



March 2018

NUCLEAR REGULATORY COMMISSION

Additional Action Needed to Improve Process for Billing Licensees

GAO Highlights

Highlights of [GAO-18-318](#), a report to congressional requesters

Why GAO Did This Study

NRC is responsible for regulating the commercial nuclear industry, including nuclear power plants. NRC provides services, such as inspections, for regulated entities that hold licenses—that is, licensees. NRC recovers the costs for these services by assessing fees and billing licensees quarterly. In fiscal year 2016, NRC collected about \$321 million in service fees. From 2006 to 2016, audits of NRC's fees identified problems with NRC's billing process. For example, a 2012 audit identified about \$24 million in unbilled fees from fiscal years 2011 and 2012.

GAO was asked to review NRC's billing process for service fees. This report examines (1) the actions NRC is taking to address problems with its billing process identified by internal reviews and (2) the challenges selected licensees identified with NRC's billing process and the extent to which NRC's actions are addressing them.

GAO reviewed audits of NRC's billing process and other documents related to this process. GAO also interviewed NRC staff and a nongeneralizable sample of 13 licensees, selected based on the amount of service fees charged from October 2015 through July 2017, and compared NRC's actions against criteria on internal controls and project planning.

What GAO Recommends

GAO is making five recommendations, including that NRC develop a project management plan for its electronic billing initiative that follows project management standards and includes steps for involving licensees and assessing results. NRC agreed with these recommendations.

View [GAO-18-318](#). For more information, contact Frank Rusco at (202) 512-3841 or ruscof@gao.gov.

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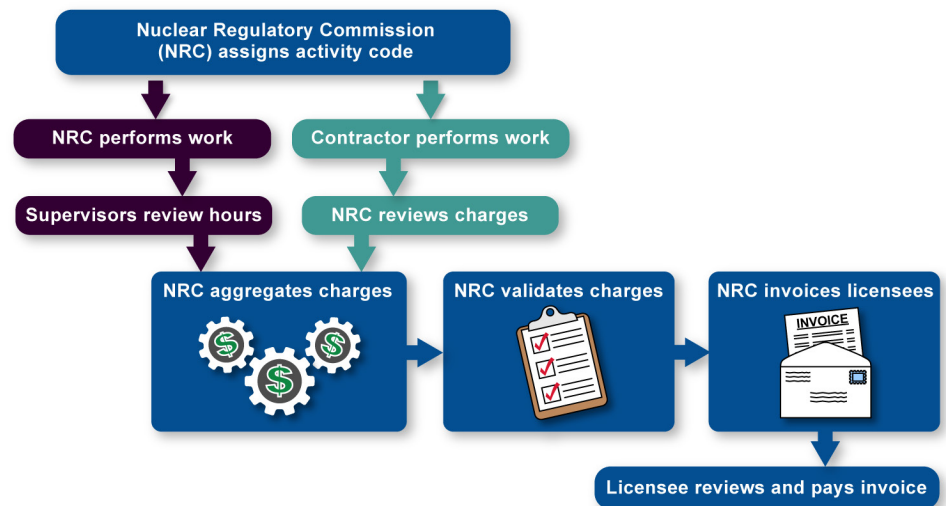
NUCLEAR REGULATORY COMMISSION

Additional Action Needed to Improve Process for Billing Licensees

What GAO Found

The Office of the Inspector General for the Nuclear Regulatory Commission (NRC) and internal reviews conducted by NRC identified several problems with the agency's billing process, and NRC has implemented or plans to implement several changes to address the recommendations. For example, the codes that NRC staff use to record their work hours on time cards—referred to as activity codes—did not describe the work and did not have a consistent naming convention, which increased the risk of staff charging their time to the wrong activity codes. This could lead, in some cases, to billing errors. To address these problems, NRC created a standard naming convention for activity codes that provides more information about the activity. See the figure below for the steps in NRC's billing process for work that NRC or contractor staff performed.

The Nuclear Regulatory Commission's Billing Process



Source: GAO analysis of NRC's information. | GAO-18-318

Some of the 13 licensees that GAO interviewed identified challenges with NRC's billing process, including its method for delivering paper invoices by mail. For example, two of these licensees stated that with invoices taking up to 10 days to arrive in the mail, they sometimes do not have sufficient time to properly review charges and remit payment to NRC within the 30-day deadline for paying the invoice. One licensee said that delays in receiving an invoice resulted in late fees. NRC is undertaking an initiative to transition to electronic billing, which may address the challenges the licensees identified and, according to NRC staff, improve the agency's billing process. However, NRC has not developed planning documents for this initiative and, according to staff, the planning phase is already past its original deadline of October 2017. The Project Management Institute has identified standards related to project management processes, including project planning. By developing a project management plan that is consistent with best practices and includes steps for involving licensees in system development and assessing results of the project, NRC would have reasonable assurance that it can better manage its electronic billing initiative.

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Abbreviations

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| NRC | Nuclear Regulatory Commission |
| OIG | Office of Inspector General |

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March 8, 2018

Congressional Requesters

The Nuclear Regulatory Commission (NRC) is the federal agency responsible for regulating the commercial nuclear industry—including nuclear power plants and other civilian uses of radioactive material—through licensing, inspection, and enforcement of its regulations. NRC provides licensing services, including conducting inspections, reviewing applications for new licenses, and renewing licenses, to regulated entities that hold a license or are applying for a license, referred to as licensees and applicants, respectively. NRC recovers the full costs for providing these services by assessing fees to licensees and applicants—called service fees—and billing licensees and applicants each quarter using a billing process that includes aggregating all the charges to be billed; reviewing the charges and correcting errors, if any; mailing quarterly invoices; and then addressing disputes from licensees and applicants, if any.¹ In fiscal year 2016, NRC collected about \$321 million in service fees from licensees and applicants. Since 2006, internal audits of NRC's revenue from fees have identified problems with the agency's billing process, some of which resulted in significant billing errors to licensees. In fiscal year 2012, for example, an internal NRC audit identified approximately \$24 million in unbilled fees from fiscal years 2011 and 2012 that went undetected by NRC staff involved in the agency's billing process.

The Omnibus Budget Reconciliation Act of 1990, as amended, requires NRC to annually assess and collect fees totaling about 90 percent of its annual budget authority.² To reach this amount, NRC assesses two types

¹According to NRC staff, its billing process is the same for licensees and applicants. This report focuses on licensees.

²42 U.S.C. § 2214. The remaining 10 percent of NRC's budget authority—known as fee relief activities—covers the cost of such activities as international assistance, agreement state oversight, and scholarships and fellowships, which do not directly benefit existing licensees and are not intended to be recovered through fees. The Omnibus Budget Reconciliation Act of 1990 also defines several items that are excluded from fees. For fiscal year 2016, the act and the 2016 Consolidated Appropriations Act exclude from fee recovery amounts appropriated (1) for NRC's responsibilities related to Department of Energy waste management activities for certain radioactive material resulting from the reprocessing of spent nuclear fuel, (2) for generic homeland security activities, (3) to NRC from the Nuclear Waste Fund for the fiscal year, and (4) for Inspector General services for the Defense Nuclear Facilities Safety Board.

of fees—service fees and annual fees—that are set through an annual rulemaking process.³ Service fees encompass reimbursable contract costs and reimbursable NRC staff time costs, which include time spent performing work for a specific licensee and certain overhead costs. In cases where NRC hires a contractor to perform work related to a specific licensee, NRC pays the contractor for the work and then bills the licensee for reimbursement. NRC assesses service fees for agency staff time by establishing an hourly rate to recover the full cost of specific regulatory services. In cases where the cost of an activity will change very little from licensee to licensee, NRC has established flat service fees based on the hourly rate.⁴ For service fees, charges on the invoice are to recover the costs for work completed in the previous quarter up to the date of the invoice and invoices are mailed to licensees quarterly via the U.S. Postal Service to collect service fees. NRC assesses annual fees to recover regulatory costs that are not otherwise recovered through service fees in order to meet the 90 percent statutory requirement. Licensees' payments for service and annual fees are due to NRC within 30 days of the invoice date so licensees can avoid paying interest on the charges. This report focuses on the billing process for service fees assessed to licensees.⁵

You asked us to review NRC's process for billing licensees for service fees. This report examines (1) the actions NRC is taking to address problems with its billing process identified by internal reviews and (2) the challenges selected licensees identified with NRC's billing process and the extent to which NRC's actions address these challenges.

To determine what actions NRC is taking to address problems with its billing process for service fees, we reviewed agency documents and interviewed NRC staff. Specifically, we reviewed assessments of NRC's

³The service fees are established under 10 C.F.R. Part 170 and the annual fees under 10 C.F.R. Part 171. More information on NRC's fee-setting process is available in GAO, *Nuclear Regulatory Commission: Regulatory Fee-Setting Calculations Need Greater Transparency*, [GAO-17-232](#) (Washington, D.C.: Feb. 2, 2017).

⁴Flat fees are service fees set at a predetermined amount for the review of certain types of license applications, such as licenses to import or export nuclear material for civilian uses. NRC calculates flat service fees by multiplying the average number of hours needed to process each licensing action by an hourly rate. NRC estimates the amount of hours by reviewing the actual number of hours that staff spent performing these actions in the previous year.

⁵For purposes of this report, we use the term service fee to refer to fees billed using the hourly rate and the term billing process to refer to the process for billing service fees.

billing process from 2006 to 2016, including two audits by NRC's Office of the Inspector General (OIG) and NRC's Business Process Improvement Project, which was an internal review completed in March 2014 that focused on eliminating or greatly reducing billing errors for service fees and improving overall efficiency and effectiveness of the billing process.⁶ We also reviewed NRC's planning documents related to the actions it is taking to address the problems, and NRC policy and guidance related to its billing process. We interviewed NRC staff in the Office of the Chief Financial Officer who are working on projects and initiatives that are designed to address problems with NRC's billing process. We also interviewed NRC staff in the agency's four regional offices (Region 1 near Philadelphia, Pennsylvania; Region 2 in Atlanta, Georgia; Region 3 near Chicago, Illinois; and Region 4 in Arlington, Texas) and eight offices (Advisory Committee on Reactor Safeguards; Atomic Safety and Licensing Board Panel; and the Offices of General Counsel, New Reactors, Nuclear Material Safety and Safeguards, Nuclear Reactor Regulation, Nuclear Security and Incident Response, and Nuclear Regulatory Research) that are responsible for reviewing charges as part of the billing process, including staff who review contractor charges.

To determine the challenges licensees have with NRC's billing process and the extent to which NRC is addressing them, we reviewed agency documents related to its billing process; interviewed a stratified, nongeneralizable sample of 13 non-federal licensees; and interviewed NRC staff.⁷ To select licensees for our sample, we used service fee-collection data produced by NRC's financial management system, called the Financial Accounting and Integrated Management Information System. From seven of NRC's nine fee classes,⁸ we selected to interview the 2 licensees that held the licenses that were assessed the highest amount of service fees from October 2015 through July 2017. However,

⁶Nuclear Regulatory Commission, Office of the Inspector General, *Audit of NRC's Contract Administration of the EPM Contract*, OIG-12-A-18 (Washington, D.C.: September 2012) and *Audit of NRC's Internal Controls Over Fee Revenue*, OIG-15-A-12 (Washington, D.C.: March 2015).

⁷We focused our review on nonfederal licensees because NRC's billing process for federal agencies follows a different billing process that utilizes the Intragovernmental Payment and Collection system.

⁸For the purpose of setting fees, NRC established the following nine fee classes: fuel facilities, import/export, materials users, operating power reactors, rare earth, research and test reactors, spent fuel storage/reactor decommissioning, transportation, and uranium recovery.

one of the seven fee classes had only 1 licensee that was assessed service fees in that class during this established period. Also, two fee classes were excluded from our sample.⁹ Our selection process resulted in 13 licensees of varying size and scope, including 1 holding multiple licenses that was assessed service fees of almost \$28 million during the established period, and another holding a single license that was assessed service fees of almost \$420,000 during the same period. If a licensee meeting our selection criteria was unwilling or unable to participate, we elected to interview the licensee that held the license that was assessed the next highest amount of service fees during this period. We interviewed licensees using a standard set of questions to collect consistent information. We analyzed licensee responses to our standard set of questions to identify key themes and grouped their responses into common categories. We interviewed NRC staff and reviewed related documentation to determine whether the agency's recent or planned actions to address problems with its billing process could address licensees' challenges. We compared NRC's current billing practices against the agency's Organizational Values¹⁰ and *Standards for Internal Control in the Federal Government*, as applicable.¹¹ We also identified leading practices for project planning in the Project Management Institute's *A Guide to the Project Management Body of Knowledge*.¹²

We conducted this performance audit from March 2017 to March 2018 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that

⁹The import/export fee class was excluded because no licensee in this class incurred service fees in the established fee-collection period. The transportation fee class was excluded because NRC adds its costs for regulating transportation activities to the annual fee amount for each fee class and separately to the Department of Energy.

¹⁰Nuclear Regulatory Commission, *NRC Organizational Values*, accessed December 6, 2017, <http://www.nrc.gov/about-nrc/values.html#values>.

¹¹GAO, *Standards for Internal Control in the Federal Government*, [GAO-14-704G](#) (Washington, D.C.: September 2014).

¹²Project Management Institute, *A Guide to the Project Management Body of Knowledge* (PMBOK® Guide) - Fifth Edition (Newtown Square, Pa.: 2013). PMBOK is a registered trademark of the Project Management Institute, Inc. The Project Management Institute is a not-for-profit association that provides global standards for, among other things, project and program management. These standards are utilized worldwide and provide guidance on how to manage various aspects of projects, programs, and portfolios.

the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

NRC is an independent agency established by the Energy Reorganization Act of 1974 to license and regulate civilian uses of nuclear materials in the United States for commercial, industrial, medical, and academic purposes.¹³ Under the Atomic Energy Act of 1954, as amended, NRC is responsible for issuing licenses for civilian uses of radioactive material and conducting oversight activities under such licenses to protect the health and safety of the public, among other things.¹⁴ NRC regulates commercial nuclear power plants; research, test, and training reactors; nuclear fuel cycle facilities; the transport, storage, and disposal of radioactive materials and waste; and the use of radioactive materials in medical, academic, and industrial settings.¹⁵ NRC is authorized to conduct inspections and investigations; enforce regulatory requirements by, among other things, issuing orders and imposing civil (monetary) penalties; and revoke licenses. NRC is headed by a five-member Commission, with members appointed by the President and confirmed by the Senate; one commissioner is designated by the President to serve as the Chair and official spokesperson of the Commission. NRC staff from headquarters and the four regional offices implement the agency's programs for developing regulations, licensing, inspection, enforcement, and emergency response, among other responsibilities. NRC's Office of the Chief Financial Officer establishes, maintains, and oversees the implementation and interpretation of the agency's regulatory user fee policies and regulations, among other responsibilities.

The Office of the Chief Financial Officer is responsible for assessing service fees to licensees for each license they hold and sending licensees invoices quarterly. The quarterly invoices for service fees may include costs in the following three categories:

¹³Pub. L. No. 93-438, 88 Stat. 1233, (1974), *codified as amended at* 42 U.S.C. §§ 5801-79.

¹⁴Pub. L. No. 83-703, 68 Stat. 919, (1954), *codified as amended at* 42 U.S.C. 2011 *et seq.*

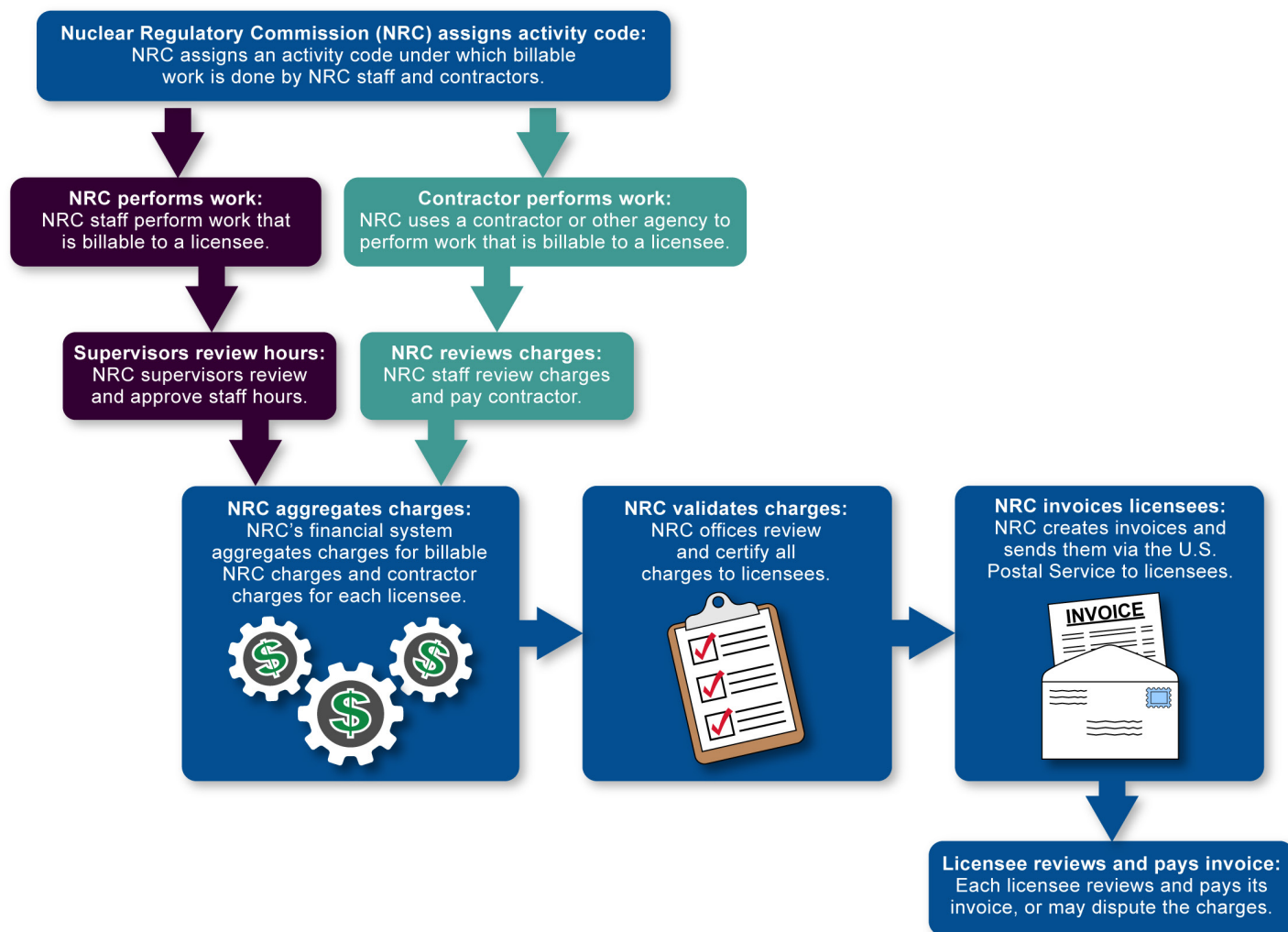
¹⁵In addition, NRC has agreements with 37 states under which the states assume regulatory responsibility for the use of certain nuclear materials used or possessed within their borders.

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- **NRC staff work.** NRC staff record their time related to services, such as licensing, inspections, special projects, and license reviews, which is then billed to licensees to recover the full cost of these services. To calculate the cost of work performed by NRC staff, NRC applies an hourly rate—as established during the agency’s annual rulemaking process—to the number of staff hours spent on work that is directly attributable to a specific licensee.
 - **Overhead costs for project managers and resident inspectors.** Some licensees work with an NRC project manager or resident inspector,¹⁶ and NRC allocates the overhead costs for these NRC staff to the licensees. Overhead costs cover the costs of these staff doing tasks that are not assigned to a specific licensee, but that benefit licensees, such as training, according to NRC staff. Project manager and resident inspector overhead costs are calculated for each relevant licensee as 6 percent of the licensee’s total NRC staff time charges for the quarter.
 - **Contractor charges.** NRC sometimes hires a commercial contractor or other federal agency, such as the Department of Energy (referred to collectively as contractors), to perform services that are directly attributable to a licensee, such as reviewing license applications. In these cases, NRC pays the contractor for the work and then bills the licensee for reimbursement of the contractor’s charges.

NRC’s billing process for service fees begins by identifying work that can be billed to a specific licensee and ends when the licensee pays the quarterly invoice. Once NRC determines that billable work needs to be done, the agency follows the steps in the billing process shown in figure 1.

¹⁶Project managers are NRC staff responsible for overseeing projects for licensees and resident inspectors are NRC staff assigned to a specific facility who provide major onsite NRC presence for inspection and assessment of licensee performance.

Figure 1: The Nuclear Regulatory Commission's (NRC) Process for Billing Licensees for Service Fees



Source: GAO analysis of NRC's information. | GAO-18-318

The steps in NRC's billing process are described in more detail below.

- **NRC assigns activity code:** After billable work is identified, NRC assigns an activity code, which is a project code to which NRC employees charge time for billable work performed.
- **NRC performs work:** NRC staff perform work that is billable to a licensee and record their time biweekly in electronic time cards in NRC's time and labor management system. If NRC staff discover that they have recorded time incorrectly in a previous pay period, such as

by charging time to an incorrect activity code, they can correct the error by making a prior-period adjustment. Adjustments that are made within 6 weeks of the date of the error can be made directly in the time and labor management system; adjustments made 6 weeks or more after the date of the error require a memo with justification from the employee's office director to NRC's Controller.

- **Supervisors review hours:** At the end of each 2-week pay period, NRC supervisors review and approve the time cards for the staff they supervise, including the hours charged to activity codes.
- **Contractor performs work:** If work is done by a contractor, the contractor submits a status report and invoice to NRC each month. Each monthly status report includes a description of the work done, the planned completion date, the total charges for the current invoice, the cumulative charges to date, and an estimate of future charges.
- **NRC reviews charges:** NRC staff responsible for managing the agency's contracts review the monthly status reports and invoices and must approve invoices before paying the contractor. After paying a contractor's invoice, NRC bills the licensee for reimbursement of the amount NRC paid to the contractor. Contractor charges are included on a licensee's quarterly invoice, and NRC may bill a licensee for contractor charges after the quarter in which the work was performed.
- **NRC aggregates charges:** NRC's financial management system aggregates all NRC staff hours and charges from contractors biweekly for each licensee. The financial management system obtains data on staff hours from NRC's time and labor management system. Contractor charges are entered manually into the financial management system.
- **NRC validates charges:** NRC regional and program offices review and certify all charges to licensees after the end of each quarter. To accomplish this, the Office of the Chief Financial Officer produces quarterly validation reports—one for staff charges and one for contractor charges—from NRC's financial management system.
- **NRC invoices licensees:** NRC creates invoices each quarter and sends them to licensees via the U.S. Postal Service. Licensees' payments are due to NRC within 30 days of the invoice date to avoid paying interest on the charges.
- **Licensee reviews and pays invoice:** Licensees review the invoice and may pay the invoice, request that NRC review the fees assessed, or dispute the fees. These billing disputes generally start informally with the licensee contacting NRC. According to NRC staff, most disputes are handled informally and generally entail explanations of

the agency's billing or licensing policies. If NRC staff are unable to resolve a licensee's concern informally, the licensee can write a letter to the Chief Financial Officer, which begins a formal dispute process. According to NRC staff, to address a licensee's concerns with the charges, the Office of the Chief Financial Officer reviews the charges on the invoice and may involve the relevant regional or program offices to determine whether the charges are valid for the work performed. Additionally, NRC's Office of the General Counsel may be included in disputes regarding NRC's fee policy. After the dispute is resolved, the licensee pays the invoice.

NRC's OIG and internal reviews conducted by NRC in the last 5 years identified problems with the agency's billing process. In 2012 and 2015, for example, OIG audits identified problems with NRC's management and review of billable charges and recommended changes to the agency's internal processes and procedures—called internal controls—to improve the accuracy of invoices. In 2013, NRC launched the Business Process Improvement Project to determine the root causes of billing errors, many of which were discovered during the quarterly validation step of the billing process. The project was completed in 2014 and made recommendations focused on strengthening internal controls and improving efficiency and effectiveness of the billing process. Additionally, in 2016 NRC requested feedback from the public, including licensees and other stakeholders, on the general communications the agency provides about its fees, intending to use the feedback to improve the transparency of its fees development and invoicing practices. Following this effort, NRC launched its Fees Transformation initiative to improve transparency of its fee-setting and billing processes.

NRC Has Taken Action in Four Main Areas to Improve Its Billing Process

NRC has recently implemented or plans to implement changes in four main areas of its billing process to address problems identified by NRC's OIG and NRC internal reviews: controls over activity codes, guidance and training for NRC staff, quarterly validation of charges, and charging licensees for billable overhead costs.

Controls over Activity Codes

NRC's OIG and internal reviews found problems with NRC's internal controls over activity codes, which affected the quality of data used for billing and other agency processes. The management of activity codes was decentralized, meaning that staff in NRC's offices generated the codes and each office followed its own policies and procedures regarding the setup and use of these codes. NRC also did not have a standardized

set of activity codes to be used across the agency. Activity codes were instead linked to specific licensees, meaning that identical work activities for two licensees would require two different activity codes. These conditions resulted in an excessive number of activity codes in the agency's time and labor management system. According to an internal NRC review, the decentralized management and absence of standardized activity codes weakened internal controls and put NRC at risk for incomplete or inaccurate billing. Further, there was no consistent naming convention, and activity code titles often lacked the specificity necessary for NRC staff to readily identify the correct code for the work activity performed, according to the OIG.¹⁷ NRC staff could also search and access the entire inventory of activity codes, including those unrelated to their work. According to the OIG, these conditions increased risk for staff to inadvertently select the wrong activity codes when recording their time; in such cases, the wrong licensee could be billed for the work.

Starting in fiscal year 2016, the Office of the Chief Financial Officer began taking responsibility for overseeing and managing activity codes, including establishing, maintaining, and closing activity codes available in the agency's time and labor management system. Further, NRC developed a set of standardized activity codes with titles related to the specific work activities completed. The transition to centralized activity code management and standardized activity codes was completed in October 2017, according to NRC staff. Also in October 2017, the agency implemented controls that prevent a staff member from charging time to an activity code unless a project manager has granted that staff member access to the code.

Guidance and Training

NRC's OIG and internal reviews found problems with staff's understanding of their roles and responsibilities for accurate time and labor reporting and management of billable contracts, which, according to NRC documents, contributed to avoidable time card errors and billing errors. To address these problems, NRC provided training and updated guidance for staff covering the following two areas:

- **Time and labor reporting.** According to an internal NRC review, staff were making avoidable data entry errors in time cards that

¹⁷Nuclear Regulatory Commission, Office of the Inspector General, *Audit of NRC's Internal Controls Over Fee Revenue*, OIG-15-A-12.

supervisors who approved the timecards were not identifying, meaning incorrect time cards were sent to the Office of the Chief Financial Officer for billing.¹⁸ In late fiscal year 2015, NRC provided training to all agency staff to emphasize the importance of accurate time reporting, the process for selecting correct activity codes, and the relationship of time card entry to billing. According to NRC officials, the agency also provided specialized training to staff in offices where errors were common. Additionally, the agency updated its time and labor reporting guidance and provided supplemental guidance to staff related to time and labor reporting. Furthermore, in preparation for changes to activity codes that were implemented in October 2017, NRC provided additional training to staff on the new activity code structure and making corrections to their time cards.

- **Management of contracts.** According to an internal NRC review, approximately one-third of the billing errors identified during the quarterly validation step of the billing process resulted from administrative errors in managing contracts. NRC's OIG also found that agency guidance related to the invoice review process was outdated and did not provide staff with sufficient criteria for verifying information contained in contractor invoices.¹⁹ Without such criteria, NRC could not ensure that it was evaluating contractor charges consistently and appropriately before billing those charges to licensees. In 2015, NRC provided training to staff who manage contracts, which, according to NRC officials, resulted in an immediate decrease in associated billing errors. NRC also revised its guidance to clarify responsibilities, procedures, and instructions for reviewing and approving contractor invoices.

Quarterly Validation

NRC's OIG and internal reviews identified conditions that made the quarterly validation step in the billing process challenging for staff to perform and that led to inconsistent validation procedures among program and regional offices. NRC has taken or plans to take the following two actions to address these problems:

¹⁸Although incorrect hours were entered and sent to the Office of the Chief Financial Officer for billing, the Office of the Chief Financial Officer has validation and quality assurance steps in the billing process that are designed to identify and correct errors before it sends invoices to licensees.

¹⁹Nuclear Regulatory Commission, Office of the Inspector General, *Audit of NRC's Contract Administration of the EPM Contract*, OIG-12-A-18.

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- **Improving validation reports.** According to NRC documents, the quarterly validation reports contained billing data for all program and regional offices—sometimes amounting to more than 4,000 pages of data—and the reports did not have the sorting functionality or querying capability that would allow NRC staff to extract relevant information. Staff in program and regional offices instead relied on manually generated reports to compile information they needed. Additionally, according to the OIG, the quarterly validation reports did not include sufficient detail on contractor charges for NRC’s staff to properly review them.²⁰ To address these problems, in 2014 NRC started providing the quarterly validation report in electronic spreadsheet format, which gave staff the sorting and filtering capabilities needed to extract data relevant to their respective reviews and eliminated the need for manually generated reports, according to NRC staff. Further, NRC began providing validation information for contractor charges in a separate report. The new validation report for contractor charges has more detailed information and specific instructions for NRC staff for verifying the accuracy of the charges.
 - **Standardizing the quarterly validation process.** According to NRC, the current quarterly validation process is not standardized across the regional and program offices and there is no agency guidance to ensure that staff in different offices conduct the process consistently. Further, there is currently no way to ensure that an adequately trained person in each program or regional office is conducting the validation, according to NRC staff. To address these problems, NRC is planning to standardize the quarterly validation process and to establish clear roles and responsibilities for staff participating in the process. One key change NRC is planning is to have the individual leading the work validate the accuracy of the charges. According to NRC’s planning documents—dated August 2017—NRC expects to pilot the new validation process in June 2018 and to implement it agency-wide by October 2018.

Charging for Billable Overhead Costs

At the end of fiscal year 2012, an internal NRC audit identified approximately \$24 million in unbilled overhead hours. NRC staff explained that the hours went unbilled because project managers and resident inspectors charged billable overhead time to nonbillable activity codes, rather than to the billable activity codes associated with licensees.

²⁰Nuclear Regulatory Commission, Office of the Inspector General, *Audit of NRC’s Internal Controls Over Fee Revenue*, OIG-15-A-12.

According to an internal NRC review, these errors accounted for approximately two-thirds of the billing errors identified during the quarterly validation process. At the beginning of fiscal year 2016, NRC started billing this overhead time as a separate fee on invoices that is calculated as 6 percent of all NRC billable hours on an invoice, which eliminated the billing errors related to overhead. However, NRC analyzed this billing method again in fiscal year 2017 and determined that eliminating the percentage charge and having staff charge their billable overhead time to billable activity codes would be more equitable. NRC intends to implement a new process for charging billable overhead time at the start of fiscal year 2019. According to NRC staff, the agency has made administrative changes to address the factors that contributed to project managers and resident inspectors incorrectly charging overhead time in the past.

Licensees We Interviewed Identified Several Challenges with NRC's Billing Process, and NRC's Recent and Planned Changes May Not Fully Address Them

Licensees we interviewed identified challenges with the amount of information available about NRC's billable work, and NRC's recent changes have made more information available, but some licensees are not aware of the information. Licensees also identified challenges with NRC's method of delivering paper invoices by mail, and although NRC's recent and planned changes may help address these challenges, NRC's plans are incomplete.

Licensees Identified Challenges with the Information Available about NRC's Billable Work, and NRC Has Made More Information Available, but Some Licensees Are Not Aware of It

Licensees we interviewed identified challenges with the amount of information available about NRC's billable work, including challenges related to planning and budgeting for NRC work and verifying charges on invoices. NRC has recently implemented changes that may address some of the challenges.

Planning and Budgeting for NRC Work

Licensees we interviewed identified challenges with planning for future work and budgeting to pay future costs because NRC does not provide certain information about the agency's billable work. Specifically, NRC does not formally provide information on timeframes for completing billable work, customized cost estimates for projects, or the status of ongoing work. Eleven of the 13 licensees we interviewed indicated that having timeframes, cost estimates, status reports, or a combination of these would be useful. One licensee explained that when it receives an invoice for work that NRC staff have performed, the licensee does not know how much work remains and cannot budget for future expenses.

This challenge may be addressed, in part, by NRC's Fees Transformation initiative. Under this initiative, NRC began reporting on its public website in September 2017 resource estimates for various licensing actions, such as site permitting, design certifications, inspections, license amendments, and license renewals, among others. These resource estimates include the low, high, and average number of NRC staff hours billed for each action, as well as some estimates for contractor charges for certain tasks. These resource estimates are based on historical expenses and were calculated using a sample of licensing and oversight actions, though they may still be useful to licensees to help plan and budget for future NRC costs. According to NRC's website, the agency will update most of the resource estimates every 2 years.

Verifying Charges on Invoices

Licensees we interviewed said that they have challenges verifying charges on their invoices because NRC's invoices do not provide enough information on work that NRC staff or contractors perform. For NRC staff work, invoices include the total hours charged by NRC staff for each activity code. However, activity codes often cover broad topics rather than specific work activities. Also, activity codes have a 120-character limit, according to NRC staff, and NRC uses some of those characters to list each licensee's name and other identifying information, which means that there is limited remaining space to identify the specific work activity. Nine of the 13 licensees we interviewed explained that more descriptive activity codes on invoices would be helpful. One licensee said that it is difficult to know what project it is being billed for because the activity code descriptions are cryptic and sometimes nondescript. In addition, all 13 licensees we interviewed indicated that having NRC staff names or their positions would be helpful in verifying the accuracy of charges. For example, 2 of these licensees explained that they are familiar with the NRC staff who consistently work on their projects, so they could consider

questioning charges if the invoice showed a new person working on a project.

Additionally, licensees said that it is difficult to verify charges on their invoices because NRC's invoices also do not contain detailed information on contractor charges. Invoices indicate that work was done by a contractor and provide the total cost of the work, but they do not include the contractor's name or describe the work performed. Five of the licensees we interviewed said that invoices do not have enough information about the contractor and the work performed. Additionally, 4 of these licensees stated that they cannot determine whether the amounts charged were accurate or reasonable without more information.

Challenges related to verifying charges may be addressed by some of NRC's recent changes to its billing process, which include updating invoices. NRC is updating its invoices to include (1) standardized activity codes that have titles describing the specific work activity completed, (2) the names of the NRC staff charging time to the licensee, and (3) the name of the contractor that performed the work for which the licensee is being billed. NRC staff expected to issue the updated invoices to licensees in January 2018, after we completed our audit work. Therefore, we could not assess licensees' satisfaction with the updated invoices. According to a planning document for some of NRC's recent changes, the agency intends to solicit feedback from licensees in fiscal year 2018 on whether the updated invoices have addressed licensees' challenges. However, NRC staff told us that they are not certain when the agency will solicit feedback.

In addition to updating invoices, NRC can provide supplemental information to licensees to help them verify the accuracy of the following charges:

- **NRC staff charges:** NRC created biweekly reports on staff charges that it sends to licensees, when requested.²¹ These biweekly reports provide more frequent cost data and include a level of detail that is not provided on the quarterly invoices. For example, the biweekly reports include NRC staff names and the charges, by employee, for that 2-

²¹NRC staff told us that the agency temporarily stopped sending the bi-weekly reports for the first quarter of fiscal year 2018—October through December—while it updated its financial management system for changes to the billing process, but planned to start sending these reports again in the second quarter.

week period. Three of the 13 licensees we interviewed that receive the biweekly reports said that they use the reports to check the quarterly invoice for accuracy by adding up the costs from the biweekly reports and comparing them to the quarterly invoice. For example, a licensee told us that if the biweekly reports and quarterly invoice have similar totals, it does not raise any questions about the charges.

- **Contractor charges:** NRC has supplemental contractor information that it can provide to licensees. NRC receives monthly status reports from contractors on charges that are ultimately billed to licensees on their quarterly invoices. These monthly status reports include current work performed and associated charges, as well as remaining work to be performed and an estimate of future charges. In 2015, NRC developed a process to review and provide to licensees certain information from the monthly status reports when licensees request it.

Although this supplemental information on staff charges and contractor charges is available, not all licensees know it is available. Specifically, 6 of the 13 licensees we interviewed told us that the biweekly reports would be useful, but did not know the reports are available and can be requested. Also, 10 of the 13 licensees we interviewed told us that detailed information on contract work would be useful, but 9 of them did not know this information is available and can be requested.

Not all licensees know the supplemental information is available because, according to NRC staff in the Office of the Chief Financial Officer, the agency has not instituted a formal process to inform all licensees of its availability. These staff added that the agency has announced the availability of this supplemental information at industry conferences or has told individual licensees about it. NRC staff explained that the agency is meeting statutory requirements for issuing invoices and provides the supplemental information as a courtesy to licensees, but is not required to do so. According to NRC staff in the Office of the Chief Financial Officer, the agency has not formally notified all licensees about the availability of this supplemental information because it is time-consuming to provide it to licensees. These staff also said that they have found that not all licensees may need this information. This is consistent with information from the licensees we interviewed. For example, 2 licensees told us that they do not need biweekly reports; one said that it operates on a fixed annual budget, so additional information on biweekly costs would not be useful. In contrast, NRC staff noted that licensees with more complex invoices—such as multiple sites and multiple inspections and licensing actions—may find the supplemental information useful. *Standards for*

Internal Control in the Federal Government explains that management should communicate quality information externally so that external parties can help the entity achieve its objectives and address related risks.²² Furthermore, being open and transparent in communications is part of NRC's Organizational Values, which guide every action it takes, how it performs administrative tasks, and how it interacts with stakeholders.²³ Communicating to licensees about what information is available could help improve the transparency of NRC's invoices, in accordance with the agency's values.

Additionally, 2 licensees told us that they requested information on work being done by a contractor but NRC staff told them that the information could not be provided. NRC staff in the Office of the Chief Financial Officer acknowledged that some NRC project managers may not be aware that licensees can request contract information because there is no policy or guidance to instruct NRC staff on what information they can provide or how to do so. *Standards for Internal Control in the Federal Government* states that agency management should clearly document—in management directives, administrative policies, or operating manuals—the processes it uses to ensure that it is achieving its objectives.²⁴ By developing a policy and guidance for NRC staff, the agency could help ensure that staff are aware of the agency's processes and provide quality information consistently.

Licensees Identified Challenges with NRC's Method for Delivering Invoices, and NRC's Recent and Planned Changes May Address These Challenges, but Its Plans Are Incomplete

Licensees we interviewed said that NRC's method for delivering paper invoices by mail created challenges related to the format and timeliness of the invoice, though NRC's recent and planned changes may help address these challenges. For example, one licensee told us that, without the sorting and filtering capabilities of an electronic spreadsheet, this licensee is not able to verify the accuracy of charges for specific components of the work that NRC is doing. Another licensee told us that it is difficult to track costs of projects to completion without an electronic spreadsheet of charges. NRC now provides biweekly reports in an electronic spreadsheet format, which may help address the challenges these licensees cited. However, as discussed above, NRC does not

²²[GAO-14-704G](#).

²³Nuclear Regulatory Commission, *NRC Organizational Values*.

²⁴[GAO-14-704G](#).

provide these biweekly reports unless they are requested, and some licensees do not know that they are available.

Licensees also cited challenges with the timeliness of invoices they receive via mail. For example, 2 licensees stated that, with invoices taking up to 10 days to arrive in the mail, licensees sometimes do not have sufficient time to conduct a proper review of charges and remit payment to NRC within the 30-day deadline. According to one licensee we interviewed, delays in receiving the invoices have resulted in late fees. To address the challenge of timeliness, NRC will, upon request from a licensee, e-mail a copy of the invoice to the licensee after the hardcopy invoice has been mailed. This practice allows the licensee to begin reviewing its charges while waiting for the mailed copy to arrive. However, of the 11 licensees that told us an e-mailed copy of the invoice would be useful, 4 of them did not know this option was available.

NRC staff said the agency intends to transition to electronic billing—that is, sending invoices in electronic format via e-mail or providing licensees with web access to review and pay invoices. According to NRC staff, the agency's transition to electronic billing is being done to improve efficiency and internal controls in NRC's billing process. However, doing so may also help address challenges that some licensees experience with the format and timeliness of invoices. For example, 11 of the 13 licensees we interviewed affirmed that receiving electronic invoices or periodic statements of charges electronically would be beneficial.

In October 2016, NRC's Commission directed NRC staff to examine opportunities to accelerate the transition to an electronic billing system. The agency has indicated its intent to complete the planning phase by October 2017 and fully implement a new system by October 2019. However, according to NRC staff, the planning phase was not completed because the agency needed to fully implement the recent changes to its billing process before planning for the transition to electronic billing. As a result, the agency has not yet developed any planning documents to help ensure that it meets its deadlines, achieves its goal of increasing efficiency, or addresses licensees' challenges. NRC staff in the Office of the Chief Financial Officer said that they recognize there could be delays in planning, but still expect to implement electronic billing by October 2019.

We have previously found that federal information technology projects too frequently incur cost overruns and schedule slippages, but that proper planning—including incorporating best practices for project planning and

scheduling—may help mitigate these effects.²⁵ The Project Management Institute's *A Guide to the Project Management Body of Knowledge* identifies standards related to project management processes, including project planning.²⁶ In particular, the guide explains that the project plan is a comprehensive document that defines the basis of all project work and describes how the project will be executed, monitored, and controlled.²⁷ The project plan integrates and consolidates plans for project components, such as plans for managing the project's scope, schedule, cost, quality, and risk, among others. Among other things, the project management plan may also include requirements and techniques for communication among stakeholders and key reviews by management. By developing a project management plan that is consistent with best practices, NRC would have more reasonable assurance that it is better managing its transition to electronic billing.

Furthermore, *Standards for Internal Control in the Federal Government* also states that, in deciding what information is required to achieve objectives, management should consider the needs of both internal and external users. Additionally, we have previously identified common factors critical to successful information technology acquisitions.²⁸ Among these factors are (1) involving end users and stakeholders in developing requirements and (2) including end users in testing of system functionality prior to formal end user acceptance testing. As NRC develops a project management plan, by involving licensees in developing system capabilities for electronic billing, which includes soliciting and considering licensees' information needs, the agency would have better assurance of a successful transition to electronic billing.

Additionally, *Standards for Internal Control in the Federal Government* states that management should design control activities to achieve objectives.²⁹ Control activities may include establishing performance

²⁵GAO, *Information Technology Investment Management: A Framework for Assessing and Improving Process Maturity*, [GAO-04-394G](#) (Washington, D.C.: March 2004).

²⁶Project Management Institute, *A Guide to the Project Management Body of Knowledge* (PMBOK® Guide) - Fifth Edition.

²⁷Project Management Institute, *A Guide to the Project Management Body of Knowledge* (PMBOK® Guide) - Fifth Edition.

²⁸GAO, *Information Technology: Critical Factors Underlying Successful Major Acquisitions*, [GAO-12-7](#) (Washington, D.C.: Oct. 21, 2011).

²⁹[GAO-14-704G](#).

measures and indicators and management reviews that compare actual performance to planned or expected results and analyze significant differences. As NRC develops a project management plan, including steps to assess the results of implementing electronic billing, which includes comparing actual performance of the new electronic billing system to planned results, would provide the agency more reasonable assurance that the project meets desired outcomes.

Conclusions

NRC has recently implemented or plans to implement a number of changes to its billing process that—if implemented as intended—could address challenges that licensees identified in our interviews. However, additional steps could enhance NRC’s efforts to improve its billing process. Licensees told us that they could use more detailed information, more timely information, and information in an electronic format. NRC has made more detailed information on staff charges available in biweekly reports and has developed a process to provide detailed information on contractor work, upon request from a licensee. NRC is also providing invoices in electronic format to some licensees, when requested. However, some licensees that would find the information on staff and contractor charges useful do not know that it is available, and some NRC staff are not aware that they can provide it or how to do so. Until NRC communicates to all licensees about what information is available and develops a policy and guidance for agency staff, the agency cannot ensure that it is providing quality information consistently.

Further, NRC intends to take additional action toward improving its billing process and invoices by transitioning to electronic billing. As NRC moves forward with this project, developing a project management plan that is consistent with best practices, to include establishing plans for the project’s schedule and cost, as well as involving licensees in developing the plan and assessing the results of implementation, will give the agency more reasonable assurance that it is better managing its transition to electronic billing and could help ensure that the project meets desired outcomes.

Recommendations for Executive Action

We are making the following five recommendations to NRC:

The Chief Financial Officer of NRC should formally communicate to all licensees that supplemental billing information—including biweekly reports and monthly status reports on contractor charges—is available and how to request it. Formal communication that would reach all

licensees could include adding information to their quarterly invoices.
(Recommendation 1)

The Chief Financial Officer of NRC should develop agency policy and guidance for staff on what billing information related to contractor charges NRC staff can provide to licensees and how it should be provided.
(Recommendation 2)

As NRC plans its transition to electronic billing, the Chief Financial Officer of NRC should develop a project plan that incorporates standards for project management, which includes establishing plans for schedule and cost. (Recommendation 3)

In developing the project plan for electronic billing, the Chief Financial Officer of NRC should include steps to involve licensees in developing system capabilities, which includes soliciting and considering licensees' information needs. (Recommendation 4)

In developing the project plan for electronic billing, the Chief Financial Officer of NRC should include steps to assess the results of implementing electronic billing, which includes comparing the actual performance to intended outcomes. (Recommendation 5)

Agency Comments

We provided a draft of this report to NRC for review and comment. NRC provided written comments, which are reproduced in appendix I. In its written comments, NRC agreed with our findings and recommendations.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the report date. At that time, we will send copies to the appropriate congressional committees, the Chairman of the Nuclear Regulatory Commission, and other interested parties. In addition, the report will be available at no charge on the GAO website at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-3841 or ruscof@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made key contributions to this report are listed in appendix II.

A handwritten signature in black ink, reading "Frank Rusco" with a long, sweeping horizontal line extending to the right.

Frank Rusco
Director, Natural Resources and Environment

List of Requesters

The Honorable John Barrasso
Chairman
Committee on Environment and Public Works
United States Senate

The Honorable Shelley Moore Capito
Chairman
Subcommittee on Clean Air and Nuclear Safety
Committee on Environment and Public Works
United States Senate

The Honorable Greg Walden
Chairman
Committee on Energy and Commerce
House of Representatives

The Honorable Fred Upton
Chairman
Subcommittee on Energy
Committee on Energy and Commerce
House of Representatives

Appendix I: Comments from the Nuclear Regulatory Commission



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

February 23, 2018

Mr. Frank Rusco, Director
Natural Resources and Environment
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20226

Dear Mr. Rusco:

On behalf of the U.S. Nuclear Regulatory Commission (NRC), I am responding to the U.S. Government Accountability Office (GAO) e-mail dated January 26, 2018, which provided the NRC an opportunity to review and comment on the GAO draft report GAO-18-318, "*Nuclear Regulatory Commission: Additional Action Needed to Improve Process for Billing Licensees.*"

The NRC staff appreciates the opportunity to review the draft report, and we appreciate the GAO staff's professionalism and many constructive interactions during this GAO engagement. Overall, the NRC agrees with the draft report and its findings. The draft report accurately describes the current efforts the NRC has taken to make this process more efficient and effective. Additionally, the NRC agrees with the recommendations for executive action.

Thank you again for the opportunity to provide comments on the GAO report. Please feel free to contact Mr. John Jolicoeur at (301) 415-1642 or John.Jolicoeur@nrc.gov if you have questions or need additional information.

Sincerely,

A handwritten signature in blue ink, appearing to read "Victor M. McCree", with the word "FOR" written in blue ink below it.

Victor M. McCree
Executive Director for Operations

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

Frank Rusco, (202) 512-3841 or ruscof@gao.gov

Staff Acknowledgments

In addition to the contact named above, Hilary Benedict (Assistant Director), Wyatt R. Hundrup (Analyst in Charge), and Breanna Trexler made key contributions to this report. Also contributing to this report were Ellen Fried, Cindy Gilbert, Heather Keister, Benjamin Licht, Laurel Plume, Dan C. Royer, and Barbara Timmerman.

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