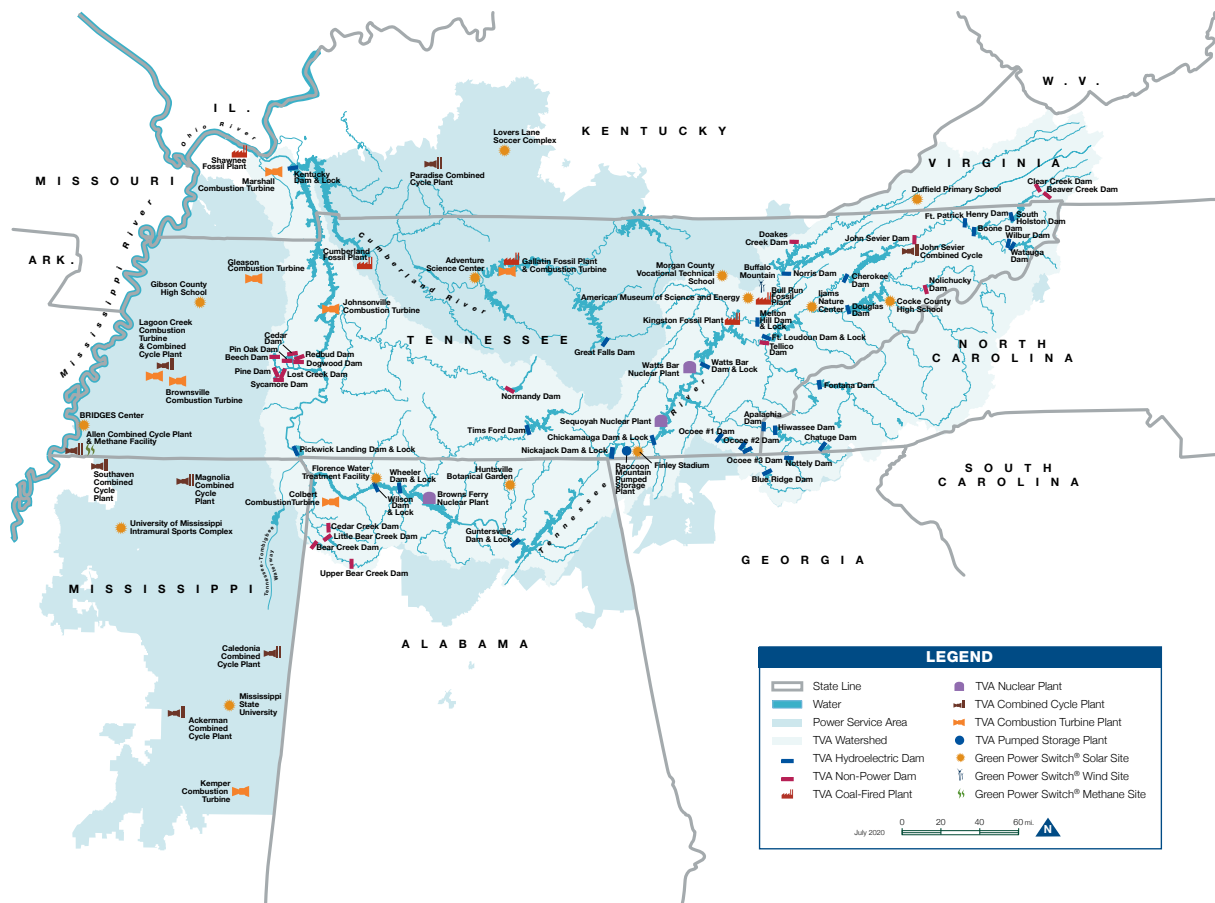
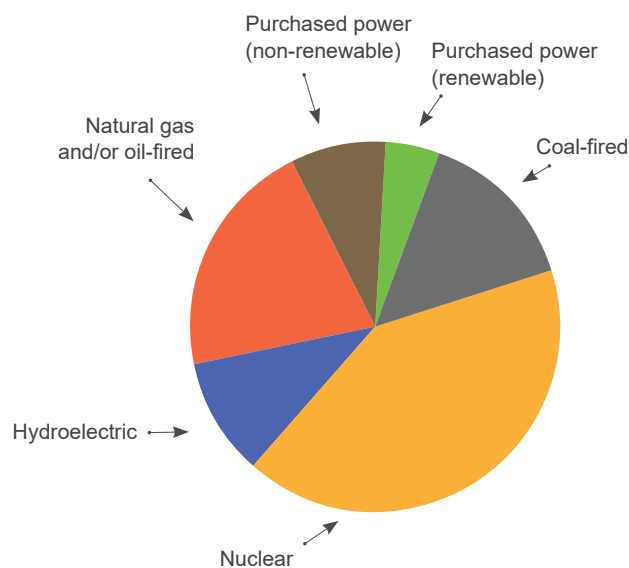


Office of the Inspector General
TENNESSEE VALLEY AUTHORITY
Semiannual Report
April 1, 2021 - September 30, 2021



Power Supply from TVA-Operated Generation Facilities and Purchased Power Year Ended September 30, 2021¹ (in millions of kilowatt hours)



- Coal-fired - 23,378
- Nuclear - 66,228
- Hydroelectric - 16,346
- Natural gas and/or oil-fired - 33,272
- Purchased power (non-renewable) - 13,258
- Purchased power (renewable) - 7,296

¹ For additional detail, see TVA's 10-K for the year ended September 30, 2021.

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MESSAGE FROM THE DEPUTY INSPECTOR GENERAL



I am pleased to present our report for the period April 1, 2021, to September 30, 2021. Our independent, professional, and dedicated staff continually focus on identifying potential risks to the Tennessee Valley Authority's (TVA) ability to achieve its mission of providing reliable power at the lowest feasible rates, environmental stewardship, and economic development to the Tennessee Valley.

In this semiannual period, our audit, evaluation, and investigative activities identified more than \$33.4 million in questioned costs, funds put to better use, recoveries, and waste, as well as opportunities for TVA to improve its programs and operations. Below are highlights of our work this period.

- Six compliance audits of contracts identified overbillings and cost savings of almost \$23.2 million.
- An audit of solar purchased power agreements found TVA had employed recommendations from a previous Office of the Inspector General (OIG) report on wind power contracts to (1) take a more measured approach for large projects in areas TVA does not have familiarity or that are new to TVA and (2) provide positive financial value earlier in the term of the purchased power agreements.
- Information Technology (IT) audits in the areas of privacy, privileged account management, and patching revealed several areas for improvement.
- An evaluation of TVA Nuclear's handling of potentially contaminated liquids identified deficiencies in the handling of these liquids at each of TVA's nuclear sites.
- Evaluations of TVA's coal, gas, and hydro industrial hygiene programs identified weaknesses that resulted in some hazards not being identified and evaluated.
- An evaluation of Transmission and Power Supply's arc flash protection program identified weaknesses related to adherence to procedures and arc flash calculations.
- Six organizational effectiveness evaluations in various TVA organizations identified strengths as well as behavioral risks that could, if not addressed, impact each individual business unit's ability to execute its mission.
- Results from investigations include more than \$7.3 million in restitution to TVA and others, and almost \$2.9 million of waste/other monetary loss identified, in addition to significant civil, prosecutive, and administrative results.



Our Inspector General (IG) position has been vacant since September 2017 when Richard Moore resigned to become the United States Attorney for the Southern District of Alabama. Although outside this reporting period, on October 6, 2021, President Joe Biden announced his intent to nominate Ben Wagner to be the next TVA IG. Additionally, on April 22, 2021, President Biden forwarded the nominations of Beth Geer, Robert Klein, Kimberly Lewis, and Michelle Moore for the TVA Board of Directors to the United States Senate, where they are awaiting confirmation.

I am extremely honored to get to work with this OIG team every day to make TVA better. Our team remains focused not only on what we do, but also on how we perform our work to maximize our resources and help identify risks to TVA. In our Noteworthy Events section, you will see two of our teams who were recognized by the Council of Inspectors General on Integrity and Efficiency with Awards for Excellence. In addition, for six consecutive years, because of the continual focus of each person on this team

to create and maintain a strong work environment, our office has been recognized as one of the Best Places to Work in the Federal Government—an honor directly attributable to the dedication of our entire team.

Finally, these continue to be difficult times, with unique challenges posed by the ongoing pandemic. As we work to identify risks and areas for improvement, we appreciate the professionalism of and dialogue with TVA's Board and management so that these risks can be mitigated. We look forward to continuing to work with the TVA Board and management as we all strive to make TVA better for the benefit of everyone in the Tennessee Valley.

Jill M. Matthews
Jill M. Matthews

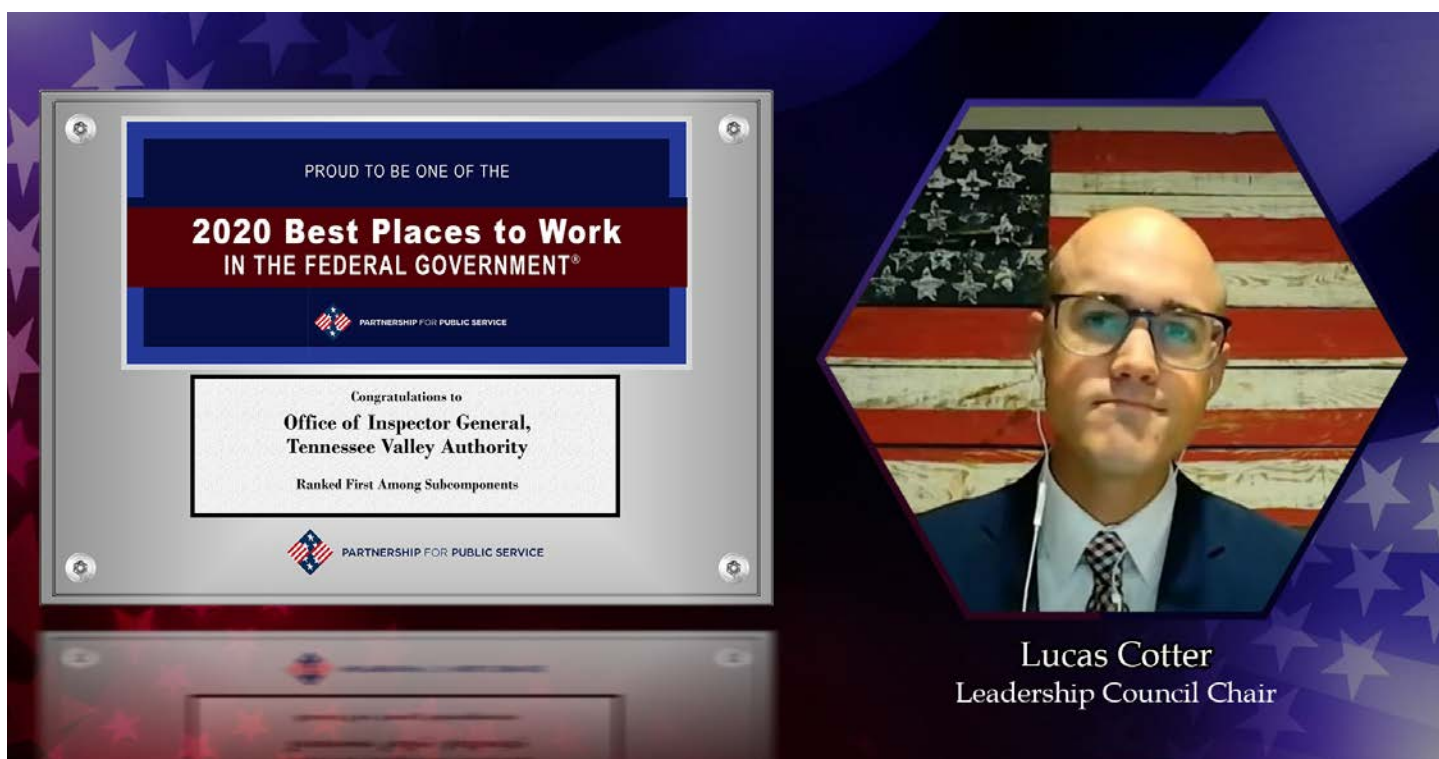
Deputy Inspector General Performing the
Duties of the Inspector General

NOTEWORTHY EVENTS

A photograph of the Bull Run Fossil Plant at night. Two tall, cylindrical smokestacks are illuminated against a dark, cloudy sky. In the foreground, a bridge with a series of lights spans across the frame, and its reflection is visible in the calm water below. The overall scene is dark, with the primary light sources being the plant's structures and the bridge lights.

Bull Run Fossil Plant

The TVA OIG has been named one of the best places to work in the federal government for a sixth consecutive year in 2020. The award was given at a virtual ceremony, June 29, 2021, by the nonprofit, nonpartisan Partnership for Public Service that determines the rankings.



TVA OIG NAMED ONE OF THE “BEST PLACES TO WORK”

TVA OIG was ranked first for the fifth time among 411 participating federal agency subcomponents. Its ranking is based on the Office of Personnel Management's annual Federal Employee Viewpoint Survey.

Deputy IG Jill Matthews said, "I am very proud of our team. This award is a testament to their commitment to fostering and sustaining a healthy work environment so that we can perform our important work and provide greater value to TVA and the people of the Tennessee Valley."

Lucas Cotter, then-chair of the OIG Leadership Council, accepted the award for the TVA OIG and said, "It was an honor to accept this award on behalf of the TVA OIG. This recognition is a testament to the office's dedication to its mission and its healthy culture. To remain among the

best places to work in the federal government in spite of the many challenges faced over the last year is evidence of our commitment to continuous improvement. It's a privilege to work alongside so many good people who make this possible."

For more information on the best places to work in the federal government, visit <https://bestplacetowork.org>. To learn more about TVA OIG, go to <https://oig.tva.gov>.

TVA OIG TEAMS WIN CIGIE AWARDS

The Council of the Inspectors General on Integrity and Efficiency (CIGIE) was established to address integrity, economy, and effectiveness issues that transcend individual federal government agencies and aid in the establishment of a professional, well-trained, and highly skilled workforce across the 75 Offices of Inspectors General.

To highlight the impactful work of federal IGs, CIGIE conducts an annual awards process where individual OIGs submit nominations for outstanding work performed. This year, two TVA OIG teams were recognized for the impact of their work. CIGIE Awards for Excellence were presented virtually on October 12, 2021.

The first award was given for an audit that addressed a cybersecurity insider threat for TVA. The TVA OIG team, comprised of Weston Shepherd and Frank Lord, won an award for their Information Technology Contractor Access audit. According to a 2019 Verizon Data Breach Investigations report, 34 percent of cybersecurity breaches involved individuals who have already been granted logical

access to systems in order to do their jobs, referred to as internal actors. According to Ernst & Young LLP, an insider threat is when a current or former employee, contractor, or business partner who has or had authorized access to an organization's network systems, data, or premises, uses that access to compromise the confidentiality, availability, or integrity of the organization's network systems, data, or premises, whether or not out of malicious intent. With a more than 50 percent failure rate of contractor background screening requirements, the team determined TVA had a potential risk of an insider threat. Insider threats can include fraud, theft of intellectual property, or trade secrets, espionage, and IT infrastructure sabotage.

The second award was given for an evaluation of TVA's Response to COVID-19. The TVA OIG team, comprised of Lindsay Denny and Lucas Cotter, identified a program offered by TVA that included an unsubstantiated statement promoting technology to customers to combat COVID-19. The program offered incentives to businesses, churches, and schools throughout the Tennessee Valley for installing duct-mounted ultraviolet germicidal irradiation (UVGI) systems. UVGI is an established means





of disinfection and has been used to prevent the spread of certain infectious diseases. In advertising this incentivized technology on their Web site, TVA used language that stated UVGI technology will kill the COVID-19 virus. However, we determined that while the technology had been tested on similar viruses in the past, it had not been tested and proven effective on COVID-19. At a time when the

world was on high alert for ways to mitigate exposure to COVID-19, promoting and incentivizing UVGI technology as a means to kill COVID-19 without testing to prove the effectiveness of the claims could have resulted in businesses, churches, and schools unknowingly exposing themselves and patrons to risks they felt had been mitigated.

EXECUTIVE OVERVIEW



TVA employees and contractors make large and small decisions every day that carry potential risks that could negatively impact TVA safety, financial health, the environment, cybersecurity, stakeholder confidence, and more. These decisions are made in an ever-changing landscape. Our office focuses our independent oversight across the breadth of these risks with the goal of being a trusted advisor, making recommendations for ways TVA can be more effective and efficient, and detect and prevent fraud, waste, and abuse. Our work performed in this reporting period has provided recommendations and actions that help make TVA better for the 10 million people served across the Tennessee Valley.

AUDITS

Our audit organization includes three departments that focus on contract audits, financial and operational audits, and IT audits. During this reporting period, these teams completed 12 audits and examinations that identified nearly \$23.2 million in questioned costs and funds to be put to better use.

Contract Audits

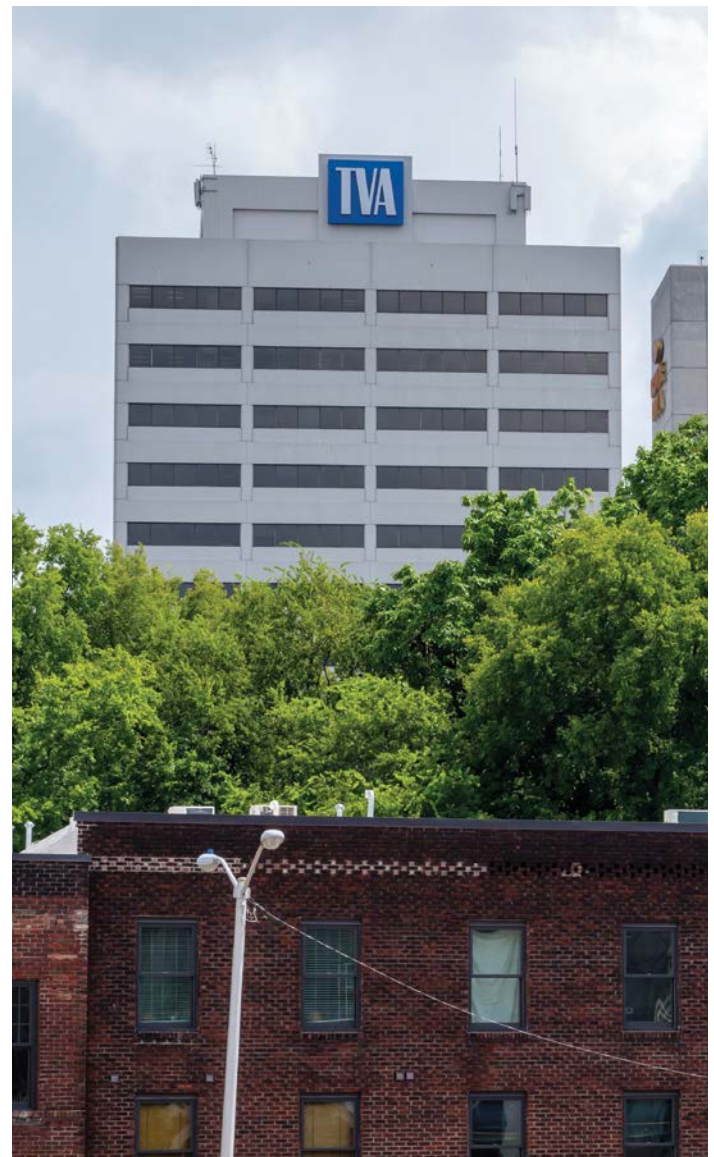
We completed six compliance audits of contracts with expenditures totaling \$396.6 million related to (1) nuclear fuel fabrication services, (2) a long-term services agreement at TVA's Ackerman Combined Cycle Plant, (3) coal combustion residual engineering services, (4) construction and modification services for TVA's Transmission and Power Supply Program, (5) valley-wide engineering services, and (6) engineering services at TVA's Boone Hydroelectric Plant. These audits identified potential overbillings and cost savings of \$23.2 million. The Contract Audits section begins on page 19 of this report.

Financial and Operational Audits

With a focus on financial reporting, compliance with applicable laws and regulations, and TVA operations, we completed audits of TVA's Federal Sustainability Report and Implementation Plan, contractor use of purchasing cards, and TVA solar purchased power agreements. In addition to our audit work, we performed work to assist TVA's external auditor. The Financial and Operational Audits section begins on page 20 of this report.

IT Audits

IT Audits completed audits of TVA's (1) privacy program, (2) privileged account management, and (3) Windows® desktop and laptop patching. The IT Audits section begins on page 24 of this report.





EVALUATIONS

Our Evaluations organization includes two groups, one of which focuses on organizational effectiveness reviews. During this reporting period, our teams completed seven evaluations and six organizational effectiveness reviews, all of which identified opportunities for improvement.

Evaluations

The Evaluations group completed seven evaluations during this semiannual period. These included evaluations of Transmission and Power Supply's switching and clearance procedures, TVA Nuclear's handling of potentially contaminated liquids, TVA's strategic real estate plan, Transmission and Power Supply's arc flash protection, and the Industrial Hygiene Program at coal, gas, and hydro plants. The Evaluations section begins on page 26 of this report.

Organizational Effectiveness

This group completed evaluations of six TVA organizations to assess behavioral and operational factors that could impact their organizational effectiveness. The organizational effectiveness reviews included evaluations of Sequoyah Nuclear Plant Chemistry, Commercial Energy Solutions' Fuels and Hedging group, Generation Services' Field Services group, Johnsonville Combustion Turbine Plant, John Sevier Combined Cycle Plant, and Transmissions Field Operations' North Maintenance. The Organizational Effectiveness section begins on page 29 of this report.

INVESTIGATIONS

This reporting period, we opened 74 cases and closed 83. Our investigative results include restitution to TVA and others totaling over \$7.3 million, and almost \$2.9 million of waste/other monetary loss identified, in addition to significant civil, prosecutive, and administrative results. The Investigations section begins on page 32 of this report.

STATISTICAL HIGHLIGHTS

April 1, 2021 – September 30, 2021

Audit Reports Issued	12
Evaluations Completed	13
Questioned Costs	\$13,457,778
Questioned Costs Agreed to by TVA	\$8,424,617
Questioned Costs Recovered by TVA	\$394,752
Funds to be Put to Better Use	\$9,700,000
Savings Realized by TVA	\$2,240,000
Investigations Opened	74
Investigations Closed	83
Recoveries/Fees	\$7,358,320
Waste/Other Monetary Loss	\$2,886,968
Criminal Forfeitures Ordered	\$1,750,000
Criminal Actions	8
Administrative Actions (Number of Subjects)	4

ORGANIZATION



Since 1985, the OIG has worked to help TVA become better. Through our audits, evaluations, and investigations, we provide TVA management, the TVA Board, and Congress with an independent look at the economy, efficiency, and effectiveness of TVA programs and help prevent and detect fraud, waste, and abuse. Over the years, the OIG has helped TVA save or recover millions of dollars and recommended numerous program improvements. We credit our success to the efforts of our hardworking and talented staff and the professional responsiveness of TVA management to our recommendations.

TVA OIG OFFICE LOCATIONS

The OIG has a work philosophy of being in the right place at the right time to do the best work possible. We support that philosophy by encouraging our OIG employees to work where they can be most effective whether that is in one of our physical offices, in the field, or in one of our virtual offices that enable our employees to telework from home or while traveling. Our philosophy has served us well, especially during the ongoing COVID-19 pandemic.

The OIG has strategically located its offices near all major TVA offices throughout the Tennessee Valley. We are headquartered in TVA's Knoxville Office Complex overlooking the downtown area. The OIG has a field office in Chattanooga, Tennessee, where members of the Evaluations and Financial and Operational Audits departments and several special agents are located. Special agents are also located in field offices in Nashville, Tennessee, and Huntsville, Alabama. Additionally, we have office locations at Watts Bar Nuclear Plant in Spring City, Tennessee, and Sequoyah Nuclear Plant in Soddy Daisy, Tennessee. Staff work in these locations as needed. As of September 30, 2021, the OIG had a total staff of 103 employees.

ADMINISTRATION

The Administration team works closely with the IG, Deputy IG, and Assistant IGs to address the day-to-day operations of the OIG and to develop policies and procedures designed to drive and enhance productivity, quality, and compliance, and achieve office goals.

Responsibilities include personnel administration, internal assessments, budget and financial management, purchasing and contract services, facilities coordination, training-event planning, communications facilitation, and IT support.

AUDITS AND EVALUATIONS

The Audits and Evaluations teams perform a wide variety of engagements designed to promote positive change and provide assurance to TVA stakeholders. Based upon the results of these engagements, the Audits and Evaluations organizations make recommendations to enhance the effectiveness and efficiency of TVA programs and operations.

The organizations use an impact- and risk-based approach to develop an annual work plan. In developing the plan, the OIG considers TVA's strategic plans, major management challenges, TVA's enterprise risk management process, and other input from TVA management. This planning model also evaluates each potential engagement from the standpoint of materiality (i.e., costs or value of assets), potential impact, sensitivity (including public and congressional interest), and the likelihood it will result in recommendations for cost savings, recovery of dollars, or process improvements. The result of the OIG Audits and Evaluations planning process is a focus on the issues of highest impact and risk to TVA.

These issues vary depending on the objectives of the project. The graphic on page 16 shows some representative examples of issues our audit and evaluation projects are commonly designed to identify.

TYPES OF AUDIT & EVALUATION ISSUES



The Audits team conducts performance audits of TVA programs and operations, providing an inclusive picture of TVA's overall fiscal and operational health. The organization is made up of three departments—Contract Audits, Financial and Operational Audits, and IT Audits. The Audits organization performs its work in accordance with *Government Auditing Standards*.

- Contract Audits has lead responsibility for contract compliance audits and preaward examinations. In addition, this department performs audits of TVA contracting processes and provides claims assistance as well as litigation support.
- Financial and Operational Audits is responsible for performing audit work mandated by legislation, agreed-upon procedures, as well as risk-based audits associated with TVA financial and operational activities. The work stems largely from mandated activities, review of TVA's business-risk environment, consideration of emerging issues, and requests. This department also provides oversight of the TVA external auditor's compliance with professional standards.

- IT Audits has lead responsibility for audits relating to the security of TVA's IT infrastructure, application controls, and general controls associated with TVA systems. This department also performs operational audits of the effectiveness of IT-related functions.

The Evaluations team assesses both operational and cultural aspects of programs and departments throughout TVA to ensure objectives and operational functions are achieved effectively and efficiently. This organization is made up of two departments—Evaluations and Organizational Effectiveness. This organization performs its work in accordance with *Quality Standards for Inspection and Evaluation* as prescribed by CIGIE.

- Evaluations performs both comprehensive reviews and more limited-scope policy and program reviews to monitor compliance and assess the efficiency and effectiveness of operations.
- Organizational Effectiveness performs risk-based reviews to assess operational and cultural areas, including behavioral and operational factors that could impact an organization's ability to achieve its mission and goals.

INVESTIGATIONS

The Investigations team proactively and reactively uncovers activity related to fraud, waste, and abuse in TVA programs and operations. This organization performs its investigations in accordance with the *Quality Standards for Investigations* as prescribed by CIGIE, applicable U.S. Attorney General Guidelines, and other guiding documents. OIG special agents maintain liaisons with federal and state prosecutors and notify the U.S. Department of Justice whenever the OIG has reason to believe there has been a violation of federal criminal law. Special agents partner with other investigative agencies and organizations on special projects and assignments, including interagency law enforcement task forces on terrorism, the environment, health care, and public corruption. The graphic below shows the major categories of investigations.

LEGAL

The OIG Legal Counsel team monitors existing and proposed legislation and regulations that relate to the mandate, operations, and programs of the OIG and TVA. Additionally, this team provides legal advice as needed for administrative, audit, evaluation, and investigative projects. OIG attorneys serve as ethics officials, providing OIG employees guidance on government ethics and standards of conduct. The TVA Whistleblower Protection Coordinator is also a part of this team and provides information regarding the statutory protections against retaliation for all TVA employees.

MAJOR CATEGORIES OF INVESTIGATIONS

Contract Fraud

Defrauding TVA through its procurement of goods and services, including fraud schemes such as misrepresenting costs, overbilling, product substitution, and falsification of work certifications

Theft of Government Property and Services

Theft of TVA property such as material, tools, equipment, or resources

Unauthorized Access Into TVA Computer Systems

Accessing a TVA computer without authorization or exceeding authorized access

Health Care Fraud

Intentional misrepresentation of health-care services, expenses, billings, needs, or coverage that results in unauthorized payments or other benefits

Workers' Compensation Fraud

Falsification of documents to receive payments by employees, former employees, or health-care providers

Employee Misconduct

Misuse of TVA-furnished equipment, travel voucher fraud, a multitude of miscellaneous matters of abuse, conflict of interest, and violations of code of conduct

Environmental Crime

Violations of environmental criminal law pertaining to the Tennessee River system and its watershed, along with violations relating to TVA land and facilities

Special Projects

Management requests, data mining and predictive analysis, congressional and TVA Board requests, and Fraud Risk Assessments

SUMMARY OF REPRESENTATIVE AUDITS



Browns Ferry Nuclear Plant

During this semiannual reporting period, the TVA OIG audit organization completed 12 audits and examinations. This work identified almost \$23.2 million in questioned costs for TVA to recover and funds to be put to better use. We also identified several opportunities for TVA to improve the effectiveness and efficiency of its programs and operations.

CONTRACT AUDITS

Contract Compliance Reviews

During this semiannual period, we completed six compliance audits of contracts with expenditures totaling \$396.6 million. These audits identified potential overbillings and cost savings of nearly \$23.2 million. Highlights of our completed compliance audits follow.

- We audited \$137.7 million in costs billed by a contractor for providing fuel fabrication services for TVA's Browns Ferry Nuclear Plant. We determined the costs billed generally complied with the contract except for a net \$80,862 overbilled due to escalation calculation errors. Specifically, we found (1) a 2017 escalation calculation was overstated by \$88,910 and (2) two 2020 escalation calculations were understated by a total of \$8,048.
- We audited \$68.1 million in costs billed by a contractor for services related to a long-term service agreement for the Ackerman Combined Cycle Plant. We determined the contractor overbilled TVA \$201,829 due to ineligible and unsupported time and material costs. Specifically, we found the contractor billed TVA (1) \$124,501 for ineligible per diem costs, (2) \$30,523 in unsupported tool costs, (3) \$18,342 for ineligible noncraft labor costs, (4) an estimated \$17,425 for ineligible craft labor costs, and (5) \$11,038 in other ineligible costs. In addition, we identified \$500,580 in costs billed to and paid by TVA under the contract that should have been billed under another contract TVA had with the contractor. We also identified opportunities to improve contract administration by TVA. Specifically, we found (1) the contract limited TVA's ability to control cost and (2) TVA did not maintain adequate documentation to support credits taken by TVA.
- We audited \$55.3 million in costs billed by a contractor for coal combustion residual engineering services. The contract provided for TVA to compensate the contractor for work on either a cost-reimbursable, time and material (T&M), unit rate, or fixed-price basis. Our audit objectives were to determine if (1) costs were billed in accordance with the terms and conditions of the contract and (2) tasks were issued using the most cost-efficient pricing methodology. Over 99.9 percent of the costs billed during our audit scope were billed using T&M compensation terms. In summary, we determined:
 - The contractor overbilled TVA \$93,916, including (1) \$73,099 for mileage rates not specified in the contract and (2) \$20,817 for ineligible travel costs.
 - The use of T&M terms on projects caused TVA to pay at least \$1,651,014 more than it would have if cost-reimbursable payment terms had been used for those projects. Additionally, if TVA utilized cost-reimbursable pricing for the remaining contract spend, they could potentially avoid \$1.01 million in future costs.
- We audited \$35.5 million in costs billed by a contractor for construction and modification services for TVA's Transmission and Power Supply Program. We determined the contractor overbilled

TVA \$120,152, including (1) a net \$93,695 in unsupported and incorrect craft labor charges, (2) \$13,955 in unsupported travel costs, and (3) \$12,502 in unsupported equipment costs. In addition, we found that (1) the contractor did not submit electronic billing files to TVA as required by the contract and (2) TVA did not revise the contract's equipment rate schedule to include a piece of equipment approved for use by TVA's Contract Manager.

- We audited \$57.5 million in costs billed by a contractor for engineering, design, and construction support services in support of TVA's dam safety, generation, and transmission work. The contract provided for TVA to compensate the contractor for these services on either a cost-reimbursable or fixed-price basis. Our audit objectives were to determine if (1) costs were billed in accordance with the terms and conditions of the contract and (2) tasks were issued using the most cost-efficient pricing methodology. Our audit scope included \$25.8 million for cost-reimbursable projects and \$31.7 million for fixed-price projects. In summary, we determined:

- The contractor overbilled TVA \$213,545 on cost-reimbursable projects, including (1) \$147,045 in temporary living allowances and travel costs, (2) \$34,298 in subcontractor costs, (3) \$18,576 in labor costs, (4) a net \$7,195 in performance fee payments, and (5) \$6,431 in volume discounts not provided to TVA.
- The use of fixed-price payment terms on projects caused TVA to pay at least \$1,524,041 more than it would have if cost-reimbursable payment terms had been used for those projects. Additionally, if TVA utilized cost-reimbursable pricing for the remaining spend on its current contract with the contractor, we estimated TVA could potentially avoid up to \$8.69 million in future costs.

- We audited \$42.5 million in costs billed by a contractor for engineering services at TVA's Boone Hydroelectric Plant. In summary, we determined:

- The contractor overbilled TVA an estimated \$5,771,839, including (1) an estimated \$5,657,998 for unapproved overtime costs for exempt labor categories, (2) \$69,383 in travel and temporary living allowance costs, and (3) a net \$44,458 for incorrect hourly billing rates.
- TVA paid an estimated \$3.3 million more in labor costs by using fixed hourly labor rates instead of negotiating cost-reimbursable compensation terms in its contract.

We also found (1) invoices were not submitted timely, (2) the contractor had not submitted electronic billing files to TVA as required by the contract, (3) site expenses were not provided for in the contract, and (4) the labor categories included in the contract's pricing schedule did not correspond to the contractor's internal job titles.

FINANCIAL AND OPERATIONAL AUDITS

During this semiannual period, Financial and Operational Audits completed audits of TVA's Federal Sustainability Report and Implementation Plan, contractor use of purchasing cards, and TVA solar purchased power agreements. In addition to our audit work, we performed work to assist TVA's external auditor.

Federal Sustainability Report and Implementation Plan

Based on the reputational risk of disseminating inaccurate information to the public, we included an audit of TVA's Federal Sustainability Report and Implementation Plan (SRIP) in our fiscal year (FY) 2021 Audit Plan. TVA submitted its first Federal SRIP to the White House in





June 2010 in compliance with Executive Order (EO) 13514, *Federal Leadership in Environmental, Energy, and Economic Performance*. Since that time, each administration has issued additional EOs that revoked all or portions of the previous administration's EOs and modified agency goals and reporting requirements. However, the requirement for TVA to file a SRIP has remained consistent through each EO. On May 17, 2018, President Donald Trump issued EO 13834, *Efficient Federal Operations*.¹ TVA's FY 2020 SRIP was filed under the requirements of EO 13834.

We found TVA did not perform procedures to validate data used to calculate nine of the ten metrics reported in the FY 2020 SRIP. TVA validated data for the greenhouse gas emissions information included in the report, but at most, performed reviews for reasonableness for the remaining nine metrics reported and calculated by TVA's Environment and Energy Policy group or subject matter experts.

TVA management agreed with our recommendations to develop guidance similar to that used to calculate the Greenhouse Gas Emissions metric to help ensure consistency in the calculation of other metrics included in the SRIP and require subject matter experts to incorporate data validation steps into the review of raw data sources used to calculate metrics in the SRIP.

Contractor Use of Purchasing Cards

We performed an audit of contractor use of TVA purchasing cards to determine if adequate controls are in place to ensure purchases made by TVA contractors using a TVA purchasing card are (1) for TVA business purposes and not the use of another entity and (2) not being billed back to TVA. The scope of our audit was approximately \$4.88 million in cardholder transactions during FY 2020.

Our audit found controls were generally adequate to ensure purchases made by TVA contractors using a TVA purchasing card were for TVA business purposes and not the use of another entity. However, we also determined:

- TVA does not have controls in place to ensure purchases made by contractor employees assigned a TVA purchasing card are not being billed back to TVA on invoices from the contractor.
- Required language to govern contractor's usage and liability for purchasing cards issued to TVA contractors is not included in contracts.
- Over 50 percent of the transactions we tested were not reconciled by the cardholder in a timely manner, resulting in untimely approval by the approving official.

TVA management stated they would evaluate our recommendation to implement a review process to compare contractor TVA purchasing card charges to invoices submitted by the contracting company, or stop allowing contractor personnel to use TVA purchasing cards. TVA management agreed with our recommendations to (1) develop contract language to govern contractor's usage and liability for purchasing cards issued to TVA contractors and add to existing contracts as applicable and (2) reinforce the policy for reconciliation of the purchasing card statement to contractor employees assigned TVA purchasing cards.

¹ United States, Executive Office of the President [Donald Trump], Presidential Documents, *Executive Order 13834 – Efficient Federal Operations*, May 17, 2018, <<https://www.federalregister.gov/documents/2018/05/22/2018-11101/efficient-federal-operations>>, accessed on December 15, 2020.

Solar Purchased Power Agreements

TVA's 2019 Integrated Resource Plan anticipates adding between 1,500 and 8,000 megawatts (MW) of solar power by 2028 and up to 14,000 MW by 2038 if a high level of load growth materializes. Therefore, we included an audit of TVA solar purchased power agreements (PPA) in our FY 2021 Audit Plan.

A 2017 OIG audit of TVA's wind power contracts² recommended TVA:

1. Take a measured approach for large projects in areas TVA does not have familiarity or that are new to TVA. For instance, rather than entering into several large contracts in a short period of time, consideration should be given to entering into one small contract to gain a better understanding of the industry and market.
2. Provide positive financial value earlier in future PPA contract terms by negotiating terms that do not set a level fixed price over the contract term. Instead, use periodic price adjustments (quarterly or annually) based on a specific economic index or escalating the price at a predetermined rate over the contract term.

In light of the recommendations from the 2017 audit, our objectives were to determine if TVA has (1) approached solar PPAs to better understand the industry and market trends being developed prior to entering into multiple agreements and (2) developed solar PPAs to recognize positive financial value earlier in the term of the PPAs. The scope of our review was utility-scale solar PPAs in place as of December 31, 2020, which included 15 utility-scale solar projects totaling 1,966.2 MW. We found TVA had (1) taken a measured approach to solar PPAs to better understand the industry and market trends and (2) generally developed solar PPAs to recognize positive financial value or breakeven.

IT AUDITS

During this semiannual period, IT Audits completed audits of TVA's (1) privacy program, (2) privileged account management, and (3) Windows® desktop and laptop patching.

Privacy Program

The Consolidated Appropriations Act of 2008 requires IGs to conduct periodic reviews of their agency's privacy program. We performed an audit to determine if TVA's privacy program was effective and in compliance with applicable regulations, guidance, and TVA policies. We found several areas of the privacy program to be generally effective, including (1) completion of privacy impact assessments, (2) privacy-related training taken by network users, (3) privacy considerations during the authority to operate process, (4) system categorization, (5) privacy incident response, (6) privacy-related contract terms and conditions, and (7) desktop and laptop sanitation. However, we identified several issues that should be addressed by TVA management to further increase the effectiveness of the privacy program. We also found gaps between TVA's policies and procedures and applicable federal privacy regulations and guidance. TVA management agreed with our recommendations intended to improve the effectiveness of the privacy program and align TVA's policies and procedures with federal privacy regulations and guidance.

Privileged Account Management

TVA policy defines a privileged account as "either local or network user accounts that have escalated administrative levels of system rights and access." The Center for Internet Security states, "The misuse of administrative privileges is a primary method for attackers to spread inside a target

² Audit 2017-15471, *Wind Power Contracts*, September 26, 2017.

enterprise.” We reviewed TVA’s management of privileged accounts to determine if TVA policy and best practices were followed. We found several controls of TVA’s privileged account management generally effective, including (1) an accurate inventory of privileged network device accounts, (2) appropriate segregation of duties, (3) appropriate account lifecycle management for most privileged users, and (4) monitoring of privileged accounts. However, we also found (1) improper usage of primary accounts with privileged access, (2) one account with inappropriate privileged access, and (3) several gaps in TVA’s policy when compared to best practices. TVA management agreed with our recommendations to (1) ensure primary accounts are prohibited from having privileged access as required by TVA policy, (2) implement an additional periodic review of the privileged account inventory and assigned access, and (3) review gaps in best practices and incorporate into TVA policies accordingly.

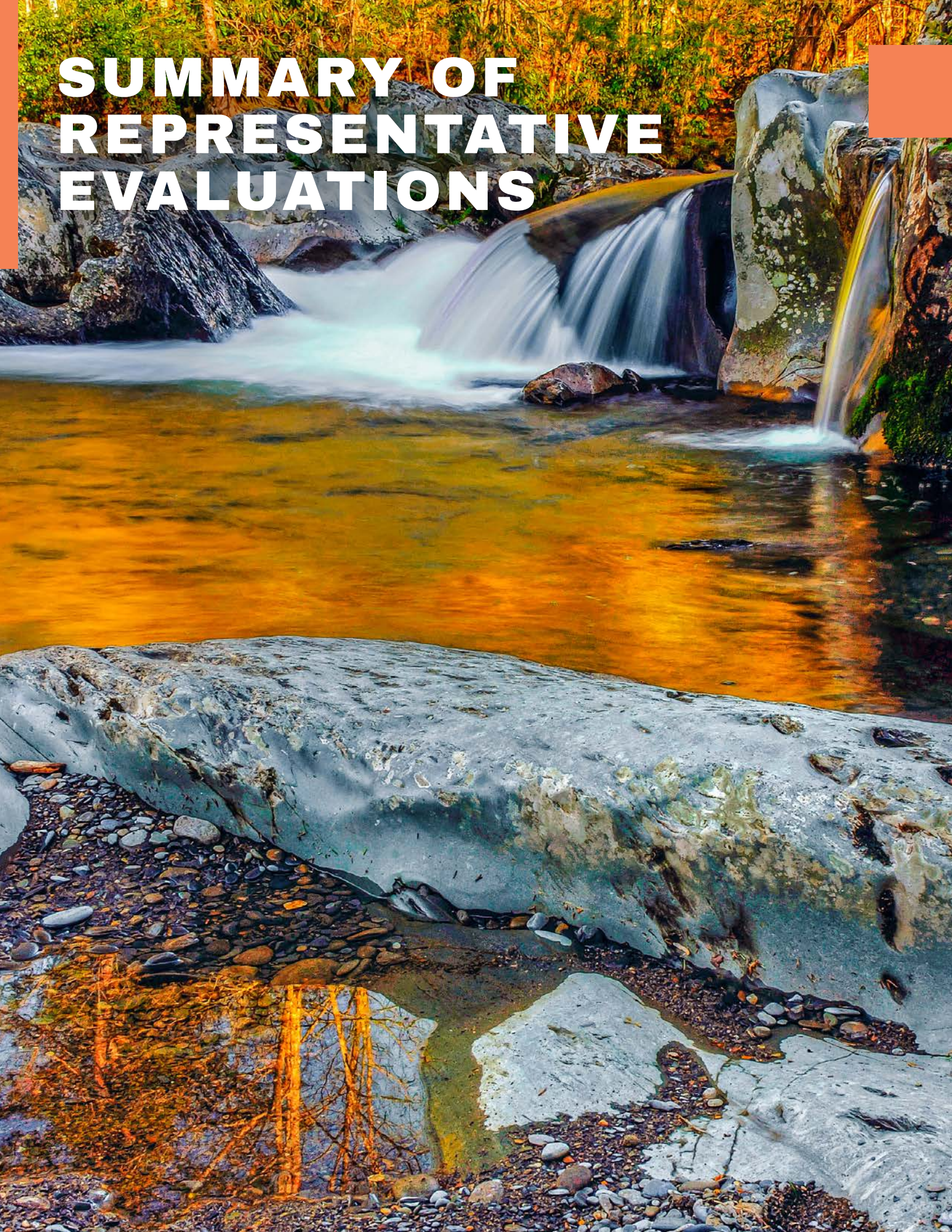
Windows® Desktop and Laptop Patching

Patching is the process for updating products and systems. Patches correct security and functionality problems in software and firmware. We performed an audit of TVA’s patching of Windows® desktops and laptops to determine if high-risk vulnerabilities on desktops and laptops were patched in accordance with TVA policy and best practices. We found (1) TVA policies and procedures aligned with best practices, (2) the majority of Windows® desktops and laptops managed by TVA’s automated patching system were patched for high-risk vulnerabilities in accordance with TVA policy, and (3) TVA had mitigated vulnerabilities for Windows® desktops and laptops that had not received updates. However, although the majority of Windows® workstations were managed by TVA’s automated patching system, we found some desktops and laptops were at potential risk of compromise. TVA management agreed with our recommendation to update processes to identify Windows® devices that are not managed by TVA’s automated patching system.



Johnsonville Dam

SUMMARY OF REPRESENTATIVE EVALUATIONS



During this reporting period, our teams completed seven evaluations and six organizational effectiveness reviews, all of which identified opportunities for improvement.

EVALUATIONS

During this semiannual reporting period, the Evaluations department completed seven evaluations, including reviews of Transmission and Power Supply's switching and clearance procedures, TVA Nuclear's handling of potentially contaminated liquids, TVA's strategic real estate plan, Transmission and Power Supply's arc flash protection, and the Industrial Hygiene Program at coal, gas, and hydro plants.

Transmission Switching and Clearance Procedures

Clearance procedures establish standardized requirements to ensure equipment is isolated from energy sources and rendered nonoperative before performing work where unexpected energizing, start up, or release of stored energy could occur and cause injury or property damage. Transmission line switches provide the ability to remotely isolate a section of the line, reconfigure power flow, and minimize outage impact for customers. Due to the importance of switching and clearances being performed safely to avoid injuries and to minimize the possibility of unscheduled outages or equipment damage, we performed an evaluation to determine if switching and clearances, required training, and audits were performed in compliance with Transmission and Power Supply's (TPS) switching and clearance procedures.

We determined the selected procedural requirements for requesting and tracking of switching and clearances were generally performed in accordance with procedures. We could not assess most procedural requirements related to preparation and performance of switching orders because field personnel performing the work do not always submit the completed switching order. However, we identified several instances where switching order steps were not performed

in sequence as required. We also determined employees who performed key functions received required training; however, tracking of training could be improved. In addition, while clearance audits were completed by the appropriate personnel within the required time frames, their effectiveness could be increased. TVA management provided actions planned to address (1) completing switching order steps in sequence, (2) switching order documentation, (3) tracking of training, and (4) effectiveness of audits.

TVA Nuclear's Handling of Potentially Contaminated Liquids

The Nuclear Regulatory Commission establishes standards for protection against ionizing radiation resulting from activities conducted under nuclear licenses. The Nuclear Industry Standard Process, Radiological Protection 007, *Control of Radioactive Material*, provides guidance for the survey, release, or control of materials from radiologically controlled areas (RCA). According to *Control of Radioactive Material*, liquids shall be controlled as radioactive material until samples indicate they can be released for unrestricted use. Specifically, liquids can only be released after all analyses have been completed, including testing results for (1) gamma radiation and (2) tritium, if there is the potential for tritium to be present. Due to concerns identified during a previous evaluation, we performed an evaluation of TVA Nuclear's handling of potentially contaminated liquids at its nuclear sites. The scope of our evaluation was limited to TVA Nuclear's process for releasing liquids from RCAs for unrestricted use.

We determined potentially contaminated liquids were released from TVA's RCAs at each of its nuclear sites. This occurred because all applicable analyses were not performed on some liquids prior to release. In addition, we identified opportunities for improvement related to (1) TVA Nuclear's processes for tritium analysis

prior to the release of liquids for unrestricted use and (2) documentation issues at each nuclear site, including the incomplete submittal of records, incomplete maintenance processes, and inaccurate logs. TVA management provided actions planned to address issues related to (1) verifying liquids do not contain any detectable radioactivity prior to release, (2) defining processes and developing guidance regarding tritium analysis, and (3) addressing documentation issues at each site.

Strategic Real Estate Plan

Due to an increase in transactions regarding real estate, we performed an evaluation to assess TVA's development and implementation of its strategic real estate plan. However, TVA did not have a formal strategic real estate plan; therefore, we reviewed the goals and objectives of the Strategic Real Estate and Governance (SREG) organization to determine if they were being achieved. We determined SREG has met, or was in the process of meeting, their stated goals and objectives. For example, SREG has (1) improved the condition, safety, and utilization of TVA's real estate assets and (2) been working to eliminate noncore and underutilized buildings through regional consolidations. However, we identified several areas for improvement that could enable SREG to more effectively accomplish their mission of helping TVA manage real estate assets and align the portfolio with business need. Specifically, (1) SREG does not have an accurate and comprehensive list of all real property, (2) SREG is not always included in, or knowledgeable of, key business decisions that impact real estate, and (3) TVA does not have a centralized real estate function.

TVA management agreed with our recommendations and provided ongoing or planned actions to address issues related to (1) improvement of the database for real estate assets, (2) communication and reinforcement of the requirement for real estate decisions to flow through SREG, and (3) consideration of the centralization of TVA's real estate functions, the creation of an agency Senior Real Property Officer, and the development of a formalized strategic plan or guiding principles.

Transmission and Power Supply Arc Flash Protection

According to the Occupational Safety and Health Administration, workers in the electric power industry are potentially exposed to a variety of serious hazards that can cause injury and death such as electric shock, thermal burn, and arc flash. An arc flash event can expel large amounts of deadly energy. TVA's medical records system indicated there were seven arc flash injuries between 2015 and 2020. Of the seven, one of the injuries occurred in 2017 at a TPS site. Due to the risk of personnel injury from arc flash hazards, we performed an evaluation to determine if TPS was performing arc flash procedures as required.

We determined some requirements of TVA procedures were not performed. Specifically, (1) some arc flash hazard analyses were not performed, (2) arc flash hazard analyses were not periodically reviewed, (3) some arc flash hazard analyses were incomplete or inaccurate, and (4) some hazards were not accurately communicated on warning labels as required. In addition, we found arc flash hazard calculations were not formatted, approved, or maintained as required. We also determined personal protective equipment was maintained and most training was completed as required by the arc flash procedure; however, we identified a few individuals who had not completed the assigned curriculum. Lastly, we identified an opportunity for improvement related to developing a TPS-specific arc flash procedure. Based on issues identified during the course of our evaluation, TPS performed an assessment of its arc flash program and developed an action plan to address identified gaps. TVA management provided actions planned to (1) address arc flash hazard analyses and calculation deficiencies, (2) verify appropriate personnel receive arc flash training, and (3) continue with planned improvements, including developing a TPS-specific procedure related to arc flash protection.

Coal, Gas, and Hydro Plant Industrial Hygiene

According to the Occupational Safety and Health Administration, one of the root causes of workplace injuries, illnesses, and incidents is the failure to identify or recognize hazards that are present or could have been anticipated. The TVA's industrial hygiene (IH) program is intended to identify, evaluate, and control health hazards to which TVA employees may be exposed in a timely manner. Due to the risk of worker exposure to health hazards at TVA generation facilities, we performed three separate evaluations of coal, gas, and hydro plant IH. The objectives of these evaluations were to determine if (1) health hazards were identified and evaluated and (2) appropriate actions were taken by TVA management when adverse conditions were identified.

We determined TVA's IH planning and assessment process had weaknesses that resulted in some hazards not being identified and evaluated. Specifically, we identified the following IH process weaknesses: (1) TVA relied on limited information to identify health hazards; (2) there was no formal evaluation of the risks posed by hazards identified; (3) IH plans did not prioritize hazards; and (4) monitoring efforts were incomplete, which allowed for misalignment between plans and exposure assessments as well as limited coverage for retiring coal plants.

We also found TVA took appropriate actions to address adverse conditions identified during assessments at gas and hydro plants but did not take appropriate actions to address some adverse conditions identified at coal plants. We concluded documentation was not maintained and some employees were not notified of hazard exposures, as required. In addition, we identified opportunities for improvement related to handling of IH issues in the contractor population. TVA management provided actions planned to address issues related to (1) IH planning, (2) IH annual assessments, (3) employee exposure notifications, and (4) handling of IH issues in the contractor population.

ORGANIZATIONAL EFFECTIVENESS

During this semiannual reporting period, the Organizational Effectiveness group completed evaluations of six TVA organizations to assess behavioral and operational factors that could impact their organizational effectiveness. The organizational effectiveness evaluations included Sequoyah Nuclear Plant Chemistry, Commercial Energy Solutions' Fuels and Hedging group, Generation Services' Field Services group, Johnsonville Combustion Turbine Plant, John Sevier Combined Cycle Plant, and Transmissions Field Operations' North Maintenance.

Sequoyah Nuclear Plant Chemistry

As part of TVA Nuclear, Sequoyah Nuclear Plant (SQN) Chemistry is tasked with (1) maintaining the chemical operating environment for all plant systems (including fuel assemblies) in such a manner that systems and equipment will meet or exceed their designed lifetimes, (2) meeting all applicable regulatory requirements, (3) avoiding adverse effects to nuclear fuel, and (4) minimizing plant dose rates, while establishing and maintaining a positive nuclear safety culture.

We identified behaviors that had a positive impact on SQN Chemistry, including relationships with most management; however, we also identified behavioral risks related to accountability, relationships within and outside SQN Chemistry, low morale, and ethics. In addition, we identified risks to operations that have hindered SQN Chemistry's effectiveness. These risks were related to the physical work environment, monitoring effluents³ and collecting required samples, and inaccurate sample documentation. TVA management agreed with our recommendations to address concerns related to accountability and relationships within and outside SQN Chemistry, correcting and monitoring the physical work environment, and identifying and correcting gaps in accurately collecting and documenting required samples.

³ Effluents are defined by the Nuclear Regulatory Commission as liquid or gaseous waste containing plant-related, licensed radioactive material, emitted at the boundary of the facility (e.g., buildings, end-of-pipe, stack, or container) as described in the final safety analysis report.

Commercial Energy Solutions' Fuels and Hedging

Commercial Energy Solutions is a business unit under TVA's Financial Services organization and provides distributed energy solutions to TVA's customers and stakeholders. One of Commercial Energy Solutions' four departments, Fuels and Hedging (F&H), is responsible for developing and executing strategies that provide (1) adequate fuel, transportation, and reagents to TVA's coal sites and (2) the most economic and reliable supply to the natural gas fleet.

We identified behaviors that had a positive impact on F&H, including relationships with team members and most management; however, we also identified a behavioral risk related to relationships with a manager in one group. In addition, we identified risks related to inaccurate coal burn forecasts and interactions with business partners' operations that could hinder F&H's effectiveness. TVA management agreed with our recommendations to address concerns related to interactions with certain management personnel and business partners.

Generation Services' Field Services

Field Services is tasked with delivering services that support plant outage execution, engineering, and programmatic needs on a planned and emergent basis. These efforts include governance for outage execution, critical field support, new unit integration, and coordination of contract support for program inspections.

During the course of our evaluation, we identified many positive behaviors for engagement; however, we also identified needed behavioral improvements in relation to first-line supervisors in three departments. We also identified risks to business operations, including experience, resource needs such as funding and staffing, and concerns related to reorganization efforts

involving engineering. In addition, business partners discussed areas for improvement related to support and collaboration. TVA management agreed with our recommendations to address management behaviors, staffing, resource issues, business partner concerns and feedback, and reorganization gaps.

Johnsonville Combustion Turbine

Johnsonville Combustion Turbine Plant (JCT), constructed in 1974, was previously operated as part of Johnsonville Fossil Plant. It is one of TVA's nine combustion turbine gas sites and the only cogeneration⁴ plant in TVA's fleet. The site has 20 units with a 1,220-MW capacity. While JCT may be relied upon to supplement TVA's generation needs, in 2020, its primary function was to provide steam to a chemical plant adjacent to JCT.

We identified behaviors that had a positive impact on JCT, including leadership actions and positive relationships with team members; however, we also identified minimal risks to operations that, if unaddressed, could hinder JCT's effectiveness. These were related to resource needs, such as specific training and budgetary needs for plant maintenance. TVA management agreed with our recommendations to address concerns related to training and plant maintenance.

John Sevier Combined Cycle Plant

John Sevier Combined Cycle Plant (JSCC), one of TVA's eight combined cycle plants, is located beside the Holston River near Rogersville, Tennessee. JSCC began commercial operation in 2012 and is comprised of three combustion turbines, one steam turbine, and has a summer capacity of 871 MW.

During the course of our evaluation, we identified behaviors that had a positive impact on JSCC, including relationships between team members and management; however, we also identified minimal behavioral risks

⁴ Cogeneration plants are also known as combined heat and power plants.

associated with communication and accountability. In addition, we identified minimal risks to operations that were related to resource needs and training. TVA management agreed with our recommendations to address concerns related to (1) communication and accountability and (2) resource needs and training.

Transmissions Field Operations' North Maintenance

As part of Transmission Field Operations, North Maintenance is responsible for performing preventive and corrective maintenance on system equipment to meet safety, reliability, and regulatory requirements; replacing transmission equipment; providing routine and emergency transmission operations/switching services; and providing

24 hours a day, 7 days a week, emergency response as the first responder for system events. North Maintenance is comprised of the Columbia, Tennessee; Murfreesboro, Tennessee; Mayfield, Kentucky; and Bowling Green, Kentucky, Transmission Service Centers.

During the course of our evaluation, we identified behaviors that had a positive impact on North Maintenance; however, we also identified needed improvements related to coworker interactions with a few employees. We also identified minimal risks to operations related to resource concerns, including inadequate staffing and equipment and/or tool needs. TVA management agreed to address concerns related to employee interactions and staffing, equipment, and tool needs.



Fontana Dam

SUMMARY OF REPRESENTATIVE INVESTIGATIONS



Watts Bar Nuclear Plant

This reporting period, we opened 74 cases and closed 83. Our investigative results include restitution to TVA and others totaling over \$7.3 million, and almost \$2.9 million of waste/other monetary loss identified, in addition to significant civil, prosecutive, and administrative results. Highlights of this reporting period follow.

Day & Zimmermann NPS, Inc., Pays \$200,000 to Resolve Alleged Violations of False Claims Act Arising From TVA Contract

In 2013 and 2014, TVA, in response to the 2011 Fukushima Daiichi nuclear disaster and the Nuclear Regulatory Commission's follow-on safety mandates, amended its existing \$700 million contract with Day & Zimmermann NPS, Inc. (D&Z), by providing an additional \$550 million, in part to fund improvements designed to enhance safeguards against nuclear meltdowns. One such improvement was to build an elevated "Flex" building ("the Flex Project"), designed to provide backup operating controls in the event of an earthquake, flood, tornado, hurricane, or other extreme event.

The settlement resolves allegations that, during the period January 1, 2014, through May 5, 2014, D&Z knowingly shifted costs from various project codes that fell outside the scope of the Flex Project and improperly charged those costs against the Flex Project by falsely using Flex Project codes. It was also alleged that D&Z failed to correct mischarges that it knew or should have known were incorrectly applied and which resulted in false claims for payment, as well as overpayments that were not returned to TVA.

The investigation determined the conservative estimate of hours incorrectly charged was about \$2.8 million in this case. D&Z paid \$200,000 to resolve allegations that it submitted false claims to TVA for services performed in connection with capital improvement projects at Watts Bar Nuclear Plant (WBN). The balance of that amount minus the settlement is almost \$2.6 million, which was statistically claimed as waste/lost opportunity.

This investigation resulted from a coordinated effort between TVA OIG and the U.S. Attorneys' Office of the Eastern District of Tennessee. The claims settled by this agreement are allegations only, and there has been no determination of liability.

TVA's Cryptocurrency Program

TVA OIG investigated a concern that false records were potentially submitted to TVA's EnergyRight® Solutions Business and Industry Program, which provides incentives for cryptocurrency mining operations, among other initiatives, within the Tennessee Valley. The specific concern regarded potential for the same cryptocurrency hardware to be resold and subsequently incentivized on a different TVA incentive application without TVA's knowledge. Our investigation did not substantiate that falsified records or instances specific to related federal criminal statutes had occurred, but did reveal several potential weaknesses in the program.

TVA became involved in electrification initiatives to increase TVA revenue as part of the EnergyRight® program. One such commercial application undertaken by TVA was cryptocurrency technology. This technology, reliant on cryptocurrency mining operations, consumes a significant amount of electricity. For this reason, TVA began incentivizing businesses who offered this technology in 2019. The investigation established cryptocurrency miner serial numbers were not inventoried nor were unique identifiers required for application for TVA incentives. Accordingly, cryptocurrency miner identification was not able to be verified as part of the incentive application process.

An additional risk concerning local power company (LPC) personnel participation in TVA's cryptocurrency incentive programs was identified. The investigation confirmed an employee of a LPC who helped administer the TVA EnergyRight® program for that LPC had financial interests in two businesses applying for TVA cryptocurrency incentives under the EnergyRight® program. As part of this LPC employee's role, the employee managed power contracts, large commercial and industrial customer relationships, and incentive programs to include the EnergyRight® program. The investigation established there is currently no TVA program rule prohibiting such interests.

These findings were reported to TVA management that confirmed permanent discontinuance of the program for incentivizing cryptocurrency mining operations effective June 10, 2020. TVA advised that in addition to eliminating the potential opportunity in this area, it also implemented new information gathering practices and tools for capturing detail on existing commitments of applications previously approved. TVA further advised that as it relates to the risk concerning LPC personnel participation in TVA incentive programs, the TVA team is actively reviewing additional programmatic controls that should minimize/eliminate this particular risk.

\$20,000 Restitution to TVA in Corporate Contribution Matter

Following a TVA OIG Fraud Risk Assessment, the OIG received an allegation of possible theft of corporate-contributions funding provided by TVA to a nonprofit group that manages a group of recreational and historic sites. TVA awarded \$62,500 in corporate contributions to this group in 2017, and the funds were provided in four payments: \$2,500, \$10,000, \$30,000, and \$20,000. Three of the TVA payments were to be used to assist with projects, including environmental cleanup and handicapped-access improvements. The \$20,000 payment specifically was to be used for repair and rehabilitation of an historical site and to maintain the historic register as appropriate. All four checks were provided to the group's chairman; however, none of them were deposited into

the group's accounts. When confronted about this issue, the chairman provided a refund of \$12,500 (to address the \$2,500 and \$10,000 TVA payments) and returned the original \$30,000 check to TVA. The chairman, however, refused to return the remaining \$20,000 to TVA. On June 23, 2020, a state complaint was filed, charging the chairman with felony Theft of Property.

On May 12, 2021, an agreement was reached with the local District Attorney's office to dismiss this case and recall the corresponding warrant, provided the chairman return \$20,000 to TVA. The funds were returned to TVA on May 20, 2021. This was a joint state and federal investigation.

Contractor Company Provides \$131,000 Temporary Living Allowance Restitution to TVA

Investigation revealed a Black & Veatch Corporation (Black & Veatch) contractor employee received \$131,000 in temporary living allowance (TLA) to which he was not entitled. The contractor employee's eligibility for TLA rested, in part, on attesting that his rental/lease/mortgage agreement for his permanent residence was an "arm's length transaction under the law." In this case, however, the contractor employee used his parents' out-of-state residence as his permanent address, listing his father as landlord, on his TLA certification. This claimed arrangement does not constitute an arm's length transaction.

The contractor employee acknowledged rental payments to his father were minimal and inconsistently paid. Additionally, the contractor employee's spouse and children have resided in Tennessee with him rather than at the claimed permanent residence since 2020. The contractor employee told investigators he was unfamiliar with the meaning of an "arm's length transaction" and was unaware TLA requirements restricted him from renting his permanent residence from his father, but he did acknowledge he was responsible for knowing TLA restrictions.

Prosecution was not sought in this matter as no criminal intent was found. A Report of Administrative Inquiry was sent to management, outlining the results of our investigation and recommending TVA seek reimbursement from Black & Veatch for the individual's TLA. Under the contract, Black & Veatch was required to certify that all representations concerning TLA are true and accurate and that supporting documentation has been collected and vetted. As a result, Black & Veatch provided payment to TVA for \$131,000, the full amount the contractor employee received based on the improper TLA certification.

State Charges Filed in Two Theft Cases

During May 2021, two individuals were charged in ongoing (unrelated) investigations of theft of TVA property.

- On May 12, 2021, a former Maintenance Services employee was charged in the State of Alabama with Theft over \$2,500 and False Business Records, as a result of a time-and-leave falsification investigation.
- On May 20, 2021, a former Property Maintenance employee was charged in the State of Tennessee with Theft of Property over \$2,500, comprised of two TVA mowers found on the individual's personal property. This is a joint investigation with TVA Police.



Former TVA Contractor Pleads Guilty

On July 19, 2021, Corrosion Monitoring Services (CMS) owner Steve Turner, a former TVA contractor at Paradise Fossil Plant, was charged by Information in the Western District of Kentucky with three violations: one count of concealing knowledge of the commission of a felony and two counts of obstruction of justice. One obstruction count charges him with knowingly, and with the intent to retaliate, taking adverse action against a family member of a CMS employee who provided truthful information to a law enforcement officer; the other obstruction count charges him with attempting to impede an investigation by instructing a CMS employee to contact TVA OIG and say his/her prior allegations against Mr. Turner were fabricated. Mr. Turner pled guilty July 22, 2021. Sentencing will occur during an upcoming reporting period.

False Statements Indictment

On July 19, 2021, the indictment of Jeffrey David Beguin was unsealed in the Eastern District of Tennessee. The indictment charges the former WBN Bechtel Power Corporation contractor with one count of falsifying and concealing facts pertinent to a criminal fraud investigation. The alleged violations took place during an investigation of Mr. Beguin's TLA.

Sentencing in Grant Fraud Investigation

During this reporting period, Rahim and Karim Sadrudin were sentenced in federal court. As detailed in a prior Semiannual Report to Congress, on November 13, 2019, the Sadrudins pled guilty to two counts of wire fraud and one count of money laundering. Their pleas were in connection with an Information filed in federal court on October 22, 2019. The Sadrudins were charged as part of a scheme greater than \$30 million to defraud Federal Emergency Management Agency (FEMA), TVA, and the State of Tennessee related to the procurement of tarps for hurricane victims in Puerto Rico and the fraudulent acquisition of state and federal grant funds to establish a textile manufacturing plant in Pikeville, Tennessee. Pikeville is located in Bledsoe County.

From April 2017 through January 2019, the Sadruddins devised and participated in a scheme first to defraud the State of Tennessee and TVA by providing false information to qualify for economic development grants worth over \$3 million to build the Pikeville textile manufacturing plant and provide jobs to the citizens of Bledsoe County. Of Tennessee's 95 counties, economically distressed Bledsoe County has the second highest jobless rate.

TVA was led to believe that the Textile Corporation of America (TCA) was in the business of manufacturing textiles. TCA would be importing raw materials from overseas but manufacturing the textiles at the Pikeville plant. TVA was told TCA would be employing approximately 1,000 people and had made a capital investment of \$27,093,050.

Once the Sadruddins began to receive funds from the State of Tennessee and TVA, they purchased tarps from Chinese suppliers to satisfy a separate \$30 million contract with FEMA, in which they pledged to provide tarps to citizens in Puerto Rico following the devastating hurricanes in that region – Hurricane Maria and Hurricane Irma. Pursuant to the contract, the defendants pledged to obtain tarps from Trade Agreements Act (TAA)-compliant countries and to provide tarps that met FEMA specifications. Instead, the defendants used the funds fraudulently obtained from the State of Tennessee and TVA to purchase tarps from China – a non-TAA-compliant country – which failed to meet FEMA contract specifications. The Sadruddins falsified records suggesting they had legally procured the tarps and that the tarps met the agreed-upon specifications.

On May 7, 2021, the two were sentenced. Both are to serve 50 months in prison followed by five years of supervised release. Joint-and-several restitution was ordered totaling \$7,005,895.76 (\$230,000 to TVA, \$3,775,895.76 to FEMA, \$3,000,000 to the State of Tennessee), as well as a forfeiture of \$1,750,000.

This was a joint investigation involving TVA OIG, U.S. Attorney's Office for the Eastern District of Tennessee, Department of Homeland Security OIG, Federal Bureau of Investigation, and State of Tennessee's Comptroller's Office.

California Software Company Executives Charged in Conspiracy to Defraud TVA

A federal seven-count indictment, unsealed September 10, 2021, charged two Danville, California, men with conspiracy to defraud TVA of over \$300,000. Anthony Gigliotti, CEO of Autonomic Software, Inc. (Autonomic), was charged with conspiracy to commit wire fraud, three counts of mail fraud, and three counts of wire fraud. Alexander Gigliotti, Autonomic's Vice President, was charged with conspiracy to commit wire fraud.

According to the indictment, Autonomic was a software company located in Danville, California, which provided a variety of software to private and public sector organizations. In 2016, Autonomic installed power management software into Rutherford County, Tennessee, school systems. The software's function was to automatically power-down school computers at the end of each school day to provide increased energy efficiency. TVA's EnergyRight® program was used to offset the costs of this software. Lockheed Martin administered this EnergyRight® incentive-based program for TVA, which was designed to conserve energy and to reduce costs for business and industry applicants. To be eligible for EnergyRight® incentive funds, applicants, school systems in this case, were required to have incurred material costs.

The indictment states that instead of following program requirements, Autonomic represented to the Rutherford County School District that schools would incur no costs for the software. Following the software installation, Autonomic submitted 47 invoices, totaling \$588,240 to Lockheed Martin. The invoices were made out to Rutherford County Schools and represented that each school incurred costs associated with Autonomic's software installation, which they did not. Alexander Gigliotti also sent an e-mail to a Lockheed Martin representative in support of seeking the incentive payments from TVA, with a breakdown of an invoice regarding purported costs incurred by Rutherford County Schools, claiming that the school paid \$22 per computer related to software and \$8 per computer related to support. In fact, Rutherford

County Schools incurred no costs whatsoever associated with the software or its installation. Lockheed Martin mailed incentive payments to Autonomic, on behalf of TVA, corresponding to each invoice submitted.

Approximately one year after the installation, Rutherford County Schools abandoned Autonomic's software altogether and purchased energy saving software at a cost substantially less than Autonomic's total purported materials costs. The indictment also alleges that Anthony Gigliotti lied to TVA OIG agents by falsely stating that Alexander Gigliotti was not involved in any of the previous TVA or school system work.

An indictment is merely an accusation. The defendants are presumed innocent until proven guilty in a court of law.

Pandemic Response Accountability Committee Fraud Task Force

The Coronavirus Aid, Relief, and Economic Security (CARES) Act is a federal law enacted on March 27, 2020, and designed to provide emergency financial assistance to the millions of Americans who are suffering the economic effects caused by the COVID-19 pandemic.

One source of relief provided by the CARES Act was the authorization of forgivable loans to small businesses for job retention and certain other expenses, through a program referred to as the Paycheck Protection Program (PPP). The Economic Injury Disaster Loan (EIDL) program was a related program that provided low-interest financing to small businesses, renters, and homeowners in regions affected by declared disasters.

During January 2021, the CIGIE Pandemic Response Accountability Committee (PRAC) established a Fraud Task Force to aid in the investigation of CARES Act fraud investigations to include PPP and EIDL fraud. Participating agencies from the IG community are detailed to work on PRAC Fraud Task Force cases.

TVA OIG began participation in PRAC Task Force efforts on a part-time basis through a Memorandum of Understanding during June 2021. This initiative allows TVA OIG to make a broader contribution to the IG community by assisting with investigations that might otherwise remain unstaffed.



LEGISLATION AND REGULATIONS



In this section of our semiannual report, it is our intent to address only current and pending legislation which relates to the economy or efficiency of TVA operations when we have recommendations or comments to make to Congress regarding the legislation. At times, we may direct recommendations to general positions and issues, particularly when there are multiple bills dealing with the issue. At other times, we anticipate making recommendations relating to particular statutes and bills and their particular wording.

During this reporting period, we are not making any recommendations to Congress regarding current or pending legislation.



APPENDICES



INDEX OF REPORTING REQUIREMENTS UNDER THE INSPECTOR GENERAL ACT

REPORTING	REQUIREMENT	PAGE OR APPENDIX
Section 4(a)(2)	Review of legislation and regulations	38 - 39
Section 5(a)(1)	Significant problems, abuses, and deficiencies	18 - 37
Section 5(a)(2)	Recommendations with respect to significant problems, abuses, and deficiencies	18 - 37
Section 5(a)(3)	Recommendations described in previous semiannual reports on which corrective action has not been completed	Appendix 4
Section 5(a)(4)	Matters referred to prosecutive authorities and the prosecutions and convictions that have resulted	Appendix 5
Section 5(a)(5) and 6(b)(2)	Summary of instances where information was refused	None
Section 5(a)(6)	Listing of audit and evaluation reports	Appendix 2
Section 5(a)(7)	Summary of particularly significant reports	18 - 37
Section 5(a)(8)	Status of management decisions for audit and evaluation reports containing questioned costs	Appendix 3
Section 5(a)(9)	Status of management decisions for audit and evaluation reports containing recommendations that funds be put to better use	Appendix 3
Section 5(a)(10)	Summary of audit and evaluation reports issued prior to the beginning of the reporting period for which (a) no management decision had been made; (b) no management comment was received within 60 days of issuing the draft report; and (c) there were any unimplemented recommendations, including the aggregate potential cost savings of those recommendations, at the end of the reporting period ¹	None
Section 5(a)(11)	Significant revised management decisions	None
Section 5(a)(12)	Significant management decisions with which the Inspector General disagreed	None
Section 5(a)(13)	Information under Federal Financial Management Improvement Act of 1996	Not Applicable
Section 5(a)(14)	Results of any peer review conducted by another Office of the Inspector General during the reporting period, and if none, a statement of the date of the last peer review	Appendix 10
Section 5(a)(15)	List of outstanding recommendations from any peer review conducted by another Office of the Inspector General, including a statement describing the status of the implementation and why implementation is not complete	None

¹ We had no open audit or evaluation reports that met all of these requirements. However, Appendix 4 includes a list of all audits issued in previous semiannual periods on which corrective action has not been completed.

APPENDIX 1

INDEX OF REPORTING REQUIREMENTS UNDER THE INSPECTOR GENERAL ACT (CONTINUED)

REPORTING	REQUIREMENT	PAGE OR APPENDIX
Section 5(a)(16)	List of any peer reviews conducted of another Office of the Inspector General during the reporting period, including a list of any outstanding recommendations made from any previous peer review that remain outstanding or have not been fully implemented	Appendix 11
Section 5(a)(17)	Statistical table showing the total number during the reporting period of (a) investigative reports issued, (b) persons referred to the Department of Justice for criminal prosecution, (c) persons referred to state and local prosecuting authorities for criminal prosecution, and (d) indictments and criminal informations resulting from any prior referral to prosecuting authorities	Appendix 5
Section 5(a)(18)	Metrics used to develop the data in the statistical table pursuant to Section 5(a)(17)	Appendix 5
Section 5(a)(19)	Investigations in which allegations of misconduct involving a senior government employee ² were substantiated	Appendix 6
Section 5(a)(20)	Instances of whistleblower retaliation, information about the official found to have engaged in retaliation, and consequences imposed, if any, to hold the official accountable	None
Section 5(a)(21)	Attempts to interfere with the independence of the Office of the Inspector General	None
Section 5(a)(22)(A)	Audit or evaluation that was closed and not disclosed to the public	None
Section 5(a)(22)(B)	Investigation involving a senior government employee that was closed and not disclosed to the public	Appendix 7

² Pursuant to Section 5(b)(7)(A) of the IG Act, as amended, senior government employee is defined as an officer or employee whose rate of basic pay is equal to or greater than 120 percent of the minimum rate of basic pay payable for GS-15 of the General Schedule.

OIG AUDIT REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED SEPTEMBER 30, 2021

Report Number and Date	Title	Questioned Costs	Unsupported Costs	Funds Put To Better Use
CONTRACT AUDITS				
2021-15792 04/26/2021	Framatome, Inc. - Contract No. 8786	\$80,862	\$0	\$0
2020-15720 05/18/2021	Siemens Energy, Inc. - Contract No. 10092	702,409	30,523	0
2020-15715 05/21/2021	Stantec Consulting, Inc. - Contract No. 13051	1,744,930	0	1,010,000
2020-15713 07/26/2021	The L.E. Myers Company - Contract No. 9070	120,152	120,152	0
2020-15701 09/14/2021	Mesa Associates, Inc. - Contract No. 13191	1,737,586	41,125	8,690,000
2020-15725 09/16/2021	Black & Veatch Construction, Inc. - Contract No. 10820	9,071,839	0	0
FINANCIAL AND OPERATIONAL AUDITS				
2021-15783 08/19/2021	Federal Sustainability Report and Implementation Plan	\$0	\$0	\$0
2021-15785 08/23/2021	Contractor Use of Purchasing Cards	0	0	0
2021-15782 08/26/2021	Solar Purchased Power Agreements	0	0	0
INFORMATION TECHNOLOGY AUDITS				
2021-15779 09/20/2021	TVA's Privacy Program	\$0	\$0	\$0
2021-15777 09/22/2021	Privileged Account Management	0	0	0
2021-15778 09/24/2021	Windows® Desktop and Laptop Patching	0	0	0
TOTAL AUDITS (12)		\$13,457,778	\$191,800	\$9,700,000

APPENDIX 2

OIG EVALUATION REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED SEPTEMBER 30, 2021 (CONTINUED)

Report Number and Date	Title	Questioned Costs	Unsupported Costs	Funds Put To Better Use
EVALUATIONS				
2021-15780 06/04/2021	TVA Nuclear's Handling of Potentially Contaminated Liquids	\$0	\$0	\$0
2020-15749 06/22/2021	Transmission Switching and Clearance Procedures	0	0	0
2020-15750 07/08/2021	Strategic Real Estate Plan	0	0	0
2020-15754 07/20/2021	Coal Plant Industrial Hygiene	0	0	0
2020-15768 08/02/2021	Transmission and Power Supply Arc Flash Protection	0	0	0
2020-15756 08/20/2021	Hydro Plant Industrial Hygiene	0	0	0
2020-15755 08/24/2021	Gas Plant Industrial Hygiene	0	0	0
ORGANIZATIONAL EFFECTIVENESS				
2021-15790 04/20/2021	Organizational Effectiveness - Johnsonville Combustion Turbine	\$0	\$0	\$0
2020-15762-04 06/15/2021	Organizational Effectiveness - Commercial Energy Solutions: Fuels & Hedging	0	0	0
2021-15802 07/07/2021	Organizational Effectiveness - John Sevier Combined Cycle Plant	0	0	0
2020-15752 07/08/2021	Organizational Effectiveness - Sequoyah Nuclear Chemistry/Environmental	0	0	0
2021-15800 08/04/2021	Organizational Effectiveness - Generation Services, Field Services	0	0	0
2021-15801 09/21/2021	Organizational Effectiveness - Transmission Field Operations, North Maintenance	0	0	0
TOTAL EVALUATIONS (13)		\$0	\$0	\$0

Note: A summary of or link to the full report may be found on the OIG's Web site at <https://oig.tva.gov>.

TABLE I • TOTAL QUESTIONED AND UNSUPPORTED COSTS • AUDITS

Audit Reports	Number of Reports	Questioned Costs	Unsupported Costs
A. For which no management decision has been made by the commencement of the period	0	\$0	\$0
B. Which were issued during the reporting period	6	\$13,457,778	\$191,800
Subtotal (A+B)	6	\$13,457,778	\$191,800
C. For which a management decision was made during the reporting period	6	\$13,457,778	\$191,800
1. Dollar value of disallowed costs	6	\$8,424,617	\$191,800
2. Dollar value of costs not disallowed	1 ¹	\$5,033,161	\$0
D. For which no management decision has been made by the end of the reporting period	0	\$0	\$0

TABLE I • TOTAL QUESTIONED AND UNSUPPORTED COSTS • EVALUATIONS

Evaluation Reports	Number of Reports	Questioned Costs	Unsupported Costs
A. For which no management decision has been made by the commencement of the period	0	\$0	\$0
B. Which were issued during the reporting period	0	\$0	\$0
Subtotal (A+B)	0	\$0	\$0
C. For which a management decision was made during the reporting period	0	\$0	\$0
1. Dollar value of disallowed costs	0	\$0	\$0
2. Dollar value of costs not disallowed	0	\$0	\$0
D. For which no management decision has been made by the end of the reporting period	0	\$0	\$0

¹ The total number of reports for which management decision was made during the period differs from the sum of C(1) and C(2) when the same report(s) contain both recommendations agreed to by management and others not agreed to by management.

APPENDIX 3

TABLE II • FUNDS TO BE PUT TO BETTER USE • AUDITS

Audit Reports	Number of Reports	Funds To Be Put To Better Use
A. For which no management decision has been made by the commencement of the period	0	\$0
B. Which were issued during the reporting period	2	\$9,700,000
Subtotal (A+B)	2	\$9,700,000
C. For which a management decision was made during the reporting period	2	\$9,700,000
1. Dollar value of recommendations agreed to by management	2	\$9,700,000
2. Dollar value of recommendations not agreed to by management	0	\$0
D. For which no management decision has been made by the end of the reporting period	0	\$0

TABLE II • FUNDS TO BE PUT TO BETTER USE • EVALUATIONS

Evaluation Reports	Number of Reports	Funds To Be Put To Better Use
A. For which no management decision has been made by the commencement of the period	0	\$0
B. Which were issued during the reporting period	0	\$0
Subtotal (A+B)	0	\$0
C. For which a management decision was made during the reporting period	0	\$0
1. Dollar value of recommendations agreed to by management	0	\$0
2. Dollar value of recommendations not agreed to by management	0	\$0
D. For which no management decision has been made by the end of the reporting period	0	\$0

RECOMMENDATIONS INCLUDED IN A PREVIOUS SEMIANNUAL REPORT AND AWAITING IMPLEMENTATION

At the end of the semiannual period, final corrective action was not complete on 37 recommendations associated with five audit and eight evaluation reports issued in a prior period. Presented below for each audit and evaluation are the report number, date, and title, along with a brief description of action management agreed to take to resolve the open recommendation, including the date management expects to complete final action.

Audit Report Number and Date	Report Title and Actions Agreed to by Management to Resolve Recommendations
2019-15619 04/29/2020	Insider Threat Program TVA agreed to (1) implement a formal positive reward program for employees practicing good security and (2) identify personnel with access to high-risk systems and develop a process to monitor terminated personnel in accordance with industry best practices and other requirements. TVA expects to complete final action by March 10, 2022.
2020-15721 10/21/2020	IT Contractor Access TVA agreed to develop processes to (1) implement screening requirements for logical access and (2) ensure contractors have the required Tier 1 background investigation in a timely manner. TVA expects to complete final action by July 20, 2022.
2020-15726 10/22/2020	Travel Expenses Reimbursed Within 50 Miles of Official Station TVA agreed to update inaccurate official stations in the human resources system and develop specific guidance on assigning and periodically reviewing official stations. TVA expects to complete final action by October 22, 2021.
2020-15694 11/24/2020	Purchasing Card Usage TVA agreed to (1) update the Financial Services Standard Programs and Processes (SPP) to align with any changes made to the Supply Chain SPP; (2) update annual training to reflect changes made to the purchasing card (P-Card) SPPs; (3) review merchant category codes; (4) develop a plan to ensure regular monitoring of P-Card transactions is performed; (5) update TVA-SPP-04.0, <i>Management of the TVA Supply Chain Process</i> , based on the hierarchy review; and (6) implement a review of purchases to determine when it is more advantageous to issue blanket contracts versus using the P-Card. TVA expects to complete final action by November 24, 2021.
2020-15709 12/21/2020	2020 Federal Information Security Modernization Act TVA agreed to (1) clarify contingency planning roles and responsibilities within the Information Technology departments and fill vacant roles as appropriate and (2) define a process for assigning risk designations for all positions. TVA expects to complete final action by April 29, 2022.

APPENDIX 4

RECOMMENDATIONS INCLUDED IN A PREVIOUS SEMIANNUAL REPORT AND AWAITING IMPLEMENTATION (CONTINUED)

Evaluation Report Number and Date	Report Title and Actions Agreed to by Management to Resolve Recommendations
2019-15644 07/13/2020	Nuclear Arc Flash Protection TVA agreed to evaluate available engineering and administrative controls and create implementation plans for chosen options specific to each site. TVA expects to complete final action by October 29, 2021.
2019-15642 07/15/2020	Power Operations Arc Flash Protection TVA agreed to (1) implement a plan to perform an arc flash hazard analysis for the required 5-year baseline and (2) implement a control to ensure arc flash hazard analyses contain all updated calculations. TVA expects to complete final action by September 30, 2022.
2019-15570 08/13/2020	Organizational Effectiveness - Watts Bar Nuclear Plant Site Security TVA agreed to take actions to improve communication and trust with support organizations. TVA expects to complete final action by January 31, 2022.
2019-15663 08/28/2020	Historic Preservation Reviews TVA agreed to (1) take actions to track the time and cost of Section 106 reviews and annually update guidance time frames as appropriate and (2) meet with business partners to better understand their information needs. TVA expects to complete final action by December 31, 2021.
2019-15684 12/10/2020	Turnover of Projects to Power Operations TVA agreed to (1) align project management and design change notice (DCN) processes; (2) communicate expectations around project turnover and DCN; (3) standardize utilization of project turnover processes for project deliverables required for return to service; (4) evaluate projects returned to service, where Return to Operation has not been signed, to determine if the equipment can be operated safely and reliably; (5) ensure on-going projects cannot be closed until DCN requirements are met; (6) establish measures to address issues delaying DCN completion and to communicate lessons learned for future project work; (7) update DCN and project responsibilities in Power Operations' processes to ensure gaps are closed; and (8) add time ranges for typical DCN activity completion to the DCN process. TVA expects to complete final action by December 10, 2021.
2020-15743 12/10/2020	Organizational Effectiveness - Sequoyah Nuclear Radiation Protection TVA agreed to (1) take steps to build trust in Radiation Protection management and (2) continue working to improve the training experience. TVA expects to complete final action by December 10, 2021.
2020-15762-03 01/22/2021	Organizational Effectiveness - Commercial Energy Solutions: Energy Services & Programs TVA agreed to assess and monitor relationships with management in one group. TVA expects to complete final action by January 22, 2022.
2020-15762-01 01/25/2021	Organizational Effectiveness - Commercial Energy Solutions: Pricing Structuring/Analysis Contracts TVA agreed to (1) focus on psychological safety and provide more opportunities for employees to attend leadership meetings, present their ideas, and increase leadership interactions with employees across the organization; (2) work to improve communications related to the organization's focus and enhance partnerships with key customers; and (3) evaluate potential system enhancements to the document management system. TVA expects to complete final action by January 25, 2022.

INVESTIGATIVE REFERRALS AND PROSECUTIVE RESULTS

Referrals	
Reports Issued to TVA Management	13
Subjects Referred to U.S. Attorneys	11
Subjects Referred to State/Local Authorities	5
Results	
Subjects Indicted/Informations and Criminal Complaints Filed	7
Subjects Convicted	1
Pretrial Diversions	0
Federal Referrals Declined	13
State/Local Referrals Declined	3

Metrics: Reports issued to TVA management are comprised of formal written reports and, when appropriate, e-mailed summaries conveying the findings of a completed investigation.

The number of indictments does not include sealed indictments or superseding indictments of the same individual already reported in this or a prior semiannual report.

These numbers may include task force activities and joint investigations with other agencies.



Cumberland Fossil Plant

APPENDIX 6

SUBSTANTIATED INVESTIGATIONS INVOLVING SENIOR AGENCY OFFICIALS

Case No.	Allegation and Disposition
21-0056	<p>During the 2019 Christmas holidays, employees were each given a rechargeable flood light, and this year a dual pack of cordless drills, by a senior manager. Employees were told the items were gifts; employees could use them at work or take them home, and nothing would be said. In addition, the manager may have accepted a grill from a vendor in the past.</p> <p>Substantiated. A Report of Administrative Inquiry (RAI) was issued. Our findings included that the manager distributed LED flood lights to plant personnel during the Christmas 2019 time frame (total cost, \$4,571.95) and drills (total cost \$5,412) during the Christmas 2020 time frame. These items were provided to personnel in the manner of gifts. The manager told the OIG he did not intend the items to be gifts but did tell employees they could take them home. As a result of our investigation, the drills and lights were collected and inventoried. Leadership training has been provided as well. The manager was suspended without pay for seven working days and has been demoted. The allegations pertaining to accepting a grill from a vendor were unsubstantiated.</p>
21-0078	<p>A project manager made an unauthorized commitment on behalf of TVA in the sale of used heavy equipment to a TVA vendor, in violation of TVA policy.</p> <p>Substantiated. The investigation found that a TVA project manager approved the release of two aging TVA generators to a machinery company in exchange for an \$11,000 credit without first consulting TVA's Investment Recovery (IR), which is required by TVA policy. IR was made aware of the transaction and determined the generators' value to be at least \$22,000. Following IR's appraisal, the company agreed to pay an additional \$11,000 to purchase the generators. An RAI was issued. Management responded it had taken steps to address the underlying concern that was raised during the investigation, chiefly that a lack of personal knowledge about TVA's IR program may have contributed to the employee's unintentional violation, and additional training will be required for relevant employee groups within the organization. No indications of intentional wrongdoing by the project manager, including a conflict of interest, were discovered during our investigation.</p>
02A16489	<p>Multiple TVA senior managers and executives were engaged in activities that violated Nuclear Regulatory Commission (NRC) processes/procedures associated with the reactor start-ups of October and November 2015 at Unit 1 of Watts Bar Nuclear Plant.</p> <p>Substantiated in part: Sixteen subjects were identified, and allegations were substantiated regarding seven of the individuals. The issues were examined during a joint investigation initiated by TVA OIG with the Department of Justice (DOJ) and included the NRC Office of Investigations and NRC OIG. DOJ deferred action to the NRC's Office of Enforcement due to concerns with approaching the statute of limitations for some of the issues.</p> <p>NRC staff interactions with TVA resulted in the NRC completing its enforcement actions in July 2021. This resulted in the documentation of multiple violations and a civil penalty against TVA. One individual action was taken directly against a Senior Reactor Operator's license. Most of the involved individuals were no longer employed at TVA upon completion of the NRC's enforcement process.</p>

Metrics: This appendix describes closed, substantiated investigations involving subjects specified by the IG Empowerment Act (salaried at 120 percent of GS-15 Level One). TVA does not operate on the GS scale, so all persons in this salary range, though included here, are not necessarily executive-level employees. Corollary to this, not all persons with substantial managerial duties are included here, based on their salaries.

PREVIOUSLY UNDISCLOSED INVESTIGATIONS INVOLVING SENIOR AGENCY OFFICIALS

Case No.	Allegation and Disposition
20-0226	A manager engaged in a cover-up involving intimidation, harassment, and favoritism. Unsubstantiated.
21-0032	The selection of a vendor is being rushed through the process, possibly based on the influence of a TVA executive. Unsubstantiated.
21-0149	A departmental review of a manager's computer use revealed numerous visits to entertainment sites, indicating possible misuse of work time. Unsubstantiated. TVA management subsequently advised they opted to address this concern administratively to be consistent with similar issues recently addressed at the same TVA site. TVA management will contact the OIG if there is subsequent indication of fraud.
21-0234	A manager retroactively altered an employee's timesheet, to the employee's detriment, without warning or explanation. Unsubstantiated.
02A16489	(See this case described in full at Appendix 6 on previous page. Allegations were unsubstantiated for nine of the 16 identified subjects.)

Metrics: This appendix describes any closed investigations, not disclosed to the public, involving subjects specified by the IG Empowerment Act (salaried at 120 percent of GS-15 Level One). TVA does not operate on the GS scale, so all persons in this salary range, though included here, are not necessarily executive-level employees. Corollary to this, not all persons with substantial managerial duties are included here, based on their salaries.



APPENDIX 8

HIGHLIGHTS - STATISTICS

	SEPT 30, 2021	MAR 31, 2021	SEPT 30, 2020	MAR 31, 2020	SEPT 30, 2019
AUDITS					
AUDIT STATISTICS					
Carried Forward	20	15	18	16	16 ¹
Started	14	14	17	11	7
Canceled	(2)	(0) ²	(0)	(0)	(0)
Completed	(12)	(8)	(20)	(9)	(8)
In Progress at End of Reporting Period	20	20	15	18	16
AUDIT RESULTS (Thousands)					
Questioned Costs	\$13,458	\$23	\$10,876	\$1,084	\$11,686
Disallowed by TVA	\$8,425	\$23	\$5,024	\$1,084	\$11,686
Recovered by TVA	\$395	\$607 ³	\$74	\$0	\$109
Funds to Be Put to Better Use	\$9,700	\$3,455	\$21,932	\$849	\$0
Agreed to by TVA	\$9,700	\$17,135 ⁴	\$8,252	\$849	\$239 ⁵
Realized by TVA	\$2,240	\$5,779	\$2,931	\$246	\$7,439 ⁶
OTHER AUDIT-RELATED PROJECTS					
Completed	8	6	7	5	8
Cost Savings Identified/Realized	\$0	\$0	\$0	\$0	\$0
EVALUATIONS					
Completed	13	7	14	10	19
Cost Savings Identified/Realized (Thousands)	\$0	\$0	\$0	\$0	\$0
SPECIAL PROJECTS					
Completed	0	1	0	1	1
INVESTIGATIONS⁷					
INVESTIGATION CASELOAD					
Opened	74	75	63	95	101
Closed	83	90	92	96	83
In Progress at End of Reporting Period	73 ⁸	87	106	137	140
INVESTIGATIVE RESULTS (Thousands)					
Recoveries	\$7,357.7 ⁹	\$2,056.1	\$4.2	\$93.4	\$569.3
Projected Savings	\$0	\$1,144.1	\$0	\$0	\$0
Fines/Penalties/Fees	\$0.6	\$0.3	\$0	\$0.1	\$0.1
Waste/Other Monetary Loss	\$2,887.0	\$429.4	\$0	\$62.4	\$1,511
Forfeiture(s) Ordered - Criminal	\$1,750.0	\$0	\$0	\$0	\$87.6
Forfeiture(s) Ordered - Civil	\$0	\$0	\$0	\$0	\$0
MANAGEMENT ACTIONS					
Disciplinary Actions Taken (Number of Subjects)	4	9	3	2	3
Counseling/Management Techniques Employed (Number of Cases)	11	13	12	13	15
Debarments	0	0	0	0	0
PROSECUTIVE ACTIVITIES (Number of Subjects)					
Referred to U.S. Attorneys	11	4	8	7	9
Referred to State/Local Authorities	5	0	2	4	1
Indicted/Informations and Criminal Complaints Filed	7	1	3	4	1
Convicted	1	1	1	2	1
Pretrial Diversions	0	1	0	0	0

¹ Does not include one project that was postponed during the period.

² One project was postponed during the period.

³ Includes amounts agreed to in a prior period.

⁴ Ibid.

⁵ Amount agreed to was identified in prior period audit.

⁶ Includes amounts agreed to in a prior period.

⁷ These numbers may include task force activities and joint investigations with other agencies.

⁸ Adjusted from previous period.

⁹ Includes \$6,775,896 court-ordered restitution to other federal and state entities resulting from a multi-agency investigation.

GOVERNMENT CONTRACTOR AUDIT FINDINGS

The National Defense Authorization Act for Fiscal Year 2008, P.L. 110-181, requires each Inspector General appointed under the Inspector General Act of 1978 to submit an appendix on final, completed contract audit reports issued to the contracting activity that contain significant audit findings—unsupported, questioned, or disallowed costs in an amount in excess of \$10 million, or other significant findings—as part of the Semiannual Report to Congress. During this reporting period, the Office of the Inspector General issued no contract review reports under this requirement.



Installing a generator in the Norris Dam powerhouse. Cerca 1930

APPENDIX 10

PEER REVIEWS OF THE TVA OIG

Audits Peer Review

Inspector General audit organizations are required to undergo an external peer review of their system of quality control at least once every three years, based on requirements in the *Government Auditing Standards*. Federal audit organizations can receive a rating of pass, pass with deficiencies, or fail. The Tennessee Valley Authority (TVA) Office of the Inspector General (OIG) underwent its most recent peer review of its audit organization for the period ended September 30, 2019. This review was performed by the Pension Benefit Guaranty Corporation OIG. The Pension Benefit Guaranty Corporation OIG issued its report, dated March 10, 2020, in which it concluded the system of quality control for the audit organization of TVA OIG in effect for the year ended September 30, 2019, has been suitably designed and complied with to provide TVA OIG with reasonable assurance of performing and reporting in conformity with applicable professional auditing standards in all material respects. Accordingly, the TVA OIG received a rating of pass. There are no outstanding recommendations from this review. The peer review report is posted on our Web site at https://oig.tva.gov/peer_reports.html.

Evaluations Peer Review

Inspector General organizations that conduct evaluations in accordance with the Council of the Inspectors General on Integrity and Efficiency's *Quality Standards for Inspection and Evaluation* (Blue Book) are required to undergo an external peer review every three years. The TVA OIG underwent its first peer review of its evaluation organization for the period ended December 31, 2019. This review was led by the Department of Labor OIG. The Department of Labor OIG issued its report, dated May 28, 2020, in which it determined the (1) TVA OIG's internal policies and procedures generally met the seven Blue Book standards addressed in the peer review and (2) TVA OIG reports reviewed met the covered Blue Book standards and complied with TVA OIG's internal policies and procedures. The peer review report is posted on our Web site at https://oig.tva.gov/peer_reports.html.

Investigations Peer Review

Investigative Operations undergoes a Quality Assessment Review at least once every three years. The Corporation for National & Community Service (CNCS) OIG completed a Quality Assessment Review of TVA OIG Investigative Operations on May 31, 2019. CNCS OIG found ". . . the system of internal safeguards and management procedures for the investigative function of TVA-OIG in effect for the period ending December 31, 2018, was in compliance with the quality standards established by CIGIE and the applicable Attorney General Guidelines. . . ." This confirmation is posted on our Web site at https://oig.tva.gov/reports/2019_Investigations_Peer_Review.pdf.

PEER REVIEWS OF ANOTHER OIG

Audits Peer Review

The Tennessee Valley Authority Office of the Inspector General (OIG) completed a peer review of the United States Office of Personnel Management (OPM) OIG audit operations. We issued our final report to the OPM Inspector General on July 8, 2021, in which we reported that in our opinion, the system of quality control for the audit organization of OPM, in effect for the 12-month period ended March 31, 2021, had been suitably designed and complied with to provide OPM OIG with reasonable assurance of performing and reporting in conformity with applicable professional standards and applicable legal and regulatory requirements in all material respects. Accordingly, the OPM OIG received a peer review rating of pass.

OPM OIG has posted its peer review report on its Web site at:

<https://www.opm.gov/our-inspector-general/publications/peer-review-reports/reports/system-review-report-july-8-2021.pdf>.



Paradise Natural Gas Plant

GLOSSARY



Disallowed Cost

A questioned cost that management, in a management decision, has sustained or agreed should not be charged to the agency.

Final Action

The completion of all management actions, as described in a management decision, with respect to audit findings and recommendations. When management concludes no action is necessary, final action occurs when a management decision is made.

Funds To Be Put To Better Use

Funds which the OIG has disclosed in an audit report that could be used more efficiently by reducing outlays, deobligating program or operational funds, avoiding unnecessary expenditures, or taking other efficiency measures.

Information

A formal accusation of a crime made by a prosecuting officer as distinguished from an indictment presented by a grand jury.

Management Decision

Evaluation by management of the audit findings and recommendations and the issuance of a final decision by management concerning its response to such findings and recommendations.

Questioned Cost

A cost the Inspector General questions because (1) of an alleged violation of a law, regulation, contract, grant, cooperative agreement, or other document governing the expenditure of funds; (2) such cost is not supported by adequate documentation; or (3) the expenditure of funds for the intended purposes was unnecessary or unreasonable.

Unsupported Cost

A cost that is questioned because of the lack of adequate documentation at the time of the audit.

ABBREVIATIONS & ACRONYMS



THE FOLLOWING ARE ACRONYMS AND ABBREVIATIONS WIDELY USED IN THIS REPORT.

Autonomic.....	Autonomic Software, Inc.
Black & Veatch	Black & Veatch Corporation
CARES	Coronavirus Aid, Relief, and Economic Security
CIGIE	Council of the Inspectors General on Integrity and Efficiency
CMS	Corrosion Monitoring Services
CNCS	Corporation for National & Community Service
D&Z	Day & Zimmermann NPS, Inc.
DCN	Design Change Notice
DOJ	U.S. Department of Justice
EIDL	Economic Injury Disaster Loan
EO	Executive Order
F&H	Fuels and Hedging
FEMA	Federal Emergency Management Agency
FY	Fiscal Year
IG	Inspector General
IH	Industrial Hygiene
IR	Investment Recovery
IT	Information Technology
JCT	Johnsonville Combustion Turbine Plant
JSCC	John Sevier Combined Cycle Plant
LPC	Local Power Company
MW	Megawatts
NRC	Nuclear Regulatory Commission
OIG	Office of the Inspector General
OPM	United States Office of Personnel Management
P-Card	Purchasing Card
PPA	Purchased Power Agreements
PPP	Paycheck Protection Program
PRAC	Pandemic Response Accountability Committee
RAI	Report of Administrative Inquiry
RCA	Radiologically Controlled Areas
SPP	Standard Programs and Processes
SQN	Sequoyah Nuclear Plant
SREG	Strategic Real Estate and Governance
SRIP	Sustainability Report and Implementation Plan
TAA	Trade Agreements Act
T&M	Time and Material
TCA	Textile Corporation of America
TLA	Temporary Living Allowance
TPS	Transmission and Power Supply
TVA	Tennessee Valley Authority
UVGI	Ultraviolet Germicidal Irradiation
WBN	Watts Bar Nuclear Plant



Office of the Inspector General

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The OIG is an independent organization charged with conducting audits, evaluations, and investigations relating to TVA programs and operations, while keeping the TVA Board and Congress fully and currently informed about problems and deficiencies relating to the administration of such programs and operations.

The OIG focuses on (1) making TVA's programs and operations more effective and efficient; (2) preventing, identifying, and eliminating waste, fraud, and abuse and violations of laws, rules, or regulations; and (3) promoting integrity in financial reporting.

If you would like to report to the OIG any concerns about fraud, waste, or abuse involving TVA programs or violations of TVA's Code of Conduct, you should contact the OIG EmPowerline, TVA OIG's hotline. The EmPowerline can be reached 24 hours a day, seven days a week, either by a toll-free phone call (1-855-882-8585) or over the Web (www.oigempowerline.com). A third-party contractor will take your call or online concern and immediately forward it to OIG personnel. You may report your concerns anonymously or you may request confidentiality.





EmPowerline®

**A hotline for reporting anonymous
and confidential concerns**

**www.oigempowerline.com
Toll-Free 855-882-8585**



**We investigate fraud, waste, and abuse in TVA programs and operations.
Examples include:**

- Contract Fraud
- Environmental Crimes
- Healthcare/Prescription Drug Fraud
- Employee Misconduct
- Conflict of Interest
- Workers' Compensation Fraud

Whistleblower Protection

Educates TVA employees about prohibitions on retaliation for protected disclosures, as well as the rights and remedies of employees who have been subjected to workplace retaliation for making protected disclosures. E-mails may be directed to:
whistleblowercoordinator@tvaoig.gov.



TVA OIG VALUES

We are a high performing work team that achieves OIG strategic objectives through operational excellence and modeling our values and behaviors every day.

Independence

Integrity

Accountability

Trusting Relationships

Effective Communications

Continuous Improvement





Office of the Inspector General
TENNESSEE VALLEY AUTHORITY
Semiannual Report
April 1, 2021 - September 30, 2021