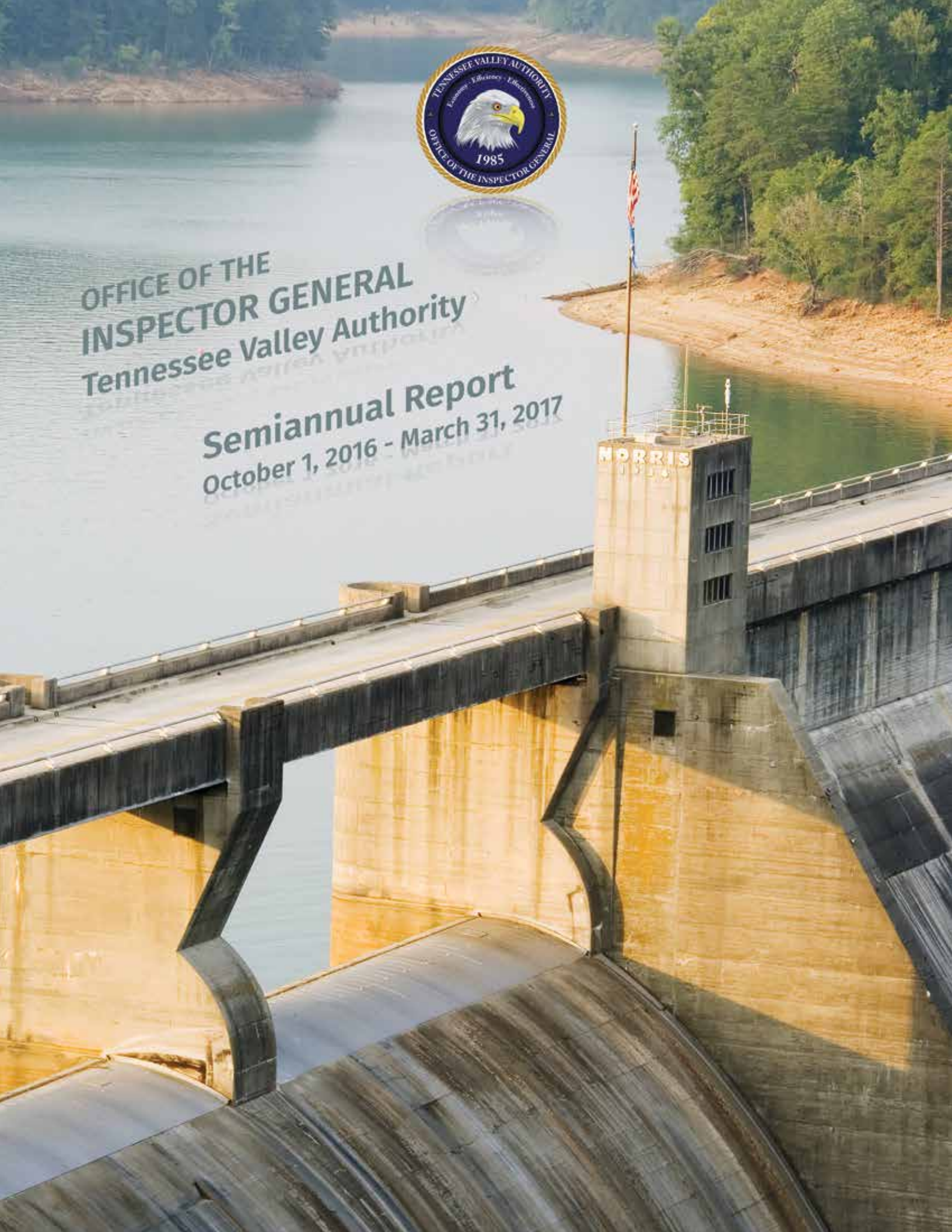
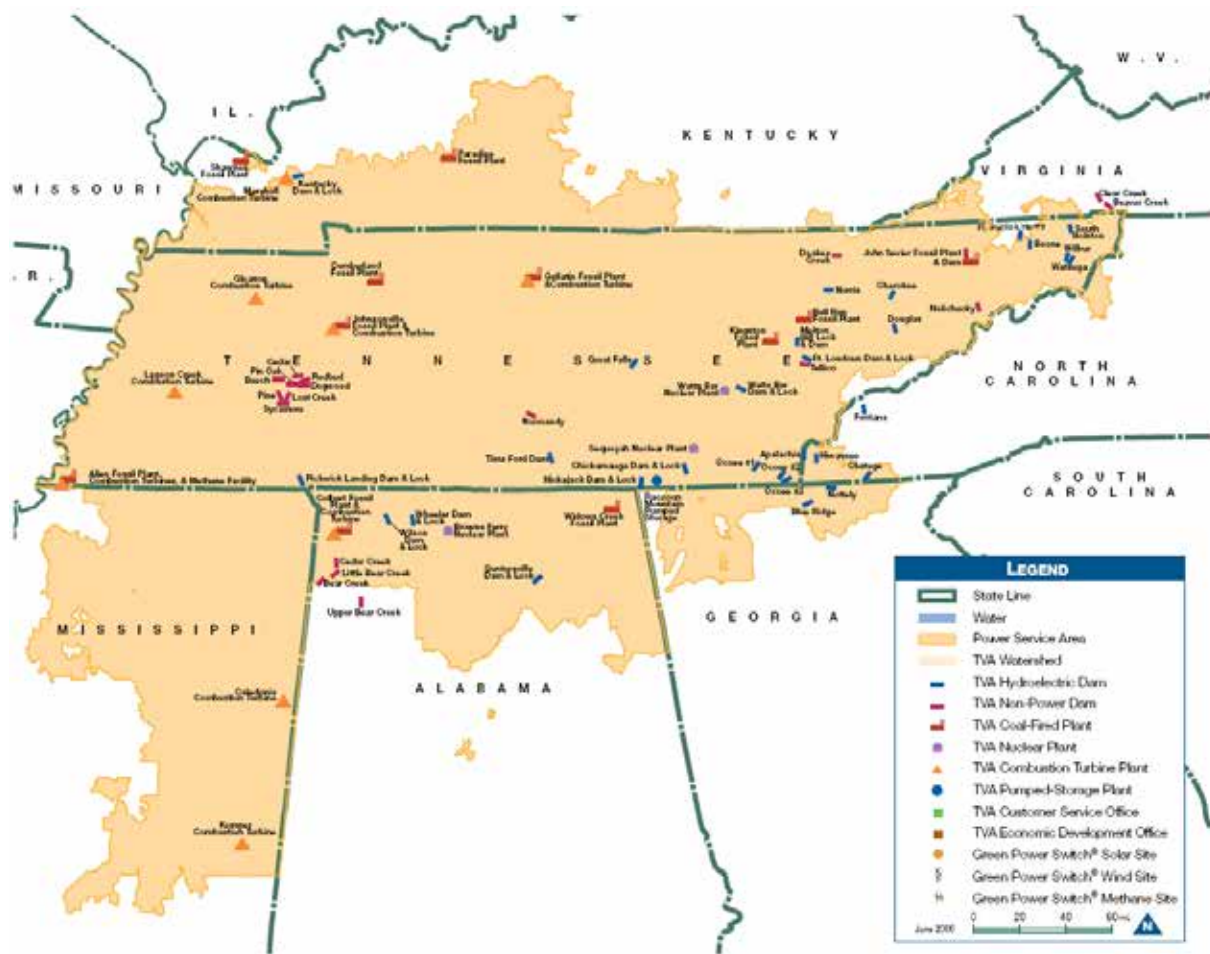




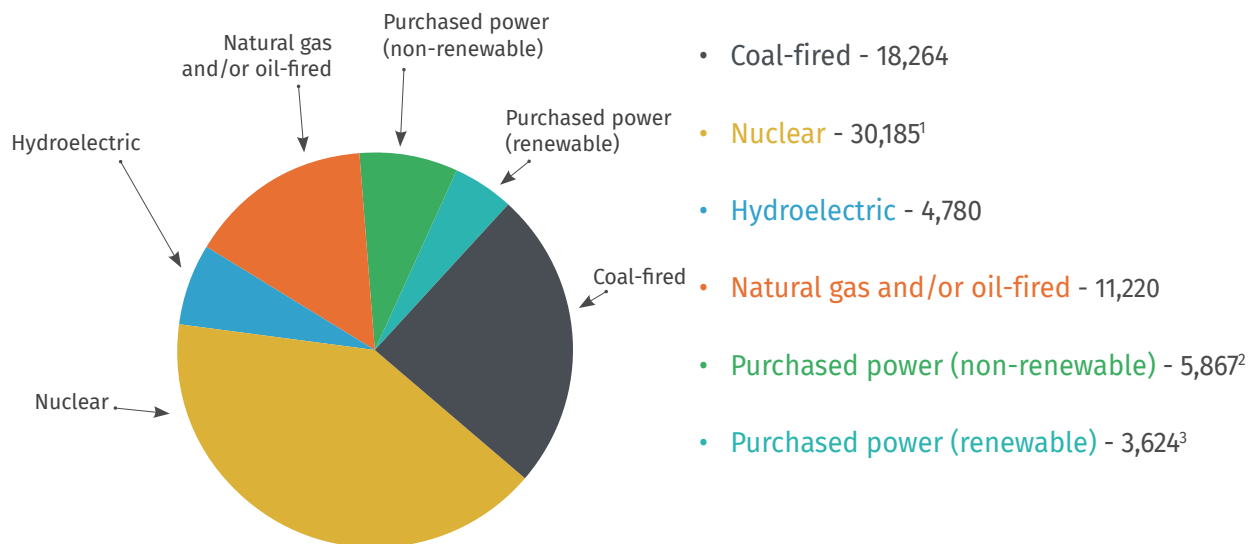
**OFFICE OF THE  
INSPECTOR GENERAL**  
Tennessee Valley Authority

**Semiannual Report**  
October 1, 2016 - March 31, 2017





## TVA Power Generation and Purchased Power Six Months Ended March 31, 2017 (in millions of kilowatt hours)



<sup>1</sup> The nuclear amount for the six months ended March 31, 2017, includes approximately 799 million kWh of pre-commercial generation at Watts Bar Nuclear Plant Unit 2 and Paradise Combined Cycle Plant.

<sup>2</sup> Purchased power (non-renewable) includes generation from Caledonia Combined Cycle Plant, which is currently a leased facility operated by TVA.

<sup>3</sup> Purchased power (renewable) includes power purchased from the following renewable sources: hydroelectric, solar, wind, and cogenerations.

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## Message from THE INSPECTOR GENERAL

*I am pleased to present our report for the period October 1, 2016, to March 31, 2017. As mentioned in the previous semiannual report to Congress, the role of the Office of the Inspector General (OIG) in identifying potential risks to Tennessee Valley Authority's (TVA) ability to achieve its mission of providing reliable power at affordable rates, environmental stewardship, and economic development to the Tennessee Valley is imperative to the agency's success.*

In this semiannual period, our audit, evaluation, and investigative activities identified approximately \$40.7 million in funds TVA could put to better use, questioned costs, recoveries and savings, and other monetary loss as well as opportunities for TVA to improve its programs and operations. Some of the highlights include:

- Six preaward examinations of cost proposals to support TVA management in negotiating procurement terms for TVA operations that resulted in potential cost savings to TVA of more than \$28 million.
- One compliance audit of a contract for coal transportation from various coal mines and blending facilities to TVA's Bull Run Fossil Plant that determined the contractor overbilled TVA more than \$8 million.
- An organizational effectiveness evaluation of TVA's primary project management organization — Generation Construction, Projects & Services — which is primarily responsible for project management related to the performance of construction and operational services and the implementation of construction projects for all non-Nuclear TVA organizations.
- Three evaluations, including a follow-up evaluation to determine if the sale of TVA's Bellefonte Nuclear Plant site was conducted according to TVA's policies and procedures, an evaluation to determine the adequacy

of staffing and training of ammonia operations at coal plants, and an evaluation associated with the demolition phase of the deconstruction of John Sevier Fossil Plant.

- Audits of tax payments on TVA credit cards, which identified \$2.48 million in taxes TVA paid on tax-exempt transactions, and TVA Information Technology's (IT) use of contractors.
- Four audits in the IT environment regarding TVA IT security practices, physical and logical access for TVA's high risk assets, physical and logical network architecture at a TVA field office, and controls for TVA's vendor management system.
- Investigative results including one indictment, one conviction, and more than \$630,000 in recoveries and projected savings.

On a personal note, I want to thank Ben Wagner for his many contributions to the TVA OIG. Ben retired May 12, 2017, after a distinguished career in TVA of more than 38 years. About 31 years ago, Ben joined the TVA OIG as it was being formed and played an instrumental role in building our organization. His leadership and contributions shaped the OIG and made us and TVA better. We thank you, Ben, for your exceptional service.

The role we play in identifying risks so that TVA Board members and executive management can mitigate those risks is a responsibility our office takes seriously.



We intend — through our audits, evaluations, and investigations — to continue providing TVA with a perspective that allows it to leverage lessons learned to better serve the 9 million people of the Tennessee Valley.

Richard W. Moore  
*Inspector General*



# NOTEWORTHY UNDERTAKING

## TVA OFFICE OF THE INSPECTOR GENERAL RANKED ONE OF THE BEST PLACES TO WORK IN THE FEDERAL GOVERNMENT

*During this semiannual period, the TVA OIG received its second consecutive award as one of the Best Places to Work in the Federal Government by the non-profit Partnership for Public Service and the accounting firm Deloitte.*



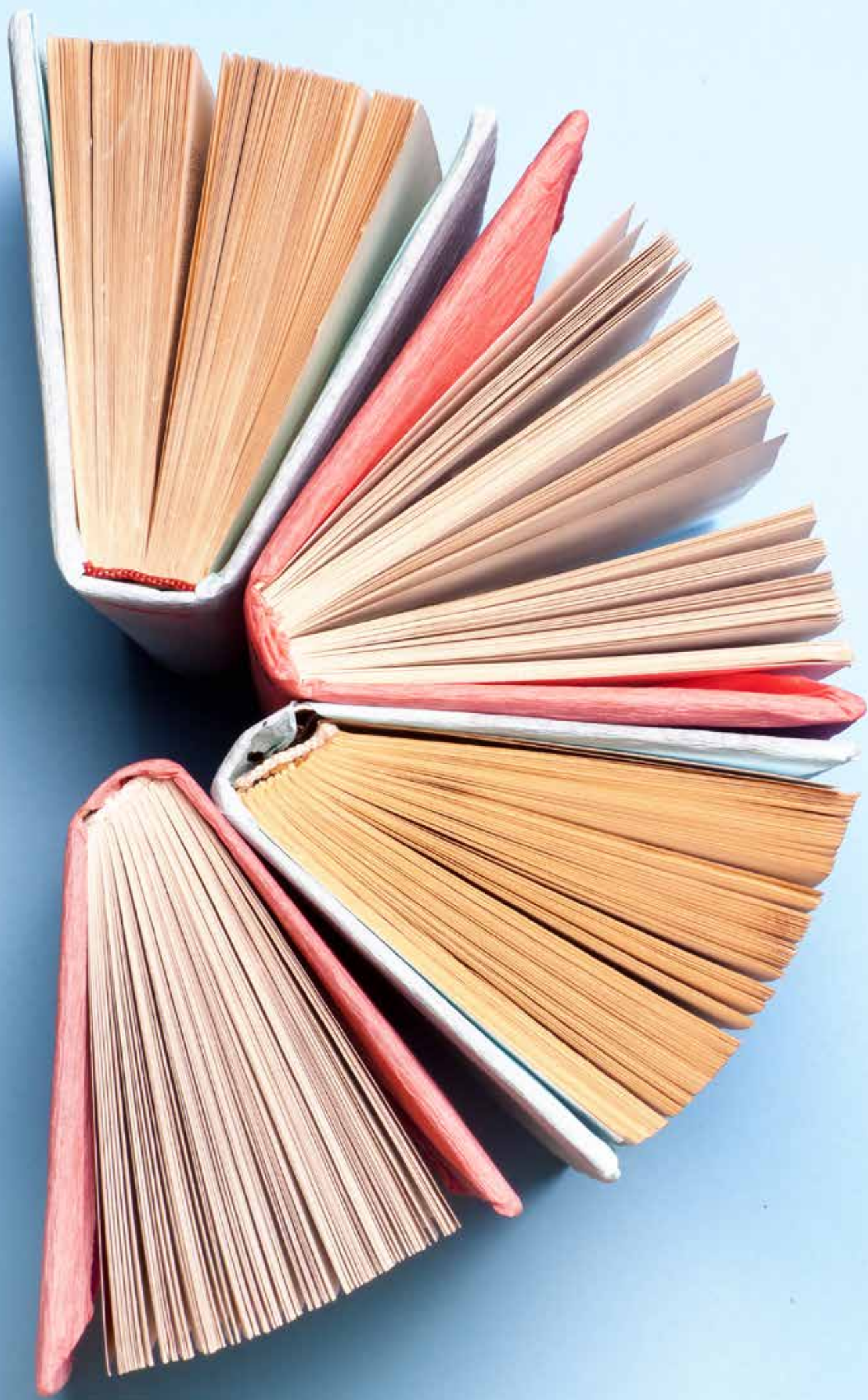
The ranking is based on the annual Employee Viewpoint Survey of federal government employees by the Office of Personnel Management (OPM). The TVA OIG ranked first of 305 federal agency subcomponents. The award was given in a ceremony in Washington, D.C., December 15, 2016.

“It was a privilege to accept our award on the OIG’s behalf at the Best Places to Work in the Federal Government event,” said TVA OIG Leadership Council Chair Leslie Franks. “Our No. 1 ranking illustrates the commitment we have to maintaining our healthy culture in the OIG. Sustaining the progress we’ve made isn’t easy – it’s something we’re always working on together, day by day, crucial conversation by crucial conversation. It takes a lot of hard work and continuous effort on everyone’s part, but I think earning this award for the second year in a row says that it’s worth it.”

Inspector General (IG) Richard Moore added, “The OIG has been on a focused journey for the last six years to create the most effective and healthy work environment possible. This is not the end of our journey. It is a great place to pause and acknowledge our progress and achievements. Our continued focus on our sustainability plans and our OIG values and behaviors both internally and with TVA stakeholders will continue to enhance the quality and impact of our work products.”

This is TVA OIG’s second year participating in OPM’s FedView survey and inclusion in the Partnership for Public Service ranking. Best Places to Work in the Federal Government’s Web site is at <http://www.bestplacestowork.org>.





# EXECUTIVE OVERVIEW

*TVA is not a stranger to the pressures of navigating risk to fulfill its mission. There is a plethora of complex and ever-changing challenges that have the potential to derail the agency's performance in both the short and long term. Some of these include TVA's heavy reliance on vendors and contractors, decommissioning aged fossil plants, reducing its debt and adapting to the pressures of decreased demand. Any of these could jeopardize TVA's ability to provide reliable power at competitive rates for the people of the Tennessee Valley. Our independent findings and recommendations provide TVA measurable insight toward risk mitigation and successfully navigating its future.*

## AUDITS

Our audit organization includes three departments that focus on (1) contract audits, (2) financial and operational audits, and (3) IT audits. During this reporting period, these teams completed 14 audit, examination, and agreed-upon procedures engagements. This work identified more than \$10.5 million in questioned costs for TVA to recover and more than \$28 million in funds the company could put to better use. We also identified several opportunities for TVA to improve the effectiveness and efficiency of its programs and operations.

### Contract Audits

To support TVA management in negotiating procurement actions, we completed six preaward examinations of cost proposals submitted by companies proposing to provide (1) construction services for TVA bottom ash dewatering facilities, (2) engineering and management services for TVA's hydro-electric power train and associated systems, (3) nuclear and non-nuclear modification and supplemental maintenance services, and (4) handling and maintenance of coal combustion products. Our examinations identified \$28.3 million of potential savings opportunities for TVA to negotiate. We also completed a compliance audit of a contract with expenditures totaling \$41.6 million related to coal transportation that

identified overbillings of \$8.05 million. The Contract Audits section begins on page 17 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 tax payments on TVA credit cards, which identified \$2.48 million in taxes TVA paid on tax-exempt transactions, and TVA Information Technology's use of contractors. In addition to our audit work, we monitored the audit of TVA's fiscal year (FY) 2016 financial statements by an external auditor and applied agreed-upon procedures related to TVA's 2016 Winning Performance (WP) payout. The Financial and Operational Audits section begins on page 17 of this report.

### IT Audits

We completed audits of (1) IT security practices of TVA as required by the Federal Information Security Modernization Act (FISMA) of 2014, (2) controls related to the physical and logical access for TVA's high risk assets, (3) controls related to the physical and logical network architecture at a TVA field office, and (4) controls for TVA's vendor management system. The IT Audits section begins on page 20 of this report.

## EVALUATIONS

Our Evaluations organization includes two departments, one of which focuses on organizational effectiveness reviews. During this reporting period, our teams completed one organizational effectiveness review and three evaluations which identified a number of opportunities for improvement.

### Evaluations

The Evaluations group completed three reviews during this semiannual period. These evaluations related to the (1) sale of the Bellefonte Nuclear Plant site, (2) ammonia staffing and training at coal plants, and (3) demolition phase of the deconstruction of the John Sevier Fossil Plant. The Evaluations section begins on page 23 of this report.

## Organizational Effectiveness

This group evaluated the Generation Construction, Projects & Services organization. The Organizational Effectiveness section begins on page 25 of this report.

## INVESTIGATIONS

This reporting period, we opened 97 cases and closed 84. Our investigative results include one conviction, one indictment, more than \$404,000 in projected savings, and more than \$225,000 in recoveries to TVA. The Investigations section begins on page 27 of this report.

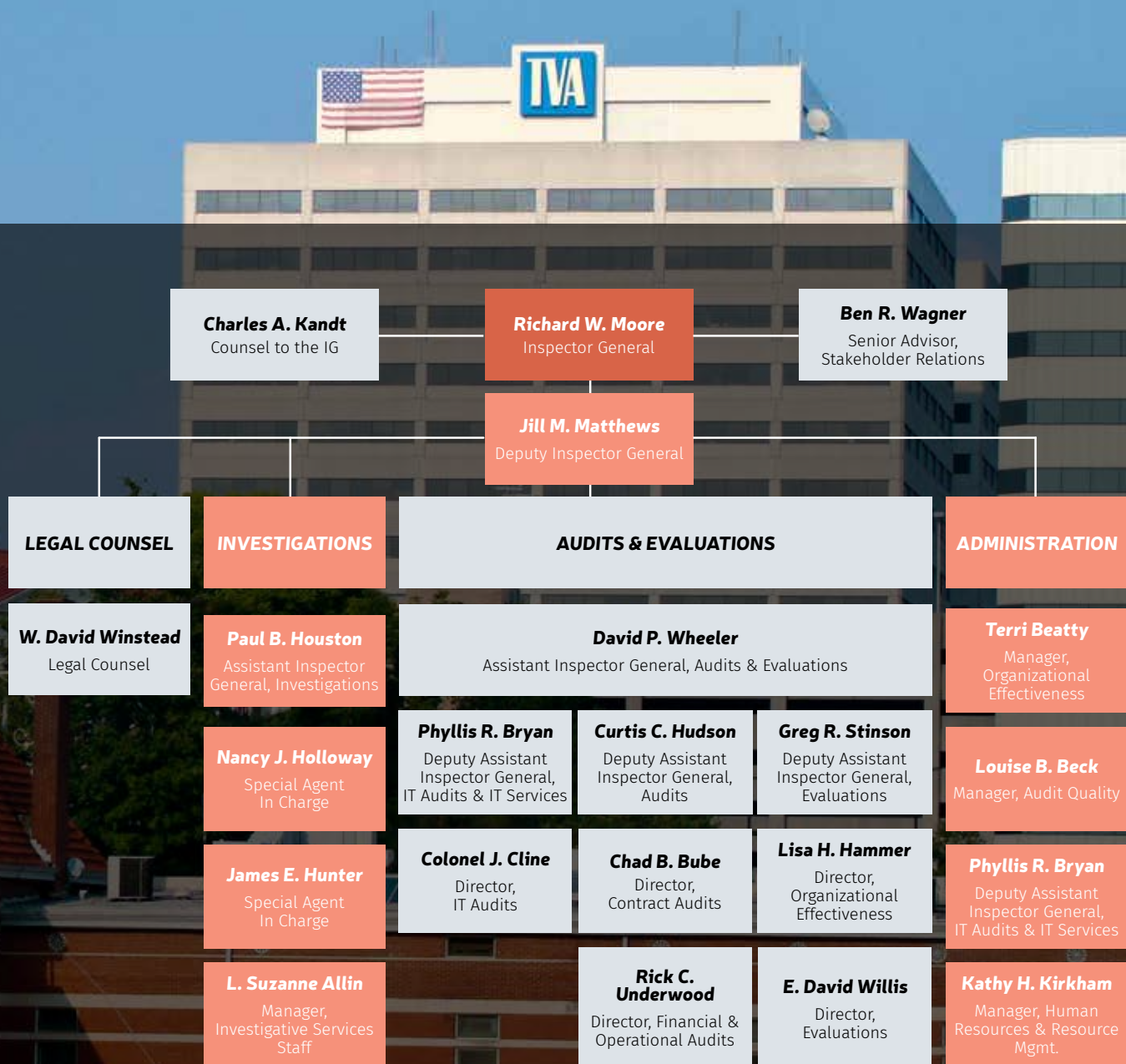
## STATISTICAL HIGHLIGHTS

*October 1, 2016 – March 31, 2017*

Audit Reports Issued	14
Evaluations Completed	4
Questioned Costs	\$10,530,466
Questioned Costs Agreed to by TVA	\$8,045,846
Questioned Costs Recovered by TVA	\$9,213,944
Funds to be Put to Better Use	\$28,247,600
Savings Realized by TVA	\$1,586,186
Investigations Opened	97
Investigations Closed	84
Recoveries/Savings/Fees	\$630,262
Other Monetary Loss	\$1,291,401
Criminal Actions	2
Administrative Actions (No. of Subjects)	8



*Kingston Fossil Plant*



# ORGANIZATION

*Since 1985, the OIG has worked to help TVA become better which is the OIG's vision. Through our audits, evaluations, and investigations, we provide TVA management, the TVA Board of Directors (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.

The OIG has strategically located its offices near all major TVA offices throughout the Tennessee Valley. We are headquartered in TVA's East Tower, opposite TVA's corporate offices, overlooking downtown Knoxville.

The OIG has field offices in Chattanooga, Tennessee, where members of the Evaluations and Financial and Operational Audits teams and several special agents are located. Special agents are located in Nashville, Tennessee, and Huntsville, Alabama, as well. We also 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 March 31, 2017, the OIG had a total staff of 104.

## 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, 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 teams make recommendations to enhance the effectiveness and efficiency of TVA programs and operations.

The teams 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 those issues of highest impact and risk to TVA.

These issues vary depending on the objectives of the project. The graphic shows some representative

## TYPES OF AUDIT & EVALUATION ISSUES

### Financial and Operational Audits

- Program Inefficiencies/Ineffectiveness
- Legal/Regulatory Compliance
- Policy Noncompliance
- Internal Control Deficiencies
- Fraud

### Contract Audits

- Inflated Proposals
- Contract Overpayments
- Inferior Performance
- Fraud

### IT Audits

- Internal Control Deficiencies
- Policy Noncompliance
- Integrity of Data and Assets
- Fraud

### Evaluations

- Operational Inefficiency
- Policy Noncompliance
- Legal/Regulatory Noncompliance
- Fraud

### Organizational Effectiveness

- Operational Ineffectiveness
- Cultural Areas for Improvement
- Unmitigated Risks
- Fraud

examples of issues our audit and evaluation projects are commonly designed to identify.

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

- Contract Audits has lead responsibility for contract compliance audits and preaward examinations. In addition, this team 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 group also provides oversight of TVA's 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 team 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 team is made up of two departments—Evaluations and Organizational Effectiveness.

This team performs its work in accordance with *Quality Standards for Inspection and Evaluation* as prescribed by the Council of the Inspectors General on Integrity and Efficiency (CIGIE).

- Evaluations performs both comprehensive reviews and more limited-scope policy and program reviews to monitor compliance, measure performance, and assess the efficiency and effectiveness of operations.

- Organizational Effectiveness performs risk-based reviews to assess operational and cultural areas, including strengths and risks 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 team 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, as well as securities fraud. 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 also serve as ethics officials, providing OIG employees guidance on government ethics and standards of conduct. Additionally, the TVA Whistleblower Protection Ombudsman is 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

### 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

### Health Care Fraud

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

### Unauthorized Access Into TVA Computer Systems

Accessing a TVA computer without authorization or exceeding authorized access

### 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

### Special Projects

Management requests, data mining and predictive analysis, congressional and TVA Board requests, and fraud-risk assessments



# SUMMARY OF REPRESENTATIVE AUDITS

*During this semiannual reporting period, the TVA OIG Audit organization completed 14 audit, examination, and agreed-upon procedures engagements. This work identified more than \$10.5 million in questioned costs for TVA to recover and more than \$28 million in funds the company could put to better use. We also identified several opportunities for TVA to improve the effectiveness and efficiency of its programs and operations. Additionally, we monitored the audit of TVA's FY 2016 financial statements by an external auditor.*

## CONTRACT AUDITS

### Preaward Contract Examinations

To support TVA management in negotiating procurement actions, we completed six preaward examinations of cost proposals submitted by companies proposing to provide (1) construction services for TVA bottom ash dewatering facilities, (2) engineering and management services for TVA's hydro-electric power train and associated systems, (3) nuclear and non-nuclear modification and supplemental maintenance services, and (4) handling and maintenance of coal combustion products. Our examinations identified \$28.3 million of potential savings opportunities for TVA to negotiate. The savings opportunities were primarily related to overstated cost proposals, indirect cost recovery rates, and profit rates.

### Contract Compliance Reviews

During this semiannual period, we completed one compliance audit of a contract for coal transportation. We audited \$41.6 million in costs billed by a contractor for the transportation of coal from various coal mines and blending facilities to TVA's Bull Run Fossil Plant. In summary, we determined the contractor

overbilled TVA \$8,045,846, including (1) \$8,040,045 for overstated adjustments of per-ton rates dating back to January 1, 2007, and (2) \$5,801 for overstated fuel price adjustments. TVA management subsequently negotiated a settlement which resulted in the contractor refunding TVA \$2 million and a contract amendment to eliminate quarterly adjustments to per ton freight rates which will potentially save TVA \$10 million in future costs.

## FINANCIAL AND OPERATIONAL AUDITS

During this semiannual period, Financial and Operational Audits completed audits of tax payments on TVA credit cards and TVA IT's use of contractors. In addition, the team monitored the audit of TVA's FY 2016 financial statements by an external auditor and applied agreed-upon procedures related to TVA's 2016 WP payout.

### Tax Payments on TVA's Credit Cards

We audited tax payments made on TVA's credit card transactions after a recent audit of TVA corporate cards<sup>4</sup> noted TVA was paying taxes on transactions that should be tax exempt. Our audit scope was TVA corporate card transactions from October 1, 2013, through June 30, 2016, totaling \$45,190,937. Our objective was to determine

<sup>4</sup> Audit Report 2014-15228, TVA Corporate Card, December 10, 2015.

the effectiveness of the processes TVA has in place for tax-exempt credit card transactions.

TVA is exempt from state and local taxes when the related transaction is paid for with the corporate card. However, state and local governments generally do not require vendors to ascertain which transactions are tax exempt. Thus, the vendor can collect the tax, even though the federal government is not liable, and the federal government can then seek a refund from the state or local government. TVA's policies and employee guidance put the burden of removing or recovering taxes paid on the employee. If it is determined that the vendor overcharged TVA, the employee must request a credit to be posted to his/her corporate card.

We found the processes TVA has in place for tax-exempt credit card transactions are not effective. We identified (1) an estimated \$2.48 million in taxes TVA paid on tax-exempt transactions; (2) tax information provided by TVA's credit card supplier was inaccurate; and (3) transactions were approved in the Employee Reimbursement System (ERS) without adequate support.

We recommended TVA management (1) work with TVA's credit card supplier, charge card merchants, and state or local authorities to (a) obtain refunds for taxes previously

paid on tax-exempt transactions and (b) recoup tax payments on an ongoing basis; (2) work with TVA's credit card supplier to obtain detailed card transaction data that accurately documents the amount of taxes paid on the TVA corporate card and/or modify ERS to enable employees to record taxes charged on corporate card transactions; and (3) reinforce the requirement for detailed receipts with both cardholders and approving officials in the annual refresher training.

## **TVA IT's Use of Contractors**

We audited IT's use of 207 non-craft staff augmentation (SA) contractor employees working in IT positions during February 2016 for which TVA paid about \$1.8 million in labor costs and associated labor markups. Our objectives were to determine whether IT's use of contractors provided reasonable assurance of a low-cost workforce and knowledge transfer to TVA annual employees once the contractor's temporary assignment was complete.

Overall, we found the majority of the 207 SA contractors had straight-time hourly pay rates less than or equal to TVA's midpoint hourly pay rates, and the rates were comparable to TVA employees' pay rates for the corresponding job codes. However, we also found (1) TVA management's approval of SA contractors' compensation exceeding the midpoint rate does not take



into account the SA contractors' indirect cost markup rates applied to the pay rate; (2) IT does not currently have a policy in place requiring knowledge transfer from contractors to TVA employees; (3) manual data entry is required to update minimum and midpoint pay rates from TVA's human resource information system, People Lifecycle Unified System (PLUS), into TVA's contractor system, IQNavigator (IQN); (4) IQN compares a contractor's hourly rate change (e.g., pay increase) to the midpoint rate in effect for the job code when the assignment was made, rather than to the current midpoint rate, unless a new assignment is created.

We recommended TVA management (1) revise TVA's Standard Programs and Processes (SPP) for Contractor Workforce Management, to require approval of a contractor's fully burdened (FB) rate (pay rate plus all markups) when it exceeds TVA's FB midpoint rate (midpoint pay rate plus fringe benefit markup) for the job code; (2) implement a comparison of a contractor's hourly pay rate to the current midpoint pay rate and the contractor's FB rate to the current FB midpoint rate for the applicable job code in IQN when either the contractor's hourly rate or the midpoint rate changes; and (3) implement procedure(s) to increase timeliness and resource efficiency and reduce the risk of manual entry errors for minimum and midpoint rate updates in IQN.

We also recommended TVA implement a policy requiring transfer of knowledge between contractors and TVA employees for systems and applications in development as well as production.

TVA management implemented controls to mitigate some of the weaknesses identified in our report. TVA management also agreed further improvements can be implemented, and it would be beneficial for leaders to better understand the total cost of their contract workforce as compared to their employee workforce. Management also agreed to develop a policy requiring knowledge transfer for specialized and unique system and application development work and skills not already possessed by TVA's IT staff.

## **Oversight of the FY 2016 Financial Statement Audit**

TVA contracted with the independent public accounting firm of Ernst & Young LLP to audit TVA's consolidated balance sheet as of September 30, 2016, and the related consolidated statements of income, changes in proprietary capital, and cash flows for the year. This also included the audit of TVA's internal control over financial reporting as of fiscal year-end. Additionally, the firm reviewed TVA's FY 2016 interim financial information



*View From Chickamauga Dam*

filed on Form 10-Q with the Securities and Exchange Commission. The contract required the work be performed in accordance with *Government Auditing Standards*. Our monitoring of their work disclosed no instances where the firm did not comply, in all material respects, with these standards.

## **Agreed-Upon Procedures Applied to 2016 WP Payouts**

TVA's WP Incentive Plan is a performance management program designed to promote teamwork, focus on continued high performance, and motivate and reward employees for achieving strategic objectives and critical success factors.

We applied six agreed-upon procedures which were requested and agreed to by TVA management solely to assist management in determining the validity of the WP payout awards for the year ended September 30, 2016. In summary, we found:

- The FY 2016 WP goals for the enterprise-wide and Strategic Business Unit (SBU) measures were properly approved. One scorecard adjustment change form for FY 2016 was approved on July 26, 2016. The change form affected one measure that was on five scorecards.
- The FY 2016 goals (i.e., target) for the corporate multiplier measures were properly approved.
- The actual year-to-date results for the SBU scorecard measures agreed with the respective supporting documentation.
- The actual year-to-date results for the enterprise-wide scorecard measures agreed with the underlying support.
- The actual year-to-date results for the corporate multiplier measures agreed with the underlying support.

- The FY 2016 WP payout percentages provided by the Benchmarking and Performance Analysis organization on October 31, 2016, were mathematically accurate and agreed with the OIG's recalculations.

## **IT AUDITS**

During this semiannual period, IT Audits completed four audits in the IT environment regarding (1) IT security practices of TVA as required by the FISMA of 2014, (2) physical and logical access for TVA's high risk assets, (3) physical and logical network architecture at a TVA field office, and (4) controls for TVA's vendor management system.

## **FISMA Score Declines under New OMB Scoring Framework**

We analyzed the metrics and associated maturity levels defined within the U.S. Office of Management and Budget (OMB) FY 2016 IG Federal Information Security Modernization Act of 2014 Reporting Metrics and found TVA's maturity levels for the five cybersecurity functional areas ranged from level 1, ad hoc, to level 3, consistently implemented.

TVA's Chief Information Officer (CIO), IT, in consultation with TVA executive management, will continue to be responsible for determining the desired level of maturity to achieve in each of the five functional areas, and actions necessary to reach the desired maturity level, while considering efficiency and budgeting constraints. The OIG will continue to reassess progress and changes to TVA's status on an annual basis, as prescribed by the OMB and the Department of Homeland Security, utilizing the annual IG metrics and maturity models prescribed by the CIGIE. We recommended the CIO, IT, perform a risk assessment of the FY 2016 IG metrics not met and determine actions necessary to reduce cybersecurity risk to TVA in FY 2017. TVA management agreed with our recommendations and is taking corrective action.

## Physical and Logical Security for TVA High Risk Assets in Compliance with Standards

We audited TVA's compliance with the North American Electric Reliability Corporation's (NERC) Critical Infrastructure Protection (CIP) standards for logical and physical access for systems and locations that are considered high risk assets under NERC CIP standards. We found TVA was within the NERC CIP compliance standards for logical and physical access to high risk systems and locations, with minor exceptions that were addressed during the audit. In addition, during our testing, we noted discrepancies in the initial clearance dates between the employee hard copy authorization forms and electronic records. TVA management corrected the records during the audit.

## Physical and Logical Security at a TVA Field Office Needs Some Improvement

We audited the cyber security controls at a TVA field office, including (1) review of logical and physical network architecture to identify security zones and perimeters and (2) analysis of network devices and physical infrastructure to determine compliance with policies, procedures, and best practices. We found (1) TVA management used proven best practices in the design of the physical and wireless corporate network physical access and environmental controls; (2) the network was appropriately architected; and (3) the cable plant was installed in a neat and organized manner. However, we found the TVA network equipment was located in an unsecured room and configurations of some of the network devices did not follow TVA suggested baselines.

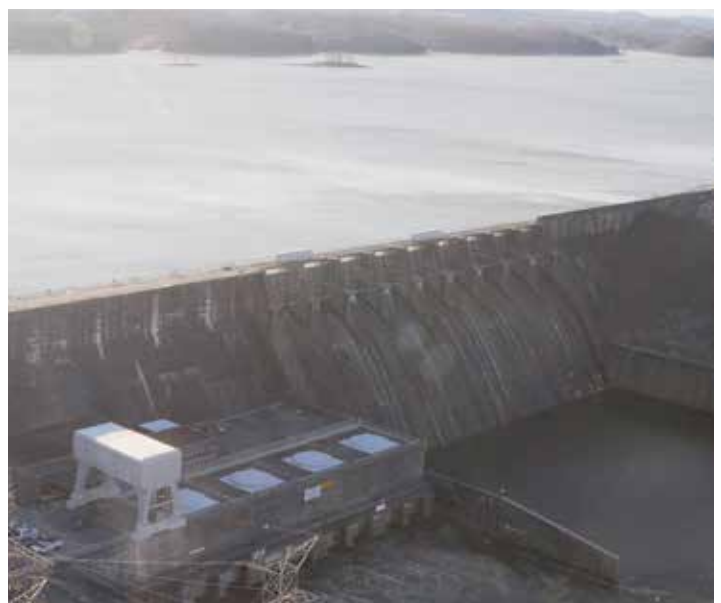
We recommended TVA management (1) determine the best solution for identified physical security concerns and (2) implement and monitor compliance of updated configuration baselines for all network devices on the business network at the TVA field office. TVA management

agreed with our recommendations and is taking corrective action to address the issues.

## Weakness Found in Vendor Management System Logical Security

We audited TVA's vendor management system to assess the (1) data processing and application controls to ensure data integrity and reliability and (2) logical security controls to ensure only authorized access to system resources and protection of sensitive information. TVA's vendor management system is a cloud-based system physically located away from TVA facilities and outsourced to a third party. In summary, we found TVA system interfaces associated with the vendor management system had reasonable data processing and application controls to ensure data integrity and reliability. However, we found weaknesses in the logical security controls that increased the risk of unauthorized access to TVA data.

We recommended TVA management (1) require the vendor to enhance its logical security controls, and (2) complete the system categorization. TVA management and the third party responsible for the vendor management system agreed with our recommendations and are taking corrective action to address the issues.



Cherokee Dam



# SUMMARY OF REPRESENTATIVE EVALUATIONS

*Our Evaluations organization includes two departments, one of which focuses on organizational effectiveness reviews. During this reporting period, our teams completed one organizational effectiveness review and three evaluations which identified a number of opportunities for improvement.*

## EVALUATIONS

The Evaluations group completed three reviews during the semiannual period. These evaluations were related to the (1) sale of the Bellefonte Nuclear Plant site, (2) ammonia staffing and training at coal plants, and (3) demolition phase of the deconstruction of the John Sevier Fossil Plant (JSF).

### **Proposed Sale of Bellefonte Nuclear Plant Site**

This evaluation was a follow-up to an interim evaluation regarding TVA's proposed sale of the Bellefonte Nuclear Plant site (Evaluation No. 2016-15376 issued July 11, 2016). Under the interim evaluation, we determined TVA had taken reasonable actions to promote transparency of the sales process and evaluated alternative uses for the site. In addition, we determined TVA appeared to have considered the significant risks associated with selling the Bellefonte site.

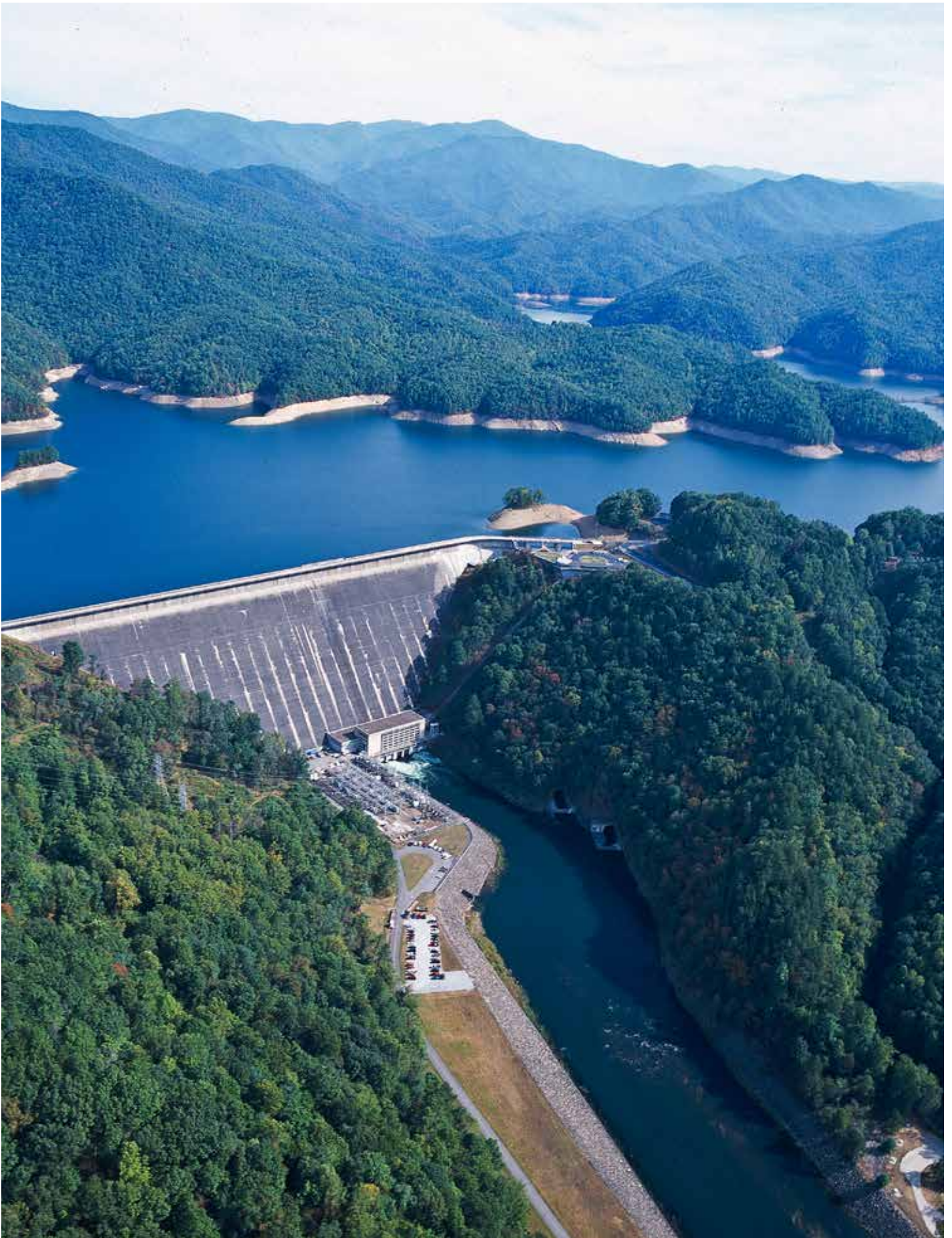
The objective of this follow-up evaluation was to determine if the sale of the Bellefonte site was conducted according to TVA's policies and procedures. We determined the sale complied with most of the steps in TVA's land disposal policies and procedures. However, the sale was a unique transaction that resulted in some deviations from TVA's policies and procedures. Also, we noted some land disposal guidance was outdated. TVA management agreed with our findings and provided an action plan to address our recommendations.

### **Ammonia Staffing and Training at Coal Plants**

TVA uses anhydrous ammonia in selective catalytic reduction systems to aid in the removal of nitrogen oxide, a by-product of burning coal. Anhydrous ammonia is hazardous when inhaled, ingested, or when it comes in contact with the eyes, skin, or mucous membranes. Based on safety risks associated with the handling of ammonia, we initiated an evaluation to determine the adequacy of staffing and training of ammonia operations at coal plants.

Based on our review of the training required by the Occupational Safety and Health Administration and the Environmental Protection Agency regulations, we determined the ammonia training provided by TVA addressed most of the federal training requirements; however, some elements may not be addressed. We also found (1) some personnel had not completed all of the required training, and (2) training could be improved by adding hands-on and more frequent training. Additionally, based on interviews with plant personnel, we determined the staffing of maintenance personnel for ammonia systems was adequate at the four coal plants we reviewed. However, staffing for assistant unit operators was inadequate or needed improvement at two of the four plants.

TVA management agreed with our findings and provided an action plan to address our recommendations.



Fontana Dam

## John Sevier Fossil Plant Demolition Program

JSF is the first in the series of planned plant retirements to enter the demolition phase of TVA's Decommissioning, Deactivation, Decontamination, and Demolition (D4) process. In the demolition phase, the plant, associated equipment, facilities, and structures are removed. Demolition also includes creating conditions for proper site drainage and establishing vegetation. TVA contracted with Brandenburg Industrial Service Company (Brandenburg) to perform the demolition at JSF.

We initiated this evaluation due to inherent safety risks associated with the demolition phase of deconstruction and TVA's lack of recent experience in fossil plant demolition. Our objective was to determine whether demolition activities at JSF adhered to safety principles found in the TVA D4 Program Guide and were in compliance with selected safety criteria established in Brandenburg's Health and Safety Plan (HASP) for JSF.

During our evaluation, we found TVA and Brandenburg met most safety requirements established in TVA's D4 Program Guide and Brandenburg's HASP for JSF. However, we determined Brandenburg was not in compliance with hazard identification requirements outlined in its HASP, and D4 overview training records were not maintained at JSF by Brandenburg for 6 of 25 sampled Brandenburg employees. We also noted potential safety hazards that were corrected subsequent to our site visit.

TVA management agreed that Brandenburg was not in compliance with hazard identification requirements outlined in its HASP. However, management disagreed with our recommendation of developing a monitoring plan because they already perform periodic reviews of contractor safety plans. Instead of developing a monitoring plan, management suggested focusing the recommendation on bringing safety observations into compliance with the HASP or revising the HASP. In addition, TVA management disagreed that Brandenburg was required to maintain training records for training that was administered by TVA but agreed with the recommendation.

## ORGANIZATIONAL EFFECTIVENESS

During this semiannual reporting period, the Organizational Effectiveness group completed an evaluation of the Generation Construction, Projects & Services (GC) organization. Although project management occurs in various TVA organizations, TVA's primary project management organization is the GC strategic business unit. According to GC, its primary responsibility is project management related to the performance of construction and operational services and the implementation of construction projects for all TVA organizations, with the exception of Nuclear.

We determined GC met performance goals for FY 2014 and FY 2015 with the exception of its recordable injury rate in FY 2014. GC was on track, as of May 2016, to meet all FY 2016 performance goals. We identified strengths related to (1) organizational alignment, (2) collaboration within GC departments, (3) management support of employees, and (4) employee engagement. We also identified inherent project management risks that, coupled with relationship issues between GC personnel and customer and support organizations, could increase the risk that GC will not be able to effectively meet its mission in the future. Specifically, both GC personnel and customer and support organizations mentioned lack of recognition of how each organization affects the other, lack of knowledge of TVA SPPs, lack of collaboration and communication, and conflicting priorities as issues that affect their relationships. TVA management agreed with our recommendation and provided their action plan to address the recommendation.



# SUMMARY OF REPRESENTATIVE INVESTIGATIONS

This reporting period, we opened 97 cases and closed 84. Our investigative results include one conviction, one indictment, more than \$404,000 in projected savings, and more than \$225,000 in recoveries to TVA.

## **Superseding Indictment Filed in Fraud Investigation**

Previously, we reported the May 2016 six-count indictment of the co-owner of Protech Metal Finishing, LLC, Phillip Michael (Mike) Huddleston. Mr. Huddleston, who controlled business operations at the Vonore, Tennessee, metal plating company, was charged with one count of conspiracy to defraud the United States (U.S.), three counts of wire fraud, and two counts of unlawful monetary transactions. The charges surround Protech's contracts with the U.S. Army to apply nickel plating to ammunition racks inside M1 Abrams tanks (contracts cited were valued in excess of \$1.2 million) and Protech's storage of company-generated hazardous wastes. An unnamed, unindicted co-conspirator was included in that indictment. On November 1, 2016, a superseding indictment was filed that named and indicted the co-conspirator, John Thomas Hatfield.

Mr. Hatfield joined Mr. Huddleston in the conspiracy charge, which alleges Mr. Huddleston and Mr. Hatfield defrauded the U.S. Army by directing and intimidating Protech employees to engage in deceptive practices to conceal Protech's failure to meet contract specifications, including the use of substandard materials and failure to conduct required quality inspections. The conspiracy charge also alleges Mr. Huddleston and Mr. Hatfield stored, and directed others to store, waste at Protech's facility in violation of the federal Resource Conservation

and Recovery Act, using deception and intimidation to avoid detection.

The OIG joined this multiagency investigation based on a request from the U.S. Environmental Protection Agency Criminal Investigation Division (EPA CID). Initial information indicated Protech possibly illegally released hazardous materials into a wastewater treatment plant that discharges into the Tennessee River, damaging the health of the Tennessee River watershed and Valley residents.

Allegations related to the dumping include the disposal of numerous chemicals, such as cadmium, which are classified by the EPA as hazardous waste and are used in the metal treatment process. Shortly after initiation of the investigation in 2013, a search warrant was executed at Protech's plant and offices. Following the search warrant execution, there have been no additional allegations, nor information uncovered, to suggest dumping has occurred. Both individuals are scheduled to stand trial during June 2017.

Agencies involved in this investigation additionally include the Federal Bureau of Investigation (FBI), Internal Revenue Service CID, U.S. Army CID, U.S. Department of Energy (DOE) OIG, and the Defense Criminal Investigative Service.

## **U.S. Nuclear Engineer, Szuhsiung (Allen) Ho, Pleads Guilty to Violating the Atomic Energy Act**

During April 2016, the U.S. Attorney's Office for the Eastern District of Tennessee unsealed the conviction of Ching Ning Guey, former TVA Senior Manager, Probabilistic Risk Assessment, who pled guilty to one count of conspiracy to unlawfully engage or participate in the production or development of special nuclear material outside the U.S. (42-US-2077(b) and 2272(a)). Mr. Guey's guilty plea stipulated that he provided prohibited Electric Power Research Institute (EPRI) documentation to the People's Republic of China that he obtained during the course of his official TVA duties.

Although Mr. Guey's guilty plea was entered during 2015, all information pertaining to the matter was sealed by the court to prevent compromising the related case of another individual, Szuhsiung (Allen) Ho, and the China Guangdong Nuclear Power Company (CGNPC)—a state-owned entity of the People's Republic of China and its largest nuclear power company—and Energy Technology International (ETI).

Mr. Ho, a naturalized U.S. citizen, was a nuclear engineer employed by CGNPC as a senior advisor and the owner and president of ETI. On April 4, 2016, he was charged with two offenses: Count 1, conspiracy to unlawfully engage or participate in the production or development of special nuclear material outside the U.S. (42-US-2077(b) and 2272(a)); and Count 2, conspiracy to act in the U.S. as an agent of a foreign government (18-US-951). On January 6, 2017, Mr. Ho pled guilty to the first count charged.

Beginning in 1997 and continuing through April 2016, Mr. Ho conspired with others to engage in the development or production of special nuclear material in the People's Republic of China without specific authorization to do so from the U.S. Secretary of Energy, as required by law. His plea agreement stipulates Mr. Ho was aware of this requirement and had sought approval from the DOE in the past, but at no time did he obtain

specific authorization of the Secretary of Energy for the conduct described in the indictment.

Mr. Ho assisted CGNPC by procuring U.S.-based nuclear engineers—one of whom was former TVA manager Mr. Guey. Mr. Ho solicited Mr. Guey and others to provide technical assistance to CGNPC and its subsidiaries with designing and manufacturing certain components for nuclear reactors to reduce the time and costs of research and development of nuclear technology. In particular, Mr. Ho sought technical assistance related to CGNPC's Small Modular Reactor Program, CGNPC's Advanced Fuel Assembly Program, CGNPC's Fixed In-Core Detector System, and verification and validation of nuclear reactor-related computer codes. Sentencing is set for May 17, 2017.

This investigation, and that of Mr. Guey, was conducted by TVA OIG, the FBI, the U.S. DOE National Nuclear Security Administration, and the U.S. Immigration and Customs Enforcement Homeland Security Investigations, with additional assistance from other agencies.

## **Valley Physician Reimburses TVA**

Investigative work revealed a Valley physician falsified coding on procedures to receive payment from TVA's self-financed Blue Cross Blue Shield (BCBS) plan. The physician reached an agreement with BCBS to reimburse TVA \$88,816, which has been paid. Additionally, the physician withdrew himself from the BCBS-Alabama network, and we estimate his inability to bill BCBS/TVA during the next five years will save TVA \$325,360. This investigation was conducted with the FBI and BCBS of Alabama. The U.S. Attorney's Office declined prosecution in this matter.

## **Former TVA Employee Sentenced on Embezzlement Charge**

On August 18, 2016, Frank Blair Tomb, a former TVA heavy equipment operator, pled guilty in federal court to one

felony count of embezzlement of government property (18-US-641).

Mr. Tomb's plea centered on an ongoing fraud scheme, which lasted from December 20, 2013, until December 3, 2014. The scheme involved purchasing diesel fuel at retail gas stations with his TVA-issued credit card, then privately reselling the fuel. Mr. Tomb used a TVA vehicle with a 100-gallon fuel storage tank for this purpose. Additionally, on October 30, 2014, Mr. Tomb requested time off work, never returned, and resigned December 3, 2014; during that period, he continued to use his TVA credit card and vehicle without proper authorization.

Mr. Tomb was sentenced January 11, 2017. He was ordered to make restitution to TVA of \$20,000, which he has done, and sentenced to two years of probation.

## **Former TVA Contractor Sentenced on False Claims Charge**

On August 4, 2016, Jim L. Calloway, a former Bechtel contractor at Watts Bar Nuclear Plant (WBN), pled guilty to a federal Information charging him with filing criminal false and fictitious claims (18-US-287) to receive government funds to which he was not entitled.

The plea agreement stipulated Mr. Calloway established a permanent residence in East Tennessee at the beginning of his WBN assignment in June 2011, and from that time through May 2015, he certified he maintained a permanent residence in Houston, Texas, so he would meet eligibility requirements to receive temporary living

allowance (TLA). While at WBN, he received \$109,110 in TLA based on false statements. Following his WBN assignment, Mr. Calloway transferred to the U.S. DOE Y-12 installation in Oak Ridge. He again falsely claimed a permanent residence in Houston; and, based on that claim, received \$7,384 in relocation expenses from DOE.

Mr. Calloway was sentenced on January 19, 2017, to three years of probation, to include 150 hours of community service, and was ordered to make full restitution to TVA and DOE, which he has done.

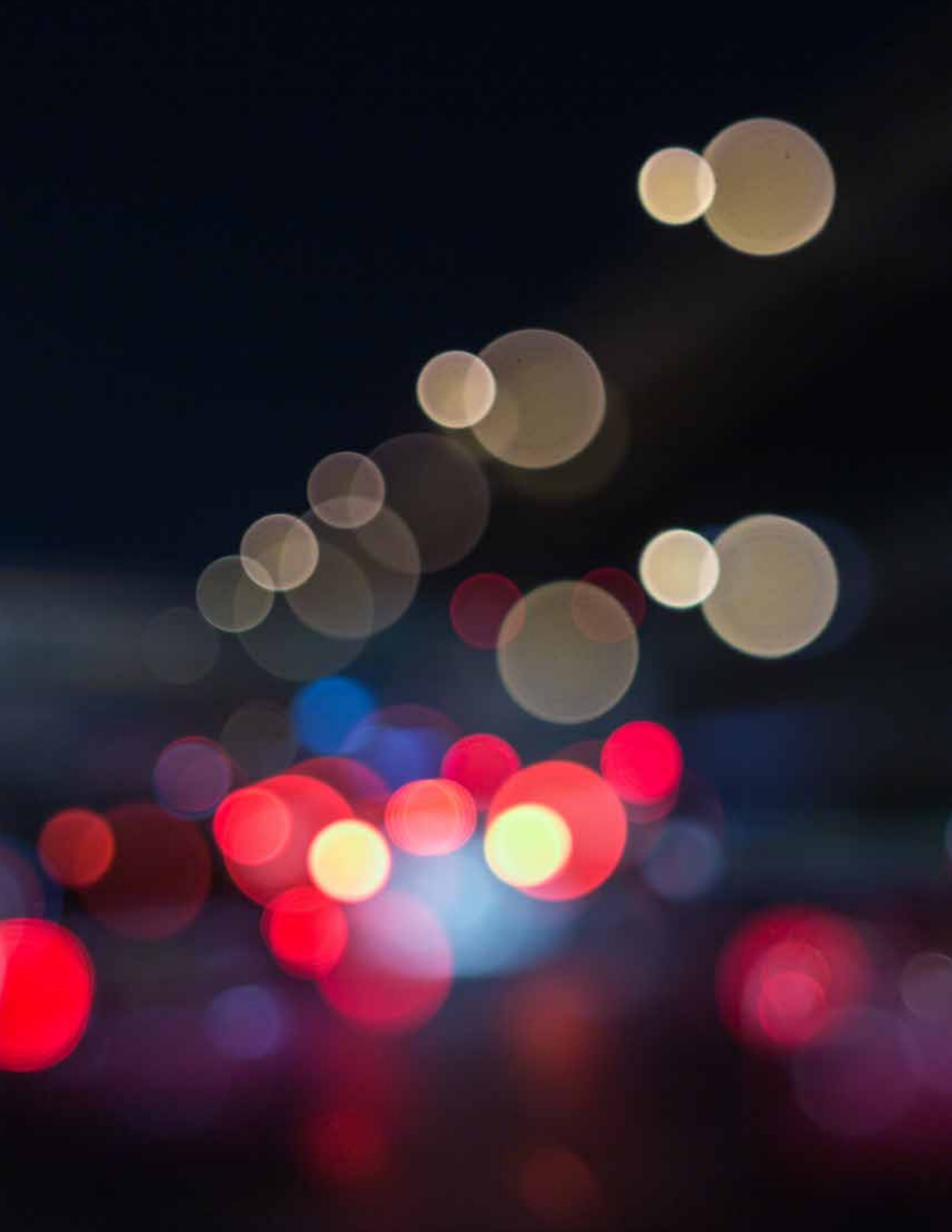
This investigation was conducted with the assistance of DOE OIG.

## **Investigation Identifies Overbillings and Results in Cost Avoidance to TVA**

An OIG investigation determined a contractor overbilled TVA \$1,255,628 in mark-ups on seven jobs. Additionally, the company submitted invoices to TVA that included unsupported and disallowed costs totaling \$115,165 for golf and hunting excursions, a vacation-condominium rental, inflated bonuses, concert tickets, and meals and other entertainment costs.

While our investigation was ongoing, TVA withheld payment to the company of \$158,784. As a result of our investigation, via a contract supplement, TVA and the company agreed to settle this matter. In the settlement, it was agreed TVA would keep half the amount previously withheld and pay the contractor the remaining \$79,392. The supplement stipulated the contract would terminate in its entirety on January 9, 2017.





# LEGISLATION AND REGULATIONS

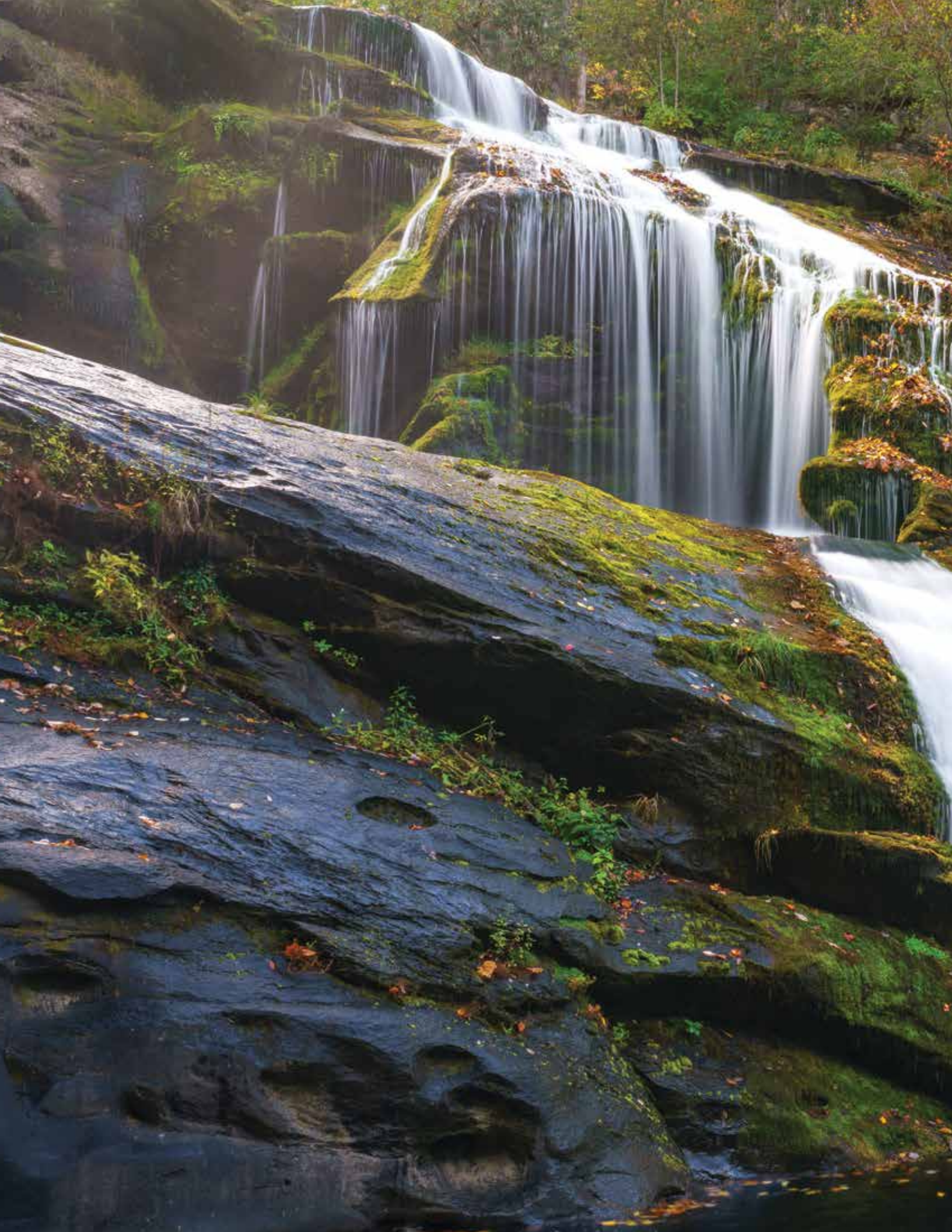
*Section 4(a) of the Inspector General Act of 1978, as amended, provides that the Inspector General shall review existing and proposed legislation and regulations relating to programs and operations of such establishment and make recommendations in the semiannual reports...concerning the impact of such legislation or regulations on the economy and efficiency in the administration of such programs and operations administered or financed by such establishment or the prevention and detection of fraud and abuse in such programs and operations.*

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 specific wording.

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



Widows Creek Fossil Plant





# APPENDICES



## INDEX OF REPORTING REQUIREMENTS UNDER THE INSPECTOR GENERAL ACT

REPORTING	REQUIREMENT	PAGE
Section 4(a)(2)	Review of legislation and regulations	31
Section 5(a)(1)	Significant problems, abuses, and deficiencies	17-29
Section 5(a)(2)	Recommendations with respect to significant problems, abuses, and deficiencies	17-29
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	17-29
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 <sup>1</sup>	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 Inspector General during the reporting period, and if none, a statement of the date of the last peer review	Appendix 11
Section 5(a)(15)	List of outstanding recommendations from any peer review conducted by another Office of Inspector General, including a statement describing the status of the implementation and why implementation is not complete	None

<sup>1</sup> 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

REPORTING	REQUIREMENT	PAGE
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 12
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 <sup>2</sup> 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	Appendix 8
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

<sup>2</sup> 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. This equates to a rate of basic pay for fiscal year 2017 equal to or greater than \$124,406.

## OIG AUDIT REPORTS • Issued During the Six-Month Period Ended March 31, 2017

Report Number and Date	Title	Questioned Costs	Unsupported Costs	Funds Put To Better Use
<b>CONTRACT AUDITS</b>				
2016-15399 10/06/2016	CSX Transportation, Inc.	\$8,045,846	\$0	\$0
2016-15430 11/08/2016	Proposal for Construction Services for TVA Bottom Ash Dewatering Facilities	0	0	10,813,000
2016-15362 12/02/2016	Proposal for Engineering and Management Services	0	0	2,880,000
2016-15429 12/13/2016	Proposal for Construction Services for TVA Bottom Ash Dewatering Facilities	0	0	4,478,600
2016-15401 01/06/2017	Proposal for Non-Nuclear Modification and Supplemental Maintenance	0	0	1,142,000
2016-15436 02/27/2017	Proposal for Nuclear Modification and Supplemental Maintenance	0	0	0
2016-15372 03/29/2017	Proposal for Coal Combustion Products Handling and Maintenance	0	0	8,934,000
<b>FINANCIAL AND OPERATIONAL AUDITS</b>				
2016-15380 10/27/2016	Information Technology's Use of Contractors	\$0	\$0	\$0
2017-15456 11/04/2016	Agreed-Upon Procedures for Fiscal Year 2016 Performance Measures	0	0	0
2016-15424 03/30/2017	Tax Payments Made on TVA's Credit Cards	2,484,620	0	0
<b>INFORMATION TECHNOLOGY AUDITS</b>				
2016-15374 10/06/2016	Physical and Logical Access for TVA's High Risk Assets	\$0	\$0	\$0
2016-15378 10/25/2016	Physical and Logical Network Architecture - TVA Field Office	0	0	0
2016-15381 12/20/2016	TVA Vendor Management System Data Security and Integrity Controls	0	0	0
2016-15407 01/11/2017	2016 Federal Information Security Management Act	0	0	0
<b>TOTAL AUDITS (14)</b>		<b>\$10,530,466</b>	<b>\$0</b>	<b>\$28,247,600</b>

## APPENDIX 2

### OIG Evaluation REPORTS • Issued During the Six-Month Period Ended March 31, 2017 (CONTINUED)

Report Number and Date	Title	Questioned Costs	Unsupported Costs	Funds Put To Better Use
2016-15384 10/14/2016	Generation Construction - Projects Organizational Effectiveness	\$0	\$0	\$0
2016-15390 01/24/2017	John Sevier Fossil Plant Demolition Program	0	0	0
2015-15345 02/09/2017	Ammonia Staffing and Training at Coal Plants	0	0	0
2016-15376-01 02/28/2017	Proposed Sale of Bellefonte Nuclear Plant Site	0	0	0
<b>TOTAL EVALUATIONS (4)</b>		<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

*Note: A summary of or link to the full report may be found on the OIG's Web site at [www.oig.tva.gov](http://www.oig.tva.gov).*



South Holston Dam

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	2	\$10,530,466	\$0
Subtotal (A+B)	2	\$10,530,466	\$0
C. For which a management decision was made during the reporting period	1	\$8,045,846	\$0
1. Dollar value of disallowed costs	1	\$8,045,846	\$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	1	\$2,484,620	\$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

## APPENDIX 3

TABLE II • FUNDS TO BE PUT TO BETTER USE • AUDITS (CONTINUED)

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	1	\$2,027,000
B. Which were issued during the reporting period	5	\$28,247,600
Subtotal (A+B)	6	\$30,274,600
C. For which a management decision was made during the reporting period	5 <sup>1</sup>	\$21,340,600
1. Dollar value of recommendations agreed to by management	5	\$21,340,600
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	1	\$8,934,000

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

<sup>1</sup> The total number of reports for which a 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.

## RECOMMENDATIONS INCLUDED IN A PREVIOUS SEMIANNUAL REPORT AND AWAITING IMPLEMENTATION

*At the end of the semiannual period, final corrective action was not complete on 83 recommendations associated with 16 audit and 15 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 on Which Final Action was Not Complete at End of Period
2012-14567 01/30/2013	<b>Building and Infrastructure Failure Risks</b> TVA agreed to enhance Tririga functionality and other tools for building asset information. Management expects to complete final action by September 30, 2016.
2013-14959 08/07/2014	<b>TVA Environmental Risk Management</b> TVA agreed to update TVA's Environmental Management System to better describe environmental review processes and responsibilities. Management expects to complete final action by September 30, 2017.
2014-15031 06/23/2015	<b>Adequacy of the Invoice Approval Process</b> TVA agreed to develop a contract quality assurance program; coordinate training/communication of personnel and ensure storage expectations are documented; review and revise the Field Invoice Approver (FIA) training; partner with Financial Services to ensure invoice approval oversight and guidance are housed in the proper organization and expert guidance is used in providing direction on the invoice review process; update the Standard Programs and Processes (SPP) and FIA training modules to include more specific language/instruction and identify opportunities to standardize invoice formats; and look at technology options to improve the invoice approval process. Management expects to complete final action by February 28, 2018.
2014-15234 06/25/2015	<b>TVA's Talent Acquisition and Deployment Process</b> TVA agreed to address process inefficiencies and provide general training on how to use the PLUS recruiting module; standardize the recruitment cycle and develop a central depository for recruitment tools and templates; develop a talent acquisition alignment team; update SPPs to reflect the current process and add pertinent information to the Employee Handbook and Leadership Handbook; work on process improvements to identify position requirements; evaluate the use of a single application for nuclear candidates; and continue to work with IT Security and the Office of General Counsel to implement ways to mitigate the duplication of applicant employee identification numbers. Management expects to complete final action by June 30, 2017.
2014-15024 09/09/2015	<b>TVA Overtime</b> TVA agreed to (1) develop guidance as part of the non-Nuclear Fitness for Duty program that will specifically address the response to extended hours of work and management of worker fatigue; (2) continue to use NPG-SPP-03.21, Fatigue Management and Work Hour Limits, to meet Federal Nuclear Regulations, and develop a methodology for overtime review on a quarterly basis with trigger points for assessing if safety or productivity are being challenged; and (3) develop procedural guidance to include: (a) when verbal overtime approval is allowed, and (b) when documented preapproval of overtime is required. Management expects to complete final action by June 26, 2017.
2014-15062 09/10/2015	<b>Maximo 7.5 Upgrade</b> TVA agreed to engage the business units to ensure ownership of stranded documents and establish a process to place documents in appropriate folders within the published Enterprise Content Management system during content migration. Management expects to complete final action by June 29, 2018.
2014-15224 09/30/2015	<b>Obtaining Things of Value</b> TVA agreed to (1) enhance the protocol by (a) identifying the types of "things of value" and "covered persons" that should be defined in the protocol, (b) incorporating how employees report a request for a "thing of value," (c) developing a process for documenting and tracking all types of defined "covered person" requests, (d) defining applicant consequences for violating the protocol, and (e) implementing a review cadence; (2) present revised protocol to TVA Board of Directors; (3) provide detailed and robust annual training to all employees; (4) collaborate with affected TVA business units to incorporate the protocol into all related SPPs and processes associated with requests for all TVA benefits identified as "things of value"; (5) disseminate the protocol annually to TVA business units with employees who could be affected by the requirements; and (6) post the "Obtaining Things of Value" protocol on the appropriate TVA Web sites. Management expects to complete final action by June 15, 2017.

## APPENDIX 4

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

Audit Report Number and Date	Report Title and Actions Agreed to by Management to Resolve Recommendations on Which Final Action was Not Complete at End of Period
2014-15063-06 02/25/2016	<b>Information Technology Organizational Effectiveness - Enterprise Solutions Delivery</b> TVA agreed to continue Enterprise Data Warehouse as part of IT's 1,000 Days to Success efforts that include (1) completing architectural framework, processes, and standards; (2) updating roadmaps and implementing prioritized initiatives; (3) implementing enterprise metadata framework; and (4) ensuring data quality through continued incorporation of data quality tools. TVA expects to complete final action by September 20, 2018.
2015-15286 04/20/2016	<b>Gallatin Fossil Plant Cyber Security</b> TVA agreed to update SPP and continue the cable upgrade project. TVA expects to complete final action by November 30, 2017.
2015-15341 05/05/2016	<b>Aggregated Demand Response Proof of Concept Agreement with Seven States Power Corporation - Contract No. 544179</b> TVA agreed to conduct a cost-benefit analysis of load curtailment events to effectively evaluate the program regarding the net benefit of economic event calls prior to any contract extension. TVA expects to complete final action by May 5, 2017.
2014-15043 05/31/2016	<b>Medco Health Solutions, Inc.</b> TVA agreed to recover \$619,286 in overbilled costs; ensure Medco reimburses plan participants \$121,048 in overbilled costs; implement processes to ensure quarterly reports are received and reviewed in a timely manner; and implement a process to monitor and independently assess contractual guarantees. TVA expects to complete final action by May 31, 2017.
2014-15063 06/29/2016	<b>Information Technology Organization Effectiveness</b> TVA agreed to ensure job descriptions accurately capture qualifications and job duties, develop a communication package to encourage employees to manage their career progression, and assess mission-critical applications to identify resource limitations and develop plans to reduce risk. TVA expects to complete final action by September 29, 2017.
2015-15318 07/07/2017	<b>ABB, Inc.</b> TVA agreed to coordinate with the requesting business unit in deciding to use milestones versus lump sum payment terms on less expensive medium power transformer designs and identify the most advantageous payment terms to TVA in Maximo; pursue recovery of \$343,577; and notify buyers of the difference between power and instrument transformers and review contract purchase order releases monthly to monitor scope adherence. TVA expects to complete final action by July 7, 2017.
2016-15394 07/18/2016	<b>Proposal for Construction Management Services</b> TVA agreed to amend the proposed \$100 million contract to include general and administrative rates similar to those used in another contract TVA has with this company, which we estimated will save TVA \$4.1 million. TVA expects to complete final action by July 18, 2017.
2016-15377 07/27/2016	<b>TVA Fraud Risk Management</b> TVA agreed to develop policies and practices to directly communicate senior level commitment to combating fraud and work with the Office of the General Counsel to implement fraud awareness training as part of TVA's required annual training. TVA expects to complete final action by July 27, 2017.
2016-15393 09/30/2016	<b>Wireless Local Area Network Deployment</b> TVA agreed to review current design and identify a method to extend the network isolation of non-TVA devices to the Internet. TVA expects to complete final action by November 3, 2017.

## 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 on Which Final Action was Not Complete at End of Period
	<b>Master Key Program Management – Energy Delivery</b>
2012-14535 03/21/2013	TVA agreed to secure facilities protected by master keys to minimize the risk posed by keys outside TVA's control and develop specifications for the purchase of a new system. A contract has been awarded and management expects to complete final action by June 30, 2017.
	<b>TVA's Succession Planning</b>
2013-14950 09/19/2013	TVA agreed to continue to evaluate ways to improve cross-pollination using a system to reduce preparation time and submit a proposal for a new system during FY 2016 business planning. Management expects to complete final action by September 30, 2016.
	<b>Follow-Up Review of Coal Fire Protection</b>
2014-15216 09/29/2014	TVA agreed to prioritize impairments and establish a due date for long-term fire impairments or make a formal decision to not pursue repair and revise SPP to include a new rating calculation and process for sharing assessment data with Power Operations senior leadership. Management expects to complete final action by April 1, 2017.
	<b>Nuclear Outage Performance</b>
2015-15273 07/24/2015	TVA agreed to drive the TVA Nuclear Fleet to top quartile performance in duration, dose, and dollars using "FY2016-FY2020 Nuclear Operations Support Business Plan-Outage Execution," which contains the initiatives the Nuclear Executive Team has developed to achieve industry top quartile outage performance in the TVA Nuclear Fleet. TVA will monitor/analyze budget performance and seek other cost-saving initiatives and continue to drive outage performance and achieve top quartile outage rating in all categories. Management expects to complete final action by October 16, 2017.
	<b>Hydro Generation Fire Protection</b>
2015-15294 07/24/2015	TVA agreed to develop an SPP to provide guidance for reporting, and maintain a historical record of fire protection system impairments in Hydro Generation, as well as Coal and Gas; develop an SPP for providing guidance and implementing code-required activities; perform annual facility walkdowns to verify compliance with housekeeping; supersede an SPP with site-specific emergency response plans; develop property risk improvement prioritization methodology to quality and prioritize property loss control recommendations across the organization; and employ a modifier to capture the criticality of the affected plant or unit to TVA's load strategy. Management expects to complete final action by June 30, 2017.
	<b>Kingston Fossil Plant Organizational Effectiveness</b>
2015-15329 03/10/2016	TVA agreed to address work management process challenges; effectively communicate the rationale for business decisions affecting staffing, operational and budgetary challenges; strengthen trust, provide feedback, and increase resolution effectiveness. TVA expects to complete final action by May 1, 2017.
	<b>Bull Run Fossil Plant Organizational Effectiveness</b>
2016-15357 03/30/2016	TVA agreed to work with employees to screen and prioritize safety and work-related issues identified, review the safety backlog, and use a contractor to facilitate training and implementation of the work management process; minimize required overtime per the General Agreement to address safety concerns; and use on-the-job training coordinators with contractor assistance to close knowledge gaps. TVA expects to complete final action by July 31, 2017.
	<b>Firearms and Ammunition at Coal Plants</b>
2015-15346 05/10/2016	TVA agreed to develop a coal fleet governance procedure requiring plants to maintain a complete firearms and ammunition inventory list, including specific language reinforcing the importance of adherence to guidance for accounting and safeguarding firearms and ammunition, and a verification of adherence to key requirements through periodic audits. TVA expects to complete final action by May 1, 2017.

## 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 on Which Final Action was Not Complete at End of Period
	<b>Actions Taken to Address Risks Related to Coal Plant Duct Work</b>
2016-15359 07/28/2016	TVA agreed to involve Generation Engineering in a technical review of the planned ductwork coatings at Cumberland Fossil Plant to validate the effectiveness for proposed applications. TVA expects to complete final action by July 30, 2017.
	<b>Coal and Gas Services Organizational Effectiveness</b>
2016-15365 08/29/2016	TVA agreed to implement a communication plan on job rotation and succession planning and enhance performance review practices, realign roles and responsibilities to promote efficiency, performance, and stakeholder interaction, and work with the Employee Advisory Group and Coal and Gas Services employees to address knowledge-sharing concerns. TVA expects to complete final action by August 28, 2017.
	<b>Work Environment for Nuclear Oversight</b>
2016-15398 09/15/2016	TVA agreed to provide leadership with 360 degree feedback, generate individual development plans, and conduct independent surveys of Nuclear Oversight employees at approximately 6-month intervals to gauge the health of the department safety conscious work environment. TVA expects to complete final action by July 31, 2017.
	<b>Work Environment for Operators at Sequoyah Nuclear Plant</b>
2016-15396 09/21/2016	TVA agreed to republish/discuss avenues for raising concerns using a variety of outlets, including all-hands meetings, site bulletins, and signage. TVA also agreed communications by the site Vice President prior to staffing the outage control center will include expectations for management, staff, and operators on roles, responsibilities, and acceptable behaviors and will emphasize that operators have the ultimate decision on safely operating the plant. TVA expects to complete final action by May 5, 2017.
	<b>Work Environment for Operators at Browns Ferry Nuclear Plant</b>
2016-15397 09/21/2016	TVA agreed to republish/discuss avenues for raising concerns using a variety of outlets, including all-hands meetings, site bulletins, and signage. TVA also agreed communications by the site Vice President prior to staffing the outage control center will include expectations for management, staff, and operators on roles, responsibilities, and acceptable behaviors and will emphasize that operators have the ultimate decision on safely operating the plant. TVA expects to complete final action by April 30, 2017.
	<b>Environmental Operations Organizational Effectiveness</b>
2016-15383 09/26/2016	TVA agreed to update Nuclear "Conduct of Environmental" process on environmental roles and responsibilities at nuclear sites, finalize a "trust and teamwork" action plan, and use an internal assessment process and communicate lessons learned to Environmental Operations employees. TVA expects to complete final action by September 30, 2017.
	<b>Environmental Permitting and Compliance Organizational Effectiveness</b>
2016-15366 09/28/2016	TVA agreed to evaluate TVA's environmental functional alignment and roles and responsibilities; evaluate, communicate, and clarify Environmental Permitting and Compliance employee roles and responsibilities; conduct process mapping; remove inactive and uncertified users from the Heritage Database; create a metric for the Environmental Services Coordination System planning tool; develop and implement a plan to address results from the Pulse Survey; establish employee engagement expectation initiatives; and develop and implement a program to gather middle and first-line management input in FY 2018-2020 business planning. TVA expects to complete final action by October 30, 2017.

## INVESTIGATIVE REFERRALS AND PROSECUTIVE RESULTS

Referrals	
Reports Issued to TVA Management	4
Subjects Referred to U.S. Attorneys	7
Subjects Referred to State/Local Authorities	0
Results	
Subject Indicted	1
Subject Convicted	1
Pretrial Diversion	0
Federal Referrals Declined	2
State/Local Referral Declined	0

**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 include task force activities and joint investigations with other agencies.



APPENDIX 6

SUBSTANTIATED INVESTIGATIONS INVOLVING SENIOR AGENCY OFFICIALS

Case No.	Summary and Disposition
15B16661	<p>OIG Investigation revealed an individual illegally purchased a Schedule IV controlled substance, Tramadol, from two international Internet suppliers. Evidence indicated he purchased thousands of the pills, and he acknowledged to an OIG special agent he had been using the drug for eight to nine years. After our initial contact with TVA management on this issue, the individual's ability to access TVA facilities was revoked, and he was placed on suspension. Subsequently, the individual retired in lieu of termination.</p> <p>This matter was both referred for prosecution to the U.S. Attorney's Office and declined November 29, 2016.</p>

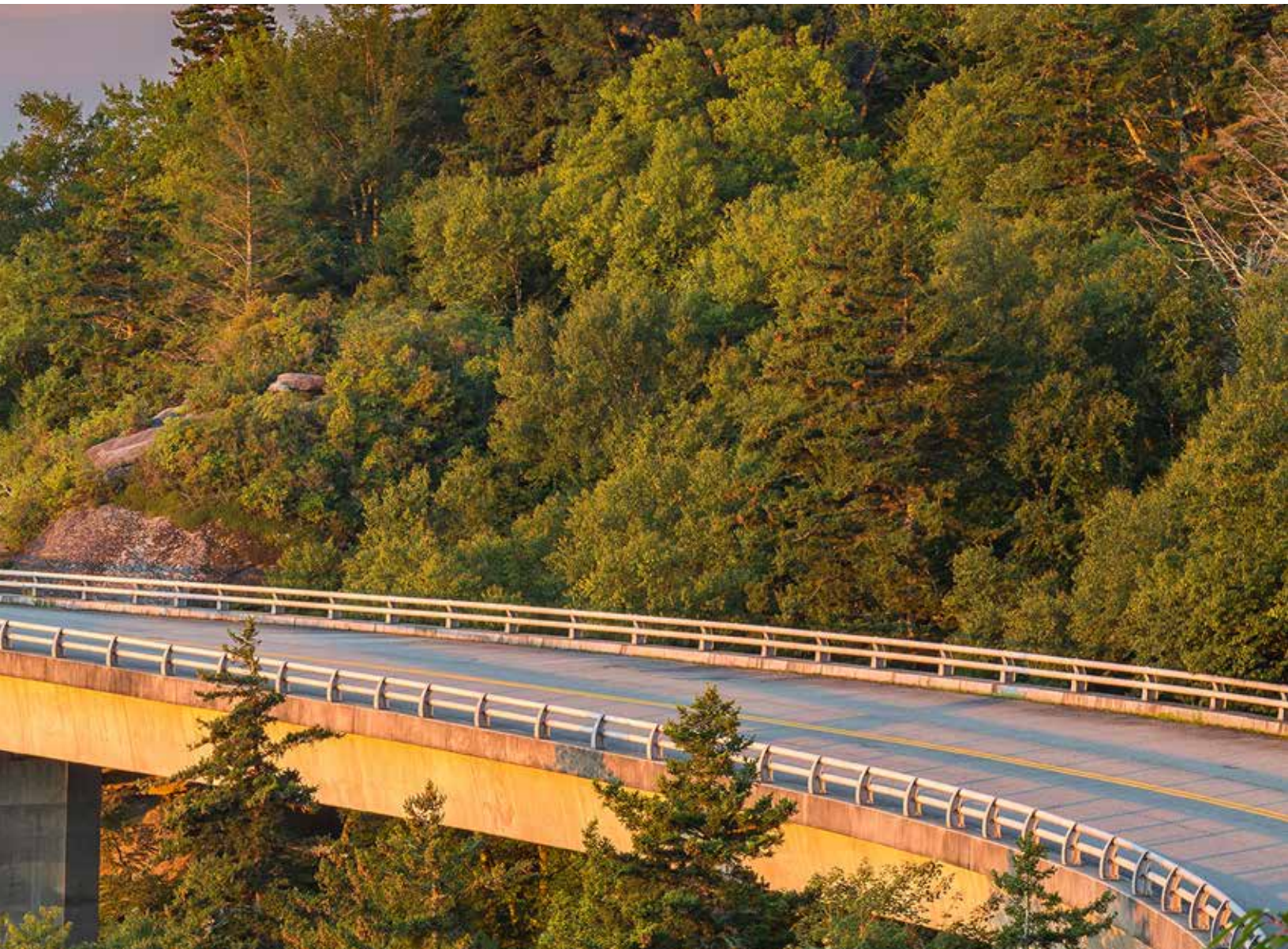
**Metrics:** This appendix describes closed, substantiated investigations involving subjects specified by the IG Empowerment Act (salaried at 120 percent of GS-15 Level One). TVA does not operate on the GS scale, so all persons in this salary range, though included here, are not necessarily executive-level 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.	Summary and Disposition
13C16406	A TVA executive allegedly manipulated the procurement process to direct a significant sole-source procurement toward his former employer. The investigation did not substantiate the allegation.

**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

### ATTEMPTS TO INTERFERE WITH THE INDEPENDENCE OF THE OFFICE OF THE INSPECTOR GENERAL

The Tennessee Valley Authority (TVA), for this semiannual period ending March 31, 2016, has not (1) imposed budget constraints to limit the capabilities of the office, (2) resisted the oversight activities of the TVA Office of the Inspector General (OIG), and (3) restricted or significantly delayed access to information. However, TVA management questioned our authority and expertise to perform work in the nuclear safety area. This stems from a review at Watts Bar Nuclear Plant performed by a consultant with nuclear expertise (NTD Consulting Group, LLC) which was completed on April 19, 2017. In TVA's February 14, 2017, response to the draft NTD report, TVA stated:

*...the OIG would have TVA serve two masters: the NRC on the one hand, which possesses the full depth and breadth of nuclear regulatory expertise and the legal authority required to implement it; and the OIG on the other hand, whose expertise and mandate are different. TVA continues to believe that serving the NRC as the sole regulator in this area is the appropriate path. TVA is ultimately responsible to the NRC and the public for maintaining the safety and reliability of its nuclear program, and so TVA must defer to the NRC's expertise in these matters.*

The OIG believes its objection is invalid for two important reasons. First, unlike a regulatory agency, the TVA OIG has no enforcement authority and has not attempted to exercise such authority. We find facts and make recommendations based on those facts. Second, the TVA OIG's jurisdictional boundaries are different from those of the NRC. While the NRC enforces its regulations, we occupy a broader space which includes TVA's own policies and best practices. Over the years, TVA OIG has performed numerous reviews in the nuclear area, including evaluations of work environment, and TVA has not previously objected. We will continue to conduct OIG reviews in a professional manner and hopefully resolve the tension which exists between the TVA OIG and TVA executives.



Wilson Dam

## HIGHLIGHTS - STATISTICS

	MAR 31, 2017	SEPT 30, 2016	MAR 31, 2016	SEPT 30, 2015	MAR 31, 2015
<b>AUDITS</b>					
<b>AUDIT STATISTICS</b>					
Carried Forward	22	22	26	28	28
Started	7	15	15	21	11
Canceled	(0)	(1)	(4)	(1)	(0)
Completed	(14)	(14)	(15)	(22)	(11)
In Progress at End of Reporting Period	15	22	22	26	28
<b>AUDIT RESULTS (Thousands)</b>					
Questioned Costs	\$10,531	\$3,271	\$9,039	\$7,599	\$8,908
Disallowed by TVA	\$8,046	\$3,271	\$2,411	\$2,156	\$8,908
Recovered by TVA	\$9,214	\$1,725	\$268	\$2,981	\$89
<b>Funds to Be Put to Better Use</b>					
Funds to Be Put to Better Use	\$28,248	\$8,901	\$15,447	\$2,106	\$1,067
Agreed to by TVA	\$21,341	\$13,664	\$10,491	\$1,067	\$512
Realized by TVA	\$1,586	\$0	\$792	\$142	\$7,375
<b>OTHER AUDIT-RELATED PROJECTS</b>					
Completed	2	9	3	7	5
Cost Savings Identified/Realized (Thousands)	\$0	\$0	\$0	\$0	\$0
<b>EVALUATIONS</b>					
Completed	4	13	5	6	1
Cost Savings Identified/Realized (Thousands)	\$0	\$0	\$0	\$0	\$0
<b>INVESTIGATIONS<sup>1</sup></b>					
<b>INVESTIGATION CASELOAD</b>					
Opened	97	108	100	126	126
Closed	84	104	103	142	146
In Progress at End of Reporting Period	146	136	131	134	152
<b>INVESTIGATIVE RESULTS (Thousands)</b>					
Recoveries	\$225.3	\$2,805.8 <sup>2</sup>	\$615.2	\$1,064.0	\$522.2
Projected Savings	\$404.8	\$4.5	\$0	\$1,897.1	\$403.3
Fines/Penalties/Fees	\$0.2	\$0	\$0.1	\$64.1	\$0.2
Other Monetary Loss	\$1,291.4	\$0	\$1,418.8	\$0	\$0
<b>MANAGEMENT ACTIONS</b>					
Disciplinary Actions Taken (No. of Subjects)	8	17	11	14	10
Counseling/Management Techniques Employed (No. of Cases)	10	8	18	9	17
Debarment	0	0	0	3	0
<b>PROSECUTIVE ACTIVITIES (No. of Subjects)</b>					
Referred to U.S. Attorneys	7	10	14	18	8
Referred to State/Local Authorities	0	1	0	2	0
Indicted	1	5	1	1	6
Convicted	1	3	1	1	6
Pretrial Diversion	0	0	0	0	0

<sup>1</sup> These numbers include task force activities and joint investigations with other agencies.

<sup>2</sup> Amount includes \$1,547,434, also included in AUDIT RESULTS—Recovered by TVA in the September 30, 2016, semiannual period, which was recovered in a qui tam settlement agreement negotiated by the U.S. Attorney's office with Bartlett Holdings, Inc.

## APPENDIX 10

### 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.



## 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 Office of the Inspector General (TVA OIG) underwent its most recent peer review of its audit organization for the period ended September 30, 2013. This review was performed by the Special Inspector General for the Troubled Asset Relief Program (SIGTARP). The SIGTARP issued its report, dated March 31, 2014, in which it concluded the TVA OIG audit organization's system of quality control for the fiscal year ended September 30, 2013, was suitably designed and complied with to provide the 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. The peer review report is posted on our Web site at <http://www.oig.tva.gov/PDF/PeerReviewReport03312014>.

The Federal Deposit Insurance Corporation OIG is currently performing a peer review of our audit organization for the period ended September 30, 2016. Results of the ongoing review will be included in our next semiannual report.

### Investigations Peer Review

Investigative Operations undergoes an external peer review, Quality Assessment Review (QAR), at least once every three years. The U.S. Railroad Retirement Board (RRB) OIG completed a QAR of TVA OIG Investigative Operations on May 23, 2016. RRB OIG found the "... system of internal safeguards and management procedures for the investigative function of the Tennessee Valley Authority OIG in affect [sic] through April 1, 2016 is compliant with the quality standards established by the CIGIE and the Attorney General Guidelines. ..." This confirmation is posted on our Web site at <http://oig.tva.gov/reports/PeerReviewLetter2016-RRB.pdf>.

## PEER REVIEW OF ANOTHER OFFICE OF INSPECTOR GENERAL

Tennessee Valley Authority Office of the Inspector General Investigations completed a peer review of Investigative Operations, U.S. Nuclear Regulatory Commission (NRC), Office of the Inspector General (OIG), during this semiannual period. We issued our final report to NRC OIG on October 5, 2016. We reviewed the organization's internal safeguards and management procedures in effect for the annual period ending June 30, 2016, and found the organization in full compliance with the quality standards established by the Council of the Inspectors General on Integrity and Efficiency and applicable Attorney General Guidelines.



# 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 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.

## **Improper Payment**

Any payment that should not have been made or was made in an incorrect amount under statutory, contractual, administrative, or other legally applicable requirements, as defined in the Improper Payment Information Act.

## **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 IG questions because (1) of an alleged violation of a law, regulation, contract, 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.

BCBS.....	Blue Cross Blue Shield
Board .....	TVA Board of Directors
Brandenburg.....	Brandenburg Industrial Service Company
CGNPC.....	China Guangdong Nuclear Power Company
CIGIE.....	Council of the Inspectors General on Integrity and Efficiency
CIO .....	Chief Information Officer
CIP .....	Critical Infrastructure Protection
D4 .....	Decommissioning, Deactivation, Decontamination, and Demolition
DOE.....	U.S. Department of Energy
EPA CID .....	Environmental Protection Agency Criminal Investigation Division
EPRI .....	Electric Power Research Institute
ERS.....	Employee Reimbursement System
ETI .....	Energy Technology International
FB .....	Fully Burdened
FBI .....	Federal Bureau of Investigation
FIA .....	Field Invoice Approver
FISMA .....	Federal Information Security Modernization Act
FY .....	Fiscal Year
GC .....	Generation Construction, Projects, and Services
HASP.....	Health and Safety Plan
IG .....	Inspector General
IQN.....	IQNavigator
IT .....	Information Technology
JSF .....	John Sevier Fossil Plant
NERC.....	North America Electric Reliability Corporation
NRC.....	Nuclear Regulatory Commission
NTD.....	NTD Consulting Group, LLC
OIG.....	Office of the Inspector General
OMB.....	U.S. Office of Management and Budget
OPM .....	Office of Personnel Management
PLUS.....	People Lifecycle Unified System
QAR.....	Quality Assurance Review
RRB.....	U.S. Railroad Retirement Board
SA .....	Staff Augmentation
SBU .....	Strategic Business Unit
SIGTARP .....	Special Inspector General for the Troubled Asset Relief Program
SPP .....	Standard Programs and Processes
TLA.....	Temporary Living Allowance
TVA.....	Tennessee Valley Authority
U.S.....	United States
WBN.....	Watts Bar Nuclear Plant
WP .....	Winning Performance



## Office of the Inspector General

400 West Summit Hill Drive  
Knoxville, Tennessee 37902

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 system. 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](http://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.

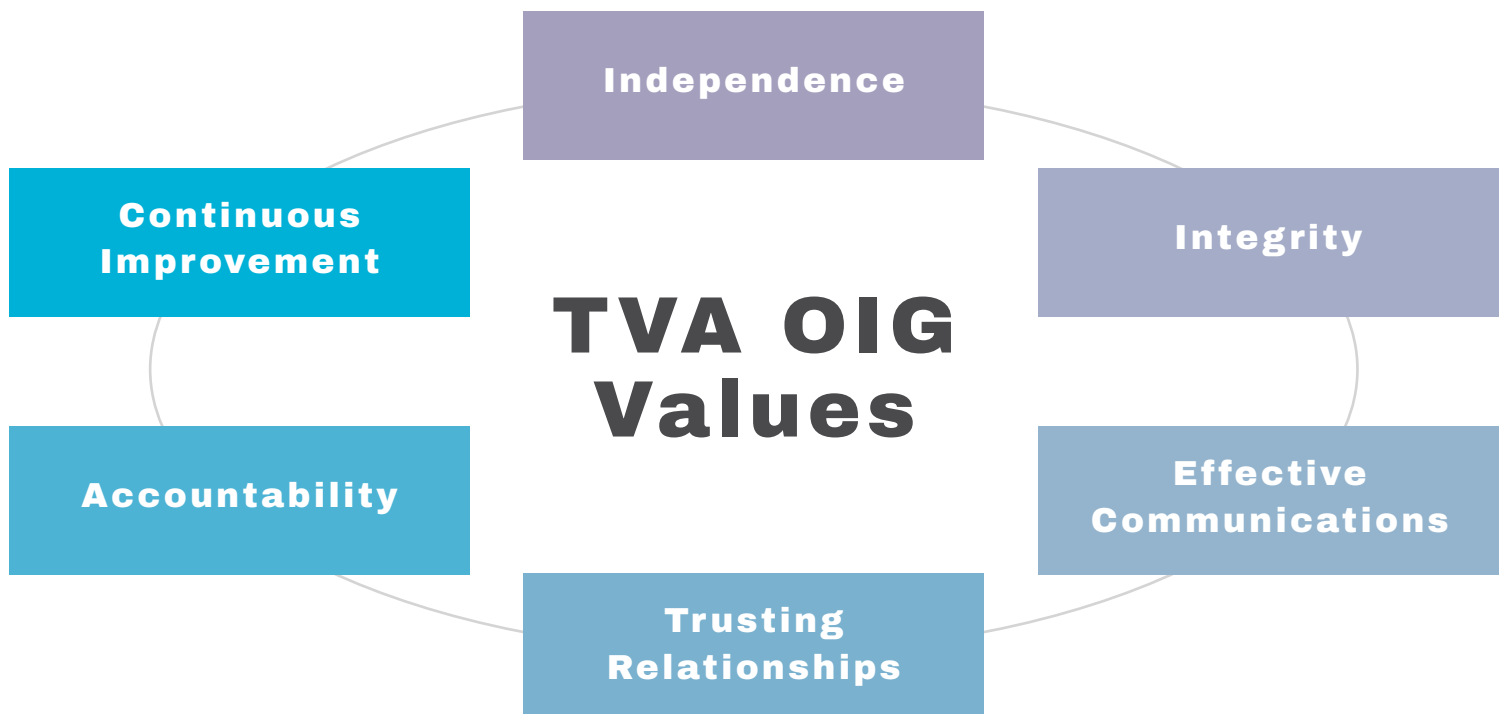
## Report Concerns to the OIG EmPowerline

**WATCH, LEARN AND BE  
EMPOWERED**

If you see or suspect wrongdoing and report it, TVA could recover money and you could receive a cash reward from the TVA Office of the Inspector General. Learn how by watching this revealing video. To watch this video now, simply scan the QR symbol at the lower right with your smart phone to be taken directly to the video. QR Code scan app required.



You can report wrongdoing to the Office of the Inspector General by visiting our EmPowerline® website at [www.oigempowerline.com](http://www.oigempowerline.com) or by calling toll-free at 855-882-8585. See the EmPowerline® website for details on the cash reward process and other important information.





*Office of the Inspector General  
Tennessee Valley Authority  
Semiannual Report  
October 1, 2016 - March 31, 2017*