteristics.

### **Weaknesses in the Methods of Acceptance of Commercial Items**

In our review of 20 CGD procurements, we identified weaknesses and inconsistencies in 12 instances in 10 of the CGD packages with Parsons' and Bechtel's selection and/or implementation of the methods of acceptance to verify critical characteristics. According to NQA-1, the selection of methods of acceptance is part of the technical evaluation and should be documented in the CGD package. The selection of a single acceptance method or a combination of the methods of acceptance for the verification of critical characteristics of a commercial item or service should be based on characteristics that ensure the item or service will perform its safety function. The four methods of acceptance provide, either individually or in combination, a means to reasonably assure that the commercial item or service will perform its safety function. The four methods that can be used for acceptance are:

- Method 1 – Special Test, Inspections, and/or Analysis;
- Method 2 – Commercial Grade Survey of the Supplier;
- Method 3 – Source Verification; and
- Method 4 – Acceptable Supplier/Item Performance Record.

#### **Method 1 – Special Test, Inspections, and/or Analysis**

We found instances where Parsons and Bechtel did not effectively utilize Method 1 to verify selected critical characteristics. In particular, we observed that the Department's contractors and subcontractors relied on material tests performed from non-qualified service providers. In cases involving procurement of services that have a safety function, NQA-1 requires those services to be provided and/or performed under an NQA-1 quality assurance program or to be dedicated in accordance with the requirements of NQA-1.

For example, Parsons did not require material test reports from qualified sources in one of the CGD packages we reviewed. In this example, Parsons accepted mill test reports from non-qualified sources to determine if the chemistry of the metal used to fabricate the cross-flow filter elements was able, as required, to resist the corrosive environment of radioactive waste at the facility. Parsons asserted that the mill test reports satisfied the acceptance criteria for the critical

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characteristics selected even though the testing service was provided by a non-qualified source. NQA-1 and the Department's CGD guidance is clear that the testing needed to be provided by a qualified source.

We also identified similar instances in three of the CGD packages in which Bechtel and its subcontractors relied on commercial material tests reports and PMI X-Ray Fluorescence testing to dedicate low carbon stainless steel. River Protection officials stated that there are limitations to PMI X-Ray Fluorescence in the dedication process. Specifically, PMI X-Ray Fluorescence has a low accuracy in identifying low mass number elements such as carbon. This created a situation where Bechtel had to rely on the commercial material tests to verify the carbon content of the low carbon stainless steel.

## **Method 2 – Commercial Grade Survey of the Supplier**

In the CGD packages reviewed, we identified that Parsons and Bechtel did not always effectively implement or document commercial grade surveys. According to NQA-1, the purpose of a commercial grade survey is to dedicate the item or service based on approval of the subcontractor's implementing process and commercial controls as related to the item's critical characteristics when NQA-1 is not invoked by contract. Commercial grade surveys are particularly useful when items are complex and critical characteristics cannot be verified using Method 1 for acceptance at receipt. Once it is determined that the subcontractor's controls are adequate, Parsons and Bechtel were required to invoke the contractual use of the surveyed processes and controls. When the item is received, the subcontractor provides a Certificate of Conformance attesting to the implementation of the surveyed processes and controls. Dedicating entities must establish a survey frequency to reconfirm survey information for application to additional purchases. This survey frequency interval is required to be consistent with supplier audits.

Despite this requirement, Parsons did not effectively implement a commercial grade survey in 3 of the 10 CGD packages reviewed at Parsons. For example, Parsons did not effectively implement a commercial grade survey for the CGD of Pipe Support Kits used to provide structural support to safety systems and components at SWPF. Parsons commercial grade survey identified significant weaknesses in the subcontractor's QAP that implemented the processes and commercial controls relied on to satisfy the critical characteristics. Additionally, the subcontractor revised its QAP five times prior to Parsons performing a second commercial grade survey. Since the subcontractor's processes and controls identify how it implements its QAP, any changes to that program could impact the surveyed processes and controls used as part of the CGD. Parsons determined that for the limited verification of critical characteristics involved in the procurement and the close proximity of the subcontractor to Parsons, the CGD survey could be augmented with additional Parsons oversight activities. However, NQA-1 and Parsons' QAP prohibit the use of a commercial grade survey as a supplemental basis for accepting commercial grade items from suppliers with a program that did not effectively implement the supplier's own specified processes and controls. Lastly, Parsons accepted a Certificate of Conformance that failed to invoke the subcontractor's surveyed QAP, as required by NQA-1. The Certificate of Conformance inappropriately attested to meeting the requirements of the subcontract.

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In another example, Parsons utilized an aged commercial grade survey for the acceptance of two shipments of high density silicone elastomer intended to be used as a fire rated barrier. Specifically, Parsons used a commercial grade survey that was nearly 6 years old, even though the Department's expectation for conducting supplier audits was every 3 years. According to NQA-1, the CGD survey frequency interval should be consistent with supplier audits. In 2010, Parsons performed a survey of its subcontractor providing the high density silicone elastomer. In 2016, Parsons accepted two shipments of the elastomer without confirming that the subcontractor continued to implement the surveyed controls identified nearly 6 years prior. The subcontractor had actually revised its QAP twice since the 2010 commercial grade survey. To Parsons' credit, it revised the survey frequency requirement in the latest QAP, which was updated in 2017.

At Bechtel, we found two examples where subcontractors that performed CGDs did not submit commercial grade surveys with the CGD packages when accepting a Certificate of Conformance. Similarly, Bechtel did not require other quality records from its qualified subcontractors to support the acceptance of critical characteristics such as results of actual dimensions, material testing and equipment used, calibration, and material tolerances. River Protection officials agreed with the Office of Inspector General (OIG) that these records needed to be part of the CGD packages. River Protection officials also identified similar quality vendor data records issues in July 2017, which included findings of inadequate acceptance documents and traceability of quality records. According to Department officials, Bechtel's process for accepting the items met the requirements of NQA-1 at the time; however, Department officials agreed that additional information could have been obtained. River Protection officials followed up by issuing a contract modification requiring Bechtel to obtain subcontractors' commercial grade surveys as part of the CGD package.

### **Method 3 – Source Verification**

Parsons did not always effectively perform source verifications. Source verification is a method of acceptance conducted by the dedicating entity at the supplier's facility or other applicable location to verify conformance with the identified critical characteristics and acceptance criteria during the fabrication and development process. A source verification is performed at intervals consistent with the importance and complexity of the item and includes monitoring, witnessing, and observing selected activities.

In 1 out of 10 CGD packages we reviewed at Parsons, Parsons' utilized a Supplier Assessment Plan during a source verification that did not include steps to verify all the selected critical characteristics in the CGD package for the cross-flow filters. For example, a critical characteristic required to be verified was for the resident inspector to *witness* the integrity test (leak and bubble test) of the 10-foot filter assemblies. According to the assessment reports, the resident inspector did report on witnessing the testing results of the 10-foot filter assemblies, and the subcontractor only performed leak tests on a sample of the 10-foot filter assemblies. Additionally, the specifications flowed down to the subcontractor required testing of each filter element. However, the specification did not define "element." Finally, while Parsons' documentation provided evidence of a continuous on-site oversight presence during the fabrication of the filters, we could not explicitly verify in documentation within the CGD

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package that the acceptance criteria used to verify that relevant activities (e.g. leak and bubble test) were actually *witnessed*<sup>2</sup> by the resident inspector at the supplier's facility. *Inspecting*<sup>3</sup> a finished item is markedly different from *witnessing* the ongoing activities associated with the fabrication of that object.

#### **Method 4 – Acceptable Supplier/Item Performance Record**

We identified weaknesses in Parsons' implementation of supplier history as a method of acceptance of critical characteristics in 2 of the 10 CGD packages reviewed at Parsons. This method requires the identification and documentation of the supplier history, the evaluation of industry data, the basis to substantiate the industry data, and the documentation of the adequacy and acceptance of the item's performance record. We identified that Parsons relied on the performance history analysis that was more than 5 years old for the dedication of high density silicone elastomer. The safety function of the elastomer was to provide a 2-hour fire rated barrier in the dark cells at SWPF. Failure of this material could result in a solvent fire that could impact radioactive waste material if waste is present in the dark cell area and not confined to a vessel. NQA-1 and Department guidance required periodic updates and review to assure the supplier/item/service maintain an acceptable performance record. Additionally, the Department's QAP Guide states that a qualified supplier's performance should be reviewed annually and audited every third year. Further, the supplier changed its quality assurance manual twice since it was originally surveyed. An additional survey or review would likely identify significant changes to the supplier's quality assurance manual and processes.

#### **Contributing Factors**

Weaknesses in Department oversight led to the issues identified with implementation of CGD at WTP and SWPF. In particular, the Department did not ensure consistent oversight across its complex or ensure that contractors effectively implemented approved contractor QAPs.

#### **Inconsistent Department Oversight**

We identified inconsistent oversight of the implementation of CGD requirements between sites because of differences in the interpretation of guidance documents. Each operations office had its own interpretation for what was considered an effective CGD. For example, the most apparent difference between CGD at SWPF's Project Office and River Protection was the treatment of services from qualified sources. In River Protection's 2009 audit of Bechtel, it identified that services, specifically material testing services, were being performed by unqualified sources. When the auditors identified a similar situation at SWPF, we found that the Project Office interpreted the requirements differently than River Protection. SWPF's Project Office officials asserted that a service (e.g. material testing services) can be conducted by

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<sup>2</sup> Witnessing activities include on-site personnel watching the fabrication and assembly processes of an item in progress.

<sup>3</sup> Inspection of an item includes activities such as receipt inspection of a final product.

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unqualified sources to verify critical characteristics as long as there are other tests that are conducted for similar characteristics. In contrast, River Protection's position is that contractors have three options for accepting testing services:

1. Utilizing a qualified and audited NQA-1 vendor;
2. Performing CGD of a testing service vendor for performance of specific tests; or
3. Utilizing testing services from a vendor qualified by an accrediting agency that complies with International Organization for Standardization (ISO) 17025 for performance of specific tests.

The last option was endorsed by the Nuclear Regulatory Commission, and Bechtel subsequently added this option to its Quality Assurance Manual, while Parsons has not. According to Department officials, in order for this approach to be used, it must be added to the contractors' Quality Assurance Manual. This different interpretation about what is acceptable in verifying critical characteristic has caused confusion and inconsistency at WTP and SWPF.

Additionally, the Department applied an inconsistent approach in the CGD of items that contained a proprietary chemical composition. For example, different types of gaskets were dedicated which had a safety function of confinement. In these dedications, the chemical composition was a critical characteristic that was required to be verified. However, because the chemical composition was proprietary, Parsons allowed the commercial vendor to submit an unqualified Certificate of Conformance or technical data sheet in lieu of an independent qualified test to verify the chemical composition. In contrast, a procurement for elastomer O-rings with a proprietary chemical composition was verified by having a qualified laboratory perform a chemical analysis to evaluate that the elastomer consisted of the chemical composition that the vendor stated it did. The process allowed for the chemical composition of the commercial item to be verified rather than solely relying on a vendor's assertion that the item met the requirements. The Department's guide on CGD did not address how to verify critical characteristics for acceptance on items that contain proprietary information. This led to a wide range of different applications and an overall inconsistency on verifying proprietary critical characteristics at WTP and SWPF.

We also identified that River Protection had not enforced its interpretation for the use of PMI with Bechtel. During the course of the audit, we identified that both Bechtel and River Protection had different interpretations regarding what was an acceptable use of PMI. According to River Protection officials, River Protection and Bechtel had preliminarily worked out an agreement for conducting chemical composition testing from qualified sources. While both Bechtel and River Protection expressed that this issue was reaching resolution, it has yet to be formally resolved.

Finally, the Department had not conducted reviews to determine if similar CGD conditions existed across its complex. Although we recognize that this is not a Department requirement, reviews at additional sites could be beneficial. For example, in 2009, and again in 2015, when River Protection identified deficiencies in Bechtel's CGD program, the Department did not conduct a review at other sites to determine if similar conditions existed. Specifically, the Department could have reviewed whether the use of material testing services was being used

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consistently across its complex. To the Department's credit, it is in the process of developing a new CGD handbook with the goal of providing examples of exemplary CGDs. Although the Department has been in the process of developing a CGD handbook for the past 2 years, it has projected to issue this handbook in 2018. In addition, the weaknesses we found in Bechtel's CGD program were similar to those found by River Protection in its 2015 audit.

### **Contractors Deviated from Approved QAPs**

We identified instances where the Department's contractors deviated from the approved contractor QAP in the dedication of commercial grade items. Specifically, we found instances where contractors had not always fully implemented procedure processes, implementation and documentation of CGD activities had not been consistent, and CGD results had not always been effective in establishing reasonable assurance that the item or service would perform its safety function.

Parsons deviated from its QAP in 5 of the 10 CGD packages reviewed. For example, we identified a technical evaluation that was not performed in accordance with its implementing procedure prior to performing a commercial grade survey for the centrifugal pumps. Parsons did not follow its CGD procedure for documenting a technical evaluation once a vendor and commercial grade item were selected (i.e. prior to performing the dedication activities such as the survey), as required by Parsons' QAP. In another example, Parsons did not ensure that a specification section was properly implemented for an O-Ring supplier deviation request.

In another example, Parsons had not ensured that it incorporated Environmental Management's corporate QAP into its own QAP. Environmental Management's 2013 audit of the SWPF QAP implementation found that Parsons had not implemented its QAP in accordance with Environmental Management's corporate QAP. The Department's *Quality Assurance Program Guide*, Department Guide 414.1-2B, states that a qualified supplier's performance should be reviewed annually and audited every third year. Additionally, we observed that Parsons' standard practice for performing supplier audits was every 3 years. If Parsons had ensured that it had flowed down Environmental Management's corporate QAP into its own QAP, the commercial grade survey for the high density silicone elastomer would have required a resurvey frequency of every third year. To Parsons' credit, the survey frequency requirement of every 3 years has been added to the latest QAP, which was updated in 2017.

Finally, we found four instances in which Bechtel did not follow its approved QAP. For example, we identified that the silicone sealant that was used to seal a leak on the anemometer was not subsequently dedicated. Bechtel did not dedicate the silicone sealant because it did not reevaluate its technical evaluation to determine if the item served a safety function. According to Bechtel's Quality Assurance Manual, "When a design change is approved other than by revision to the affected design documents, measures shall be established to incorporate the change into these documents, where such incorporation is appropriate." Therefore, Bechtel should have applied the same rigor to the design change in the anemometer that was applied to the original design.

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## CGD Weaknesses at Other Sites

Environmental Management has experienced CGD weaknesses at other sites. During the course of this audit, the OIG issued a report on *Quality Assurance Management at the Waste Isolation Pilot Plant* (DOE-OIG-17-07, September 2017), which identified similar CGD weaknesses at the Waste Isolation Pilot Plant (WIPP). Specifically, WIPP did not effectively perform technical evaluations and/or the acceptance process, both of which are key parts of an effective CGD. In one example, WIPP did not adequately perform a technical evaluation prior to the acquisition of safety-significant mechanical gauges used to provide differential pressure readings at various locations throughout WIPP. Specifically, WIPP's technical evaluation for these gauges was performed after procurement and receipt. In another example, WIPP did not select the appropriate method of acceptance or conduct an adequate technical evaluation for six spare steel ropes. Additionally, the audit found that WIPP relied on a non NQA-1 supplier's test results in the CGD of the steel ropes.

## Impact and Path Forward

The weaknesses of the Department's CGD program limit the ability to provide reasonable assurance that its items and services meet the requirements for safe operation. Specifically, this could lead to subcontractors supplying parts and services that do not meet regulatory requirements or quality assurance expectations. An ineffective CGD program can impact the safety of the facility. Ultimately, these weaknesses can result in the procurement of items or services that are not suitable, safe, or durable for the nuclear environment. For example, if the cross-flow filters and the filter metal elements are found to be non-conforming during installation, SWPF operations could be delayed until new filter metal elements could be obtained. In addition, these weaknesses may result in increased costs and future operational delays. For example, a Bechtel official stated that Bechtel spent an estimated \$1.2 million on corrective actions designed to correct quality assurance CGD deficiencies identified in the River Protection 2009 audit. In another example, River Protection found issues in the commercial grade survey of a CGD procurement for Emergency Turbine Generators. To resolve the issues, River Protection identified that it will cost approximately \$60,000 to implement the corrective actions. Due to SWPF's and WTP's critical role in the Department's successful cleanup of legacy waste, it is imperative that the Department ensures that SWPF and WTP meet all quality assurance requirements.

River Protection recognized weaknesses in the CGD processes and is currently completing a review of conditions identified in its 2015 audit of Bechtel's CGD program. Additionally, River Protection is performing an extent of condition review to determine the scope of the problems that were identified in the 2015 audit. Furthermore, the SWPF Project Office has been responsive in discussing the areas of concern that we have identified. Finally, Environmental Management agreed that the Department needs to develop and implement a CGD handbook to improve consistency in CGD across the Department's complex.

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## RECOMMENDATIONS

Although the Department has taken positive steps to address some of the weaknesses identified, we believe that additional steps are needed to ensure that CGD and quality assurance requirements are met for all future Department operations. Accordingly, we made recommendations to ensure effective CGD across the Department's complex. Specifically, we recommend that the Associate Under Secretary for Environment, Health, Safety and Security:

1. Continue to develop guidance and training for oversight related to CGD, including completing a CGD handbook to ensure consistent implementation of the Department's CGD across its complex; and
2. Develop Department guidance on the implementation of CGD for proprietary vendor information.

We also recommend that the Assistant Secretary for Environmental Management:

3. Develop corrective actions to address the weaknesses in technical evaluations and methods of acceptance identified in this report; and
4. Perform an extent of condition review to determine if the CGD concerns we identified in our judgmental sample at WTP and SWPF are systemic and implement corrective actions as a result.

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## MANAGEMENT RESPONSE

Management concurred with each of the report's recommendations. Environmental Management agreed that there are always opportunities to strengthen CGD processes and improve the CGD program. Environmental Management also stated that it will continue to work on improving the CGD programs at its sites to ensure items and services are safe for nuclear operations. Environmental Management, however, stated that while its staff from Headquarters, Savannah River Site, and River Protection had several meetings with OIG auditors to provide comments regarding the factual accuracy of the report and address other concerns with the report, many of Environmental Management's comments were not accepted by the OIG and were not subsequently incorporated into the draft report.

Management's comments are included in Appendix 3.

## AUDITOR COMMENTS

Management's comments are responsive to our recommendations. We are pleased that Environmental Management firmly stands behind the safety of the items and services at the WTP and SWPF. Environmental Management stated that there was no information in the draft report to indicate that the items and services in the reviewed CGD packages failed to meet requirements for safe operation or that those items and services were not suitable, safe, or durable for their intended nuclear operations. Once Environmental Management completes the extent of condition review recommended in this report, it will have more complete information available to determine whether the CGD packages for these facilities continue to provide adequate information to document reasonable assurance that each item and service will perform its intended safety function. Until then, we are concerned that without adequate documentation in CGD packages, the Department may not be able to provide reasonable assurance that a commercial item or service will perform its intended safety function, as required.

We are also pleased that Environmental Management is committed to improving the CGD process at its sites to ensure items and services are safe for nuclear operations. However, we disagree with Environmental Management's statements regarding the factual accuracy of the report and that we did not accept or incorporate its comments into the report. Environmental Management provided 23 technical comments on the coordination draft report, and the OIG considered all comments provided and made subsequent changes to the report based on 16 of the 23 comments. In the other seven technical comments, Environmental Management did not provide a proposed change to the report or provide sufficient evidence to change the OIG's opinion. Further, the OIG held several meetings with Environmental Management, River Protection, and SWPF Project Office officials to discuss our disposition to comments and proposed changes to the report.

## **OBJECTIVE, SCOPE, AND METHODOLOGY**

### **Objective**

We conducted this audit to determine if the implementation of “commercial grade dedication” (CGD) of commercial items and services at the Department of Energy’s Waste Treatment and Immobilization Plant (WTP) and Salt Waste Processing Facility (SWPF) projects was effective.

### **Scope**

We conducted the audit between March 2017 and December 2018. The scope of the audit was limited to the CGD quality assurance requirements for procurements made by Bechtel National, Inc. (Bechtel) for the WTP on the Hanford Site near Richland, Washington, and by Parsons Government Services, Inc. (Parsons) for the SWPF at the Savannah River Site. The audit included a review of Bechtel’s and Parson’s policies and procedures related to quality assurance and CGD. We conducted work at the Department’s Office of River Protection, located in Richland, Washington; at Bechtel; at the Savannah River Site, located near Aiken, South Carolina; and at Parsons. The audit was conducted under Office of Inspector General project number A17RL024.

### **Methodology**

To accomplish the audit objective, we:

- Reviewed laws, regulations, and program guidance applicable to CGD and quality assurance activities within the Department;
- Interviewed key Department, Bechtel, and Parsons officials to discuss the policies and procedures used to assign and evaluate CGD and quality assurance requirements for the WTP and SWPF procurements;
- Obtained and analyzed assessments, surveillances, and other reviews of Bechtel’s and Parsons’ quality assurance activities; and
- Obtained and reviewed a judgmental sample of Bechtel’s and Parsons’ CGD procurements. During our audit, we judgmentally selected 20 CGD procurements for review, 10 from Parsons out of a universe of 264 procurements and 10 from Bechtel out of a universe of 278 procurements. We limited our review of CGD packages at Bechtel to those received after the compensatory measures were put in place in October 2015.

We conducted this performance audit 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 objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective. Accordingly, the audit included tests of controls and compliance with laws and regulations to the extent necessary to satisfy the

objective. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We conducted a reliability assessment of computer-processed data relevant to our audit objective by comparing the data to source documents. We deemed the data to be sufficiently reliable for our purposes.

Management officials waived an exit conference in April 2019.

## **PRIOR REPORTS**

- Audit Report for [\*Quality Assurance Management at the Waste Isolation Pilot Plant\*](#) (DOE-OIG-17-07, September 2017). The audit found that the Waste Isolation Pilot Plant had not always effectively managed quality assurance requirements. Specifically, the Waste Isolation Pilot Plant did not always perform commercial grade dedications of items relied on for safety, evaluate suppliers' abilities to meet quality assurance requirements prior to and after contract award, identify the appropriate quality assurance requirements in contract documents, and maintain adequate document control of quality assurance documents. The weaknesses were attributed to the Carlsbad Field Office providing limited oversight of quality assurance activities through audits and surveillances.
- Audit Report for [\*Department of Energy Quality Assurance: Design Control for the Waste Treatment and Immobilization Plant at the Hanford Site\*](#) (DOE/IG-0894, September 2013). The audit found significant shortcomings in the Department of Energy's process for managing the design and fabrication changes of waste processing equipment procured for the Waste Treatment and Immobilization Plant. The Department had not ensured that Bechtel National, Inc. subjected design changes requested by suppliers to the required review and approval by the organization responsible for nuclear safety. Also, the Department had not ensured that Bechtel National, Inc. properly verified that deviations from design requirements that could affect nuclear safety were implemented.
- Audit Report for [\*The Department of Energy's \\$12.2 Billion Waste Treatment and Immobilization Plant – Quality Assurance Issues – Black Cell Vessels\*](#) (DOE/IG-0863, April 2012). The audit found that the Department had procured and installed vessels in the Waste Treatment and Immobilization Plant that did not always meet quality assurance and/or contract requirements. The audit identified multiple instances where quality assurance records were either missing or were not traceable to the specific area or part of the vessel. In addition, it found that the Department paid the Waste Treatment and Immobilization Plant contractor a \$15 million incentive fee for production of a vessel that was later determined to be defective.
- Audit Report for [\*The Procurement of Safety Class/Safety-Significant Items at the Savannah River Site\*](#) (DOE/IG-0814, April 2009). The audit found that the Department had procured and installed safety class and safety-significant structures, systems, and components that did not meet the American Society of Mechanical Engineers' *Quality Assurance Requirements for Nuclear Facility Applications* (NQA-1) standards. For example, three structural components were procured and installed at the Mixed Oxide Fuel Fabrication Facility that did not meet technical specifications for items relied on for safety. Also, in six instances the items used in the construction of the National Nuclear Security Administration's Tritium Extraction Facility failed to satisfy quality standards. Finally, one component at the Interim Salt Processing project that did not meet quality standards was procured.

## MANAGEMENT COMMENTS



Department of Energy  
Washington, DC 20585

FEB 13 2019

MEMORANDUM FOR MICHELLE ANDERSON  
DEPUTY INSPECTOR GENERAL

FROM: ANNE MARIE WHITE   
ASSISTANT SECRETARY  
FOR ENVIRONMENTAL MANAGEMENT

SUBJECT: Office of Environmental Management Review of Office of  
Inspector General Draft Audit Report – *Department of Energy's  
Quality Assurance Commercial Grade Dedication of Items  
Relied on for Safety (A17RL024)*

The Department of Energy (DOE) Office of Environmental Management (EM) appreciates the work of the DOE Office of Inspector General (OIG) team in auditing the Commercial Grade Dedication (CGD) program at the Waste Treatment and Immobilization Plant (WTP) and Salt Waste Processing Facility (SWPF) projects. EM also appreciates the opportunity to respond to the OIG draft audit report (Draft Report). The Draft Report provides four recommendations to improve CGD packages within EM. EM concurs with the recommendations and agrees there are always opportunities to strengthen CGD processes and improve the CGD program. EM will continue to work on improving the CGD programs at EM sites to ensure items and services are safe for the nuclear operations.

The OIG performed an audit of the implementation of CGD at the SWPF and WTP from March 2017, through the summer of 2018. EM staff from Headquarters, Savannah River, and the Office of River Protection had several meetings with the OIG auditors to provide comments regarding the factual accuracy of the report and address other EM concerns with the report. Many of the EM comments were not accepted by the OIG and were not subsequently incorporated into the Draft Report. As such, we have provided a management response that indicates this concern, as well as other concerns we had with the Draft Report. We specifically emphasize that the issues and documentation concerns raised by the Draft Report do not call the safety of either facility into question. Therefore, EM firmly stands behind the safety of the items and services at the WTP and SWPF, and EM is committed to ensuring that CGD packages for these facilities continue to provide adequate information to document reasonable assurance that each item and service will perform its intended safety function.



We have included a response to each of the OIG recommendations from the report. However, it should be noted that EM's efforts are focused on opportunities for improvement in the CGD documentation, and again are not an indication that there are any issues with the actual safety of the items and services considered in the CGD packages.

If you have any questions, please contact Mr. Dae Chung, Deputy Assistant Secretary for Safety, Security, and Quality Assurance, at (202) 586-5151 or [dae.chung@em.doe.gov](mailto:dae.chung@em.doe.gov).

Attachment

DOE-EM OIG DRAFT REPORT MANAGEMENT RESPONSE/GENERAL  
COMMENTS

The Department of Energy (DOE) Office of Environmental Management (EM) appreciates the work of the DOE Office of Inspector General (OIG) team auditing the Commercial Grade Dedication (CGD) program at the Waste Treatment and Immobilization Plant (WTP) and Salt Waste Processing Facility (SWPF) projects. EM also appreciates the opportunity to respond to the draft OIG audit report (Draft Report).

The Draft Report identified some examples where documentation associated with previously prepared CGD packages<sup>1</sup> may not be adequate based upon current departmental requirements. EM has reviewed the specific examples from the Draft Report and has discussed them with, and provided explanatory information associated with these examples to the OIG auditors on numerous occasions. While EM agrees that some of the CGD documentation in a CDG package requires more attention and emphasis, there is no information in the Draft Report to indicate that the items and services that were the subject of the CGD packages reviewed, fail to meet requirements for safe operation, or that those items and services are not suitable, safe, or durable for their intended nuclear operations. EM firmly stands behind the safety of the items and services that were the subject of the CGD packages at the two facilities that are addressed in the Draft Report, and EM is committed to ensuring that CGD packages continue to provide adequate information to document reasonable assurance that each item and service will perform its intended safety function.

EM has concerns with the OIG audit and the Draft Report:

- The Draft Report does not adequately identify CGD requirements specific to the projects' contracts (or Code of Record). As a result, in some cases the OIG auditors incorrectly concluded that certain items that were procured and were the subject of CGD packages, were not appropriately dedicated. For example, NQA 1-2008 with the NQA-1a-2009 addenda was not the selected consensus standard for EM until 2012, and therefore was not required to be included in previously issued contracts. The Draft Report does not reflect the fact that CGD requirements evolved over the roughly twelve year procurement window analyzed by the OIG, and continued evolving through the period of the OIG review. As CGD requirements evolved to reflect new industry standards, contractual requirements also changed. The Draft Report does not reflect the fact that different CGD requirements may apply to different procurements depending on when the contracts were established.
- The Draft Report does not distinguish between CGD guidance documents and requirements documents. For example, the EM CGD Guide (issued in 2011) that is referenced in the Draft Report is not a requirements document; the EM CGD Guide is a guidance document only.

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<sup>1</sup> A commercial grade dedication package is an auditable collection of documents that is the result of the commercial grade dedication process for a specific item and its documented safety function(s). These documents contain the technical and quality basis for satisfying the commercial grade item dedication process, and provide the objective evidence to reasonably ensure that the dedicated commercial grade item will perform its required safety function(s).

- The Draft Report makes generalizations about Bechtel and Parsons, without adequately identifying concerns, specific to each contractor.
- The Draft Report does not reflect all of the specific and detailed feedback previously provided by EM to the OIG auditors regarding EM's issues with the technical and factual accuracy of the OIG's concerns related to the CGD packages reviewed.

EM has reviewed the Draft Report and is in the process of conducting additional reviews to determine if any other CGD packages require documentation upgrades. EM agrees there are opportunities to strengthen CGD processes and improve the CGD program, and EM has self-identified issues with CGD in the past. EM will continue to work on improving the CGD programs at EM sites. However, it should be noted that EM's efforts are focused on opportunities for improvement in the documentation in the CGD packages. EM's efforts to find opportunities for improvement in the documentation contained in those packages are not an indication that there are any issues with the actual safety of the items and services that were the subject of those packages. As a result, EM provides the following responses to the specific recommendations of the Draft Report:

*Recommendation 1. Continue to develop guidance and training for oversight related to CGD, including completing a CGD handbook to ensure consistent implementation of the Department's CGD across its complex;*

EM Response: Since the scope of this recommendation extends beyond the EM portfolio to the DOE CGD program, EM has been informed that the Office of the Associate Under Secretary for Environment, Health, Safety and Security (AU) will address this recommendation.

*Recommendation 2. Develop Department guidance on the implementation of CGD for proprietary vendor information;*

EM Response: Since the scope of this recommendation extends beyond the EM portfolio to the DOE CGD program, EM has been informed that AU will address this recommendation.

*Recommendation 3. Develop corrective actions to address the weaknesses in technical evaluations and methods of acceptance identified in this report; and*

EM Response: EM concurs with this recommendation. EM agrees that the Draft Report identified opportunities for improvement in the documentation of technical evaluations and in documentation of methods of acceptance for select CGD packages. EM is currently reviewing the Draft Report and taking appropriate actions to address the issues identified by the audit.

*Recommendation 4. Perform an extent of condition review to determine if the CGD concerns we identified in our judgmental sample at WTP and SWPF are systemic, and implement corrective actions as a result.*

EM Response: EM concurs with this recommendation. EM agrees that the Draft Report identified some opportunities for improvement in the documentation contained in the CGD packages reviewed by the auditors. EM is currently reviewing a sampling of other CGD packages to determine if any additional actions are warranted.



Department of Energy  
Washington, DC 20585

February 13, 2019

MEMORANDUM FOR TERI L. DONALDSON  
INSPECTOR GENERAL

FROM: MATTHEW B. MOURY  
ASSOCIATE UNDER SECRETARY  
FOR ENVIRONMENT, HEALTH, SAFETY AND SECURITY

SUBJECT: COMMENTS FOR IG DRAFT AUDIT REPORT on Department of Energy's Quality Assurance: Commercial Grade Dedication of Items Relied on for Safety (A17RL024)

Thank you for the opportunity to comment on the Draft Audit Report, "The Department of Energy's Quality Assurance: Commercial Grade Dedication of Items Relied on for Safety." The Office of Environment, Health, Safety and Security has completed its review of the report and provides the following comments:

**Recommendation 1:** That the Associate Under Secretary for Environment, Health, Safety and Security continue to develop guidance and training for oversight related to commercial grade dedication (CGD), including completing a CGD handbook to ensure consistent implementation of the Department's CGD across its complex.

**Management Response:** Concur.

**Action Plan:** The Commercial Grade Dedication Handbook, DOE-HDBK-1230-YY, is in RevCom negotiation. This Handbook is a training tool, similar to a textbook that will provide the best practices and lessons learned for implementing commercial grade dedication at DOE and NNSA facilities.

**Estimated Completion Date:** June 30, 2019

**Recommendation 2:** Develop Department guidance on the implementation of CGD for proprietary vendor information.

**Management Response:** Concur

**Action Plan:** The Commercial Grade Dedication Handbook, DOE-HDBK-1230-YY, will have a case study with an example for implementing CGD for proprietary vendor information.

**Estimated Completion Date:** June 30, 2019



If you have any questions, please contact me at (202) 586-1285 or have a member of your staff contact Garrett Smith, Director, Office of Nuclear Safety, at (301) 903-7440.

Office of Environmental Management Guide on Commercial Grade Dedication: Overview of the Generic Process

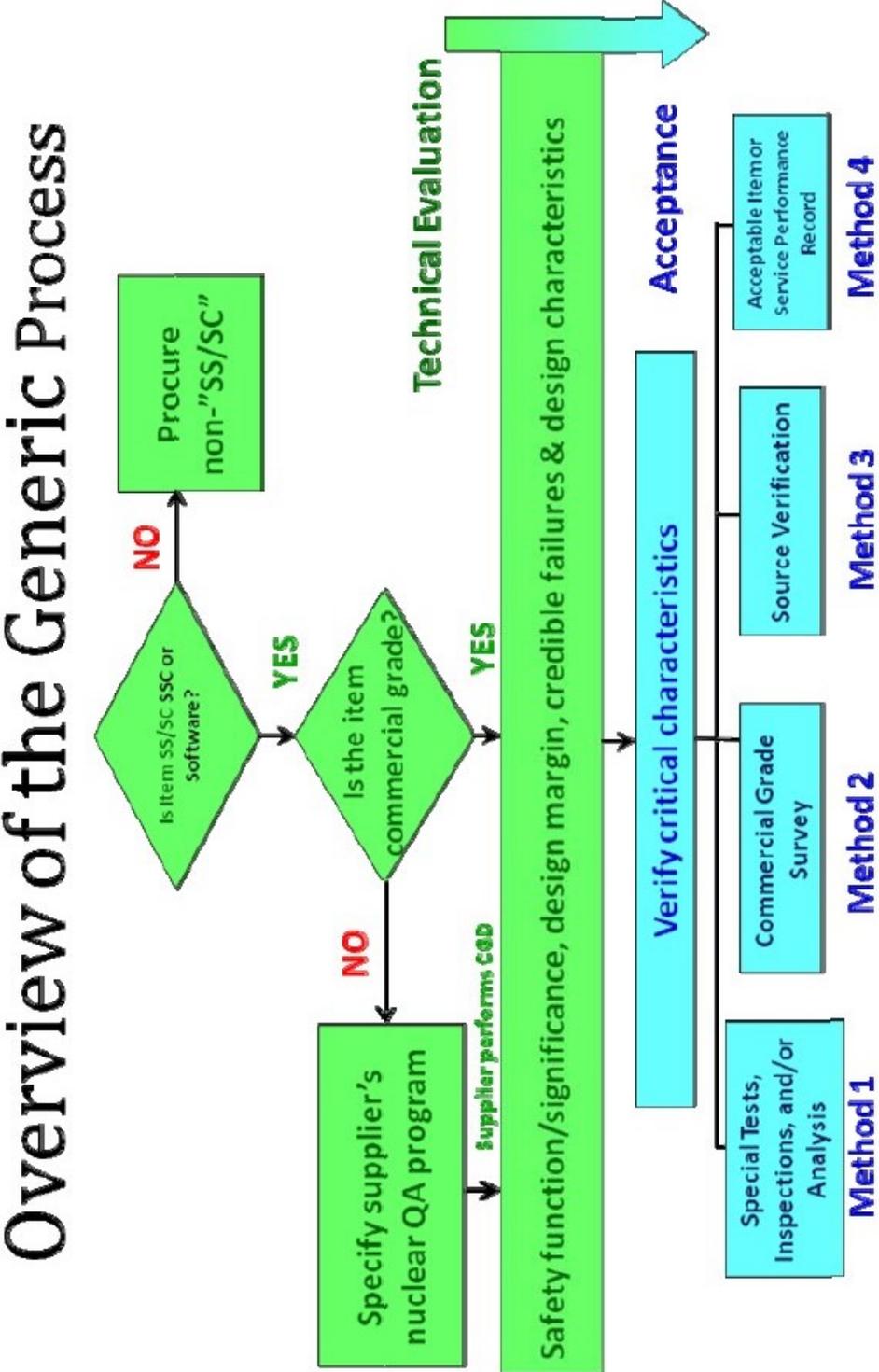


Figure 1: Overview of Generic Commercial Grade Dedication Process

## **FEEDBACK**

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Office of Inspector General (IG-12)  
Department of Energy  
Washington, DC 20585

If you want to discuss this report or your comments with a member of the Office of Inspector General staff, please contact our office at (202) 586-1818. For media-related inquiries, please call (202) 586-7406.