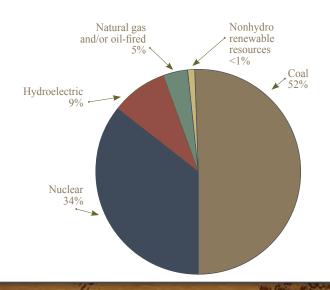


TVA POWER GENERATION 2011

(in millions of kilowatt hours)



- > Coal 74,592
- Nuclear 49,562
- > Hydroelectric 12,706
- Natural gas and/or oil-fired 6,809
- Nonhydro renewable resources 8

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Message from the

INSPECTOR GENERAL

As those of you who read our Semiannual Report (SAR) know, the Office of Inspector General (OIG) at the Tennessee Valley Authority (TVA) selects a theme for each SAR and this SAR is no different. Our theme for this edition is "Navigating Risk." In many ways, our theme for every SAR could be about risk as this is the heart of our work and what drives our audit plan every year. This is the first edition of our SAR devoted to the topic of risks, but it will not be our last. Hopefully, you will see why.



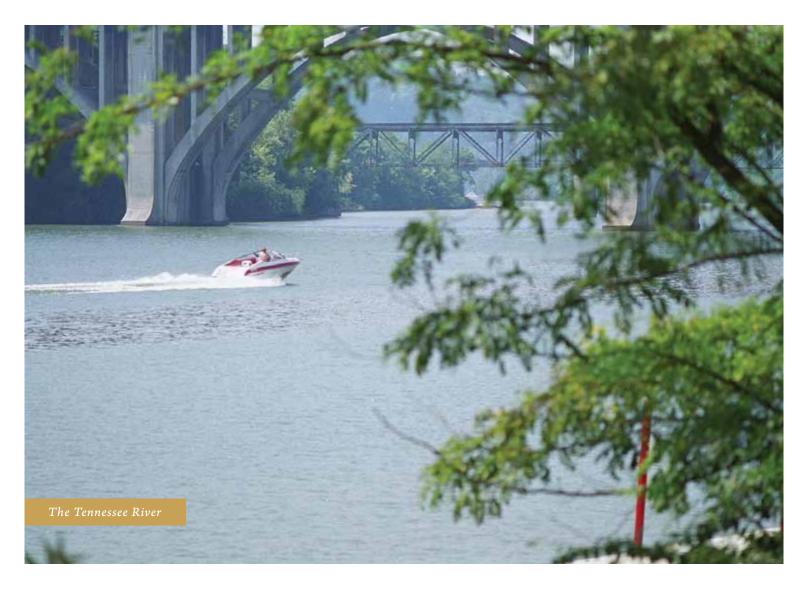
In this semiannual period, our audit, inspection, and investigation activities resulted in almost \$16 million in recoveries, fines/penalties, waste, potential savings, questioned costs, or funds which could be put to better use, as well as numerous recommendations to help TVA become better and recognize areas where additional controls may be necessary to adequately control risks.

Some of the highlights include:

An assessment of TVA's financial flexibility, including identification of alternatives for the TVA Board and executives to consider in meeting future financing needs. TVA is making significant investments to improve the condition of existing assets and bringing new ones online that will comply with environmental regulations. At the same time, TVA is approaching a statutorily

- imposed debt ceiling of \$30 billion mandated by Congress in 1979, a major impediment to making needed investments.
- A follow-up review of the effectiveness of TVA's Information Technology organization which showed TVA has not made improvements needed and has even declined in some respects.
- The conclusion of a series of reviews in which we used an outside expert to assess TVA's progress and actions after the Kingston ash spill. These reviews centered on the stability of dikes and ash ponds at Johnsonville Fossil Plant, the stability of the gypsum stack at Widows Creek Fossil Plant, groundwater monitoring of the coal combustion products disposal areas, and environmental sampling and

- monitoring plans following the Kingston ash spill of December 2008.
- Reviews that identified needed improvements related to TVA's plan for removal of polychlorinated biphenyl equipment, and fossil fire protection systems.
- > Investigations that resulted in five convictions, six indictments, and a pretrial diversion for falsification of quality control documents, workers' compensation fraud, and contract fraud as a result of the manipulation of injury records. In addition, an investigation identified issues in a contractor's work that resulted in more than \$9.6 million in avoidable power replacement costs related to the Colbert Fossil Plant Unit 5 precipitator overhaul.



As this report is being released, three of TVA's Board members end their service. Dennis Bottorff, current Chairman of the TVA Board, Tom Gilliland, Chairman of the Audit, Risk, and Regulation Committee, and Robert ("Mike") Duncan, Chairman of the Customer and External Relations Committee, all rotate off the TVA Board as the 112th Congress ends its session. Service on the TVA Board is in theory "part-time." As any of these Board members can tell you, this is only in theory. The challenges facing new Board members at TVA are immense. The complexities of a far flung enterprise require focused attention by Board members on matters that affect the lives of every resident of the Tennessee Valley. It is quite likely that most of the contributions of each of these three Board members will go unnoticed by the public. The diligence, hard work, and sound judgment of these three public servants have made TVA better. On behalf of the Office of the Inspector General, I extend my heartfelt thanks for a job well done.

In that vein, we welcome our newest member to the TVA

Board, Richard Howorth, who was nominated by President Obama on March 17, 2011, and was confirmed by the United States Senate on June 30, 2011. We look forward to building a healthy working relationship with Director Howorth in the years to come as we all strive to make TVA better.

Cichen W. Moore

Richard W. Moore Inspector General



THE ROLE OF THE OIG NAVIGATING Risk | TVA OIG



Special Feature

THE ROLE OF THE OIG

IN IDENTIFYING RISK AT A GOVERNMENT AGENCY

In this article, we examine the intersection of federal agency responsibility for accurately assessing and dealing with risks to the agency and the role of the Inspector General (IG) in this important area. When the inevitable "Where was the IG?" comes after an agency crisis, we should have a good answer. Was the risk that resulted in a crisis on the IG's radar? If not, why not? The role of the IG as we discuss here is not to supplant the agency's responsibility to properly identify and control risks but to accurately assess the sufficiency of the agency's risk management program and to identify risks not recognized by the agency as appropriate. If the agency's enterprise risk management (ERM) program is comprehensive, the IG can rely with some confidence on the program in order to allocate scarce OIG resources for focused audits, inspections, and investigations.

GETTING IT ON THE RADAR: Developing a Robust Enterprise Risk Management Program

In today's world, how effective a business or government agency is at identifying its risks and taking action to reduce those risks can be the difference between success and failure. Managing risk is a challenging endeavor. In the past, many companies focused risk identification on past losses, failures, and incidents. Today, companies and government agencies are well advised to actively seek out the unknown and identify what process deviations are occurring and what negative workforce behaviors are occurring throughout the organization now that could create a significant risk or, more importantly, what small deviations when added together could constitute a significant risk for the company. Deviations from both organization-approved standardized processes and established workforce behaviors

must be caught in the risk management net early.

There are many reasons an ERM program might be ineffective, but two key common causes are (1) the agency or company's organizational health or culture and (2) the design of the ERM program. If either of these components is weak, the chance of missing serious risks increases exponentially.

THE ROLE OF CULTURE in Developing an ERM Program

Private sector companies routinely pay consultants millions of dollars to design a "state of the art" ERM program only to see them fail. The best designed risk management program is destined to fail if the culture of the organization does not make it safe for employees at all levels to raise risks. If employees hear the words, "We want you to raise risks you see in your work

area," but what they see does not support those words, then the double message results in a culture that does not support "raising your hand." Managers who see other managers fired or moved because they offered a position that conflicts with upper management will quickly recognize talk about "risk management" as simply that; talk. The key is creating a safe environment where differing opinions can be shared in a mutually respectful way. Communicating priorities so that employees know they have been heard whether their ideas are followed or not engenders trust in the leadership and a willingness to "raise your hand" again. Recruiting employees at all levels of an organization is critical for an effective risk management system. Relying on only leadership (executives and managers) often robs the system of the observations of those closest to the risks. A culture in

which employees believe they can safely have awkward conversations about policies and practices is fundamental to an effective risk management system. Identifying risks must become a normal part of every employee's work life. For the "new normal" to take hold, however, there must be a trust that identified risks will be fairly evaluated without retaliation. Few government or corporate leaders, however, have the expertise to create that environment without specialized assistance from professionals who can objectively test the culture of an organization and take steps to improve the culture as required. Therefore, those organizations that have poor organizational health are most vulnerable to unforeseen risks.

Making a safe environment for employees to raise issues comes with a corresponding duty of employees to follow clear behaviors set by the organization. In other words, there must be a corresponding duty of employees to be accountable when management creates a safe environment to proffer differing opinions. This is more than simply requiring employees to follow policies and procedures or to avoid engaging in unethical or illegal behavior. The organization should have a list of desired behaviors that reflect the culture

the organization aspires to have. These behaviors may include such things as: give and expect mutual respect, communicate expectations clearly, seek and value the opinions of others, and be comfortable bringing up issues and recommending solutions. Management should be able to depend on employees to take responsibility for identifying risks. As the "new normal" takes hold, risk identification and reduction will become part of everyone's job.

THE IMPORTANCE OF THE RIGHT DESIGN for an ERM Program

In addition to culture, the appropriate design of the risk management program is critical. The Committee on Sponsoring Organizations (COSO)¹ defines ERM as:

...a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risks to be within its risk appetite to provide reasonable assurance regarding the achievement of entity objectives.

According to COSO's framework, a mature ERM program has risk management embedded in how the organization conducts business. The value of the program is clearly understood by executives and line management. Dedicated risk management resources are consulted by executive/ operational lines for risk advisory support and recognized as a strategic business driver.

According to the COSO report, enterprise risk management enables management to effectively deal with uncertainty and associated risk and opportunity, enhancing the capacity to build value.

Value is maximized when management sets strategy and objectives to strike an optimal balance between growth and return goals and related risks, and efficiently and effectively deploys resources in pursuit of the entity's objectives. Enterprise risk management encompasses:

- ➤ ALIGNING RISK APPETITE

 AND STRATEGY Management considers the entity's risk appetite in evaluating strategic alternatives, setting related objectives, and developing mechanisms to manage related risks.
- ➤ ENHANCING RISK RESPONSE

 DECISIONS Enterprise risk

 management provides the rigor

 to identify and select among

 alternative risk responses risk

 avoidance, reduction, sharing,

 and acceptance.

¹ In September 2004, Committee of Sponsoring Organizations of the Treadway Commission issued *Enterprise Risk Management - Integrated Framework*. The Executive Summary can be found at http://www.coso.org/documents/COSO_ERM_ExecutiveSummary.pdf.

- ➤ REDUCING OPERATIONAL
 SURPRISES AND LOSSES –
 Entities gain enhanced
 capability to identify potential
 events and establish responses,
 reducing surprises and
 associated costs or losses.
- ➤ IDENTIFYING AND MANAGING MULTIPLE AND CROSS-ENTERPRISE RISKS Every enterprise faces a myriad of risks affecting different parts of the organization, and enterprise risk management facilitates effective response to the interrelated impacts, and integrated responses to multiple risks.
- SEIZING OPPORTUNITIES By considering a full range of potential events, management is positioned to identify and proactively realize opportunities.
- ➤ IMPROVING DEPLOYMENT OF CAPITAL Obtaining robust risk information allows management to effectively assess overall capital needs and enhance capital allocation

A mature program will include:
(1) a well-defined risk tolerance;
(2) risks that are systematically identified, assessed, and communicated; (3) decisions which are made with due consideration to risk/return tradeoffs; and

(4) specified and monitored risk-adjusted performance metrics. COSO's Enterprise Risk Management Integrated Framework suggests that the chief executive should assess the organization's enterprise risk management capabilities. In one approach, the chief executive brings together business unit heads and key functional staff to discuss an initial assessment of enterprise risk management capabilities and effectiveness. Whatever its form, an initial assessment should determine whether there is a need for, and how to proceed with, a broader, more in-depth evaluation.

THE TVA EXPERIENCE with Risk Management

Risk management at TVA before the December 2008 Kingston coal ash spill was never the subject of much focus from TVA stakeholders. That environmental disaster resulted in the release of about 5.4 million cubic yards of coal ash spilling onto adjacent land and into the Emory River, more than a billion dollars in clean-up costs, and litigation. After the spill, both TVA management and TVA's stakeholders have taken a hard look at how well TVA manages risks.

TVA's experience was probably similar to other government agencies and private sector

companies in that the design evolved; the culture did not. While the components of the ERM improved significantly, the program was not supported by a healthy corporate culture. At the time of the Kingston coal ash spill, TVA ranked in the lower quartile of organizational health when benchmarked against other utilities. Among other things, this meant that confidence in TVA leadership was low and trust that employee concerns would be addressed fairly was poor. TVA's culture profile was classic for an organization at risk due to employee resentment and distrust. The likelihood that employees will "raise their hands" and help the agency identify risks is extremely low when there are unresolved issues based on poor communication and a lack of trust throughout the agency. This often results in deviations from standard processes in favor of "one off" solutions that sometimes expose a company to additional risks. As noted in our report on the Kingston ash spill,² attitudes and conditions at Kingston emanated from a legacy culture which impacted the way TVA handled coal ash. The very real health hazard posed by coal ash disposal was minimized by the culture which exposed TVA to unnecessary and unforeseen risks. Fortunately, the TVA Board and TVA's leadership recognized

 $^{^{2}\,}$ Review of the Kingston Ash Spill Root Cause Case Study and Observations About Ash Management, July 23, 2009.

the importance of improving TVA's culture after Kingston and recent surveys indicate a steady movement toward a healthy culture after more than two years of focused culture work.

What difference does it make for TVA's risk management program that TVA's organizational health is improving? Employees who believe that management is demonstrating respect for their opinions and is making it safe to offer differing opinions will volunteer the discretionary effort it often takes to raise a potential risk. Employees begin to align with the vision and goals of the organization and view risks no longer as just problems for management but risks that could affect their success as individuals. Risk identification appears now to be driven deeper into the agency and the best information about risk seems to be getting the right analysis. The success of TVA's culture change, therefore, will likely have a pronounced effect on the success of its risk management program.

Currently, TVA has a Chief Risk
Officer with a staff dedicated to
facilitating discussions about
risk throughout all organizations
within TVA. The risks that are
identified in these discussions are
evaluated and they are ranked
with mitigation plans to reduce
the risks as appropriate. The Chief

Executive Officer (CEO) meets periodically with the Risk Council, made up of senior executives, to review and discuss emerging risk issues. Additionally, the TVA Board of Director's Audit, Risk, and Regulation Committee routinely reviews the top ranked risks and the related mitigation efforts. The OIG serves in an advisory capacity by routinely meeting with the Chief Risk Officer to stay abreast of emerging risk issues.

Over time, TVA's ERM program has evolved to the point it is now embedded in how the company conducts business and has progressed significantly since the Kingston spill.

Particularly noteworthy is that risk management discussions occur at the plant level and issues are

identified by employees with direct knowledge of operations and risk. As a result, the number of risks identified has grown substantially. These risks are rolled up into 19 risk areas that are judged significant enough to impact TVA as an enterprise.

DEVELOPING CLARITY around the Role of the OIG in Assessing an Enterprise Risk Management Program

The scope of responsibility for an OIG in risk management for a government agency does not appear to have been the subject of much public debate. Agency risks differ significantly based upon the varied missions of federal agencies and, correspondingly, the work of IG offices differ based on the specific responsibilities of their

TVA VISION

Sets forth TVA's long term objectives, consistent with its mission and the TVA Act

ANNUAL BUDGET

Adopted by Board of Directors, sets forth rates, financing and capital plan for the enterprise

ANNUAL SBU/BU BUSINESS PLAN

Establishes how resources will be deployed at the SBU/BU level in support of TVA's corporate objectives, including risk

RISK-INFORMED BUSINESS PLAN

Sets out the SBU/BU response to its most significant risks and acts as a platform by which it can align resources to better manage those risks

SEMIANNUAL SBU RISK ASSESSMENT

Establishes context, serves to assist SBU/BU with the assessment of its risks

TVA Risk FRAMEWORK Operations Financial/ Compliance Strategic Reporting Assets Asset Compliance Organizational Financial Performance and Cyber Security with Laws and Reputation Health Flexibility Operations Regulations Talent Business Customer Environmental IT Infrastructure Market Exposures Management Distributions Relations Capacity Long Range External Expansion and Planning External Safety Litigation Reporting Construction Influences Long Range Internal Processes Planning Process and Procedures

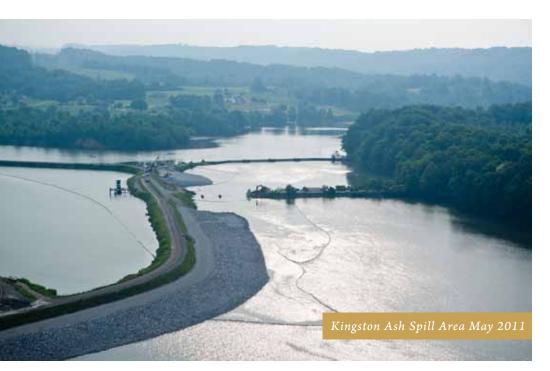
respective agencies. All IG offices, however, regularly engage in risk assessments for their respective agencies without necessarily evaluating the ERM program specifically. As we noted above, two critical components of a robust ERM program are organizational health and the right design for the program. An examination of both would seem to be a logical part of any OlG's work.

As for TVA, the ERM program has evolved over the years. In 1999, the OIG recommended TVA establish an enterprise risk management program and create a Chief Risk Officer position. In 2003, an OIG follow-up review was conducted to assess the adequacy

of the risk management program. The OIG identified numerous weaknesses and recommended actions such as enhancing sponsorship of the program by the Board and executive management, establishing a more rigorous framework for identifying and monitoring risks and implementing an enterprise-wide risk management training program. In our 2008 review, done with the assistance of an external consultant with broad knowledge of risk management practices, we found that TVA had made progress in risk identification and assessment since 2003 and that the commitment to risk management at the top of the agency was strong. However, our assessment, published in

September 2008, also found that the program needed to be driven further down into the organization. Three months later, the Kingston ash spill also demonstrated this same need. The Kingston disaster serves as an example of the importance of a properly designed ERM program supported by a healthy culture. Our report on Kingston pointed to significant risks that were associated with ash management and that were known internally as early as 1987, but that information was not captured in any risk matrix.

In addition to the role the OIG has played in reviewing the ERM program, the OIG continues to play a vital role in helping TVA



manage risk. A key role for the OIG is to provide an objective evaluation to the TVA Board that the major business risks are being managed appropriately and that the risk management and internal control framework are operating effectively. Like any IG office, risk is a key component in the planning of our audits and evaluations. The OIG addresses risks such as:

> CATASTROPHIC RISKS -

Catastrophic risks are defined as major accidents such as fires and explosions, a nuclear plant (radiological) accident, building or infrastructure failure, or other accident that could have a major impact on TVA. While these risks generally have a low probability of occurrence, the consequences are very high. The Kingston ash spill and the Fukushima nuclear event have

demonstrated the impacts that result when a catastrophic risk becomes a reality. To help identify weaknesses and lower TVA's exposure, the OIG has completed a number of audits and inspections including reviews of TVA's dam safety program, fire protection at fossil plants, and TVA's plan for removal of polychlorinated biphenyl (PCB) equipment to name a few. Additionally, in keeping with the OIG's commitment to monitor TVA's assessment and improvements of ash storage facilities, the OIG retained engineering firm Marshall Miller and Associates, Inc. (Marshall Miller), to peer review geotechnical evaluations and improvements at selected sites.

> Cyber Security Risk -

These risks include inadequate/ ineffective controls which would allow (1) an intentional or unintentional act that compromises or destroys TVA's ability to perform business functions, (2) loss of data, and (3) noncompliance with federally mandated regulations. Our work has included in depth assessments of the effectiveness of TVA's Information Technology organization, security monitoring program, security posture at plants as well as application and network controls. Results of our work factor into TVA's cyber security risk assessment.

> CONTRACTOR OVERBILLING

RISK - These risks include excessive costs being billed to TVA by contractors as a result of (1) unsupported, duplicate and ineligible billings, (2) overstated billing rates, (3) confusing and conflicting contract clauses, and (4) fraud. Over the last five years, our compliance and preaward audits have identified more than \$270 million in questionable costs billed or proposed by contractors. TVA management uses the results of our contract compliance and preaward audits to (1) recover overbillings, (2) prevent the payment of inflated costs in the future, and (3) avoid

- future wasted expenditures by correcting confusing and/ or conflicting contract terms which our audits identify.
- > OPERATIONAL EFFICIENCY AND EFFECTIVENESS RISK -TVA's operational efficiency and effectiveness is a key driver in mitigating risks in all areas of performance including organizational health. The risk of programs and operations being inefficient or not effective significantly drives up cost, increases safety concerns, and harms the reputation of TVA. A primary focus of the OIG is to continually look for opportunities to improve on efficiency and effectiveness in each and every review conducted. Additionally, we periodically report on the progress TVA is making by conducting benchmark reviews in key strategic areas of TVA operations. Recently, our reviews have identified needed improvements in: (1) controls around the receiving and burning of coal, (2) the effectiveness of TVA's transmission line maintenance program, and (3) organizational health in various key areas of performance.
- > REPUTATIONAL RISK ASSOCIATED WITH TVA'S REGULATOR ROLE OVER Power Distributors -Our work identified areas for improvement in TVA's oversight of the distributors of TVA power. In addition, as a result of our work, TVA has increased its focus on its regulatory role by: (1) developing a Distributor Compliance group to assess distributor compliance with the wholesale power contract with TVA and (2) reviewing its rate setting process to provide greater transparency, better financial review, and increased Board oversight.
- > Fraud and Misconduct **RISK** – Misrepresentations and unethical behavior can have significant impact across the organization. Our investigative work and the OIG EmPowerline play a key role in preventing, detecting, and deterring fraud and misconduct that can impact such areas as TVA's finances, compliance with laws and regulations, safety, and reputation. Our investigations this year have resulted in more than \$5 million in recoveries, savings, fines, and penalties; numerous administrative actions, including termination of employees and contractors; and multiple indictments and prosecutions at the federal and state levels. In addition, we have identified instances

of falsification of safety-related nuclear plant documents and substantiated misconduct allegations. Finally, we proactively conducted fraud risk assessments with TVA in various program areas. These types of assessments help to identify potential fraud schemes and raise fraud awareness.

CONCLUSION

The work of an IG office adds value to a federal agency in many ways, including the routine evaluation of the agency's enterprise risk management program. Any credible assessment involves a review of both the ERM design and the agency's culture that can either support the program or undermine it. An agency should not rely on the OIG to find agency risks as the primary responsibility for risk management resides most appropriately with agency management. The agency can reasonably expect, however, that the OIG will provide accurate assessments of the agency's ERM program and will bring to the agency's attention risks caught by the OIG and not "on the radar" of the agency. This collaborative approach requires a mutually respectful relationship that promotes prevention rather than fault finding after the fact. Risk management may very well be the single greatest reason for a healthy relationship between an agency and its OIG.



NOTEWORTHY UNDERTAKINGS NAVIGATING Risk | TVA OIG



NOTEWORTHY UNDERTAKINGS



TVA OIG'S REVIEW OF TVA'S DAM SAFETY PROGRAM Wins Council of Inspectors General on Integrity and Efficiency (CICIE)

Council of Inspectors General on Integrity and Efficiency (CIGIE) Award of Excellence

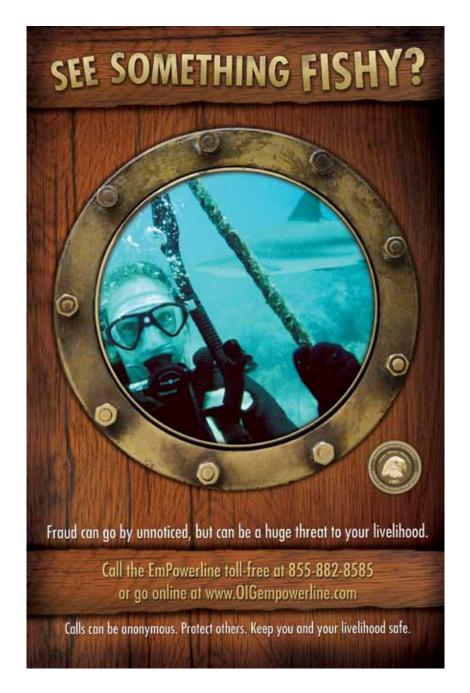
The TVA OIG has been recognized by CIGIE for its work on a review of TVA's Dam Safety Program. On October 18, 2011, Heather Kulisek and Kristin Leach, auditors in our Inspections group, accepted the CIGIE Award of Excellence for their work. This review was the result of broad interest by the media, TVA stakeholders, and the public at large surrounding the safety and condition of TVA dams after the Kingston ash spill.

TVA's Dam Safety Organization (Dam Safety) is responsible for ensuring that TVA's Dam Safety Program, formalized in 1982, meets federal guidelines. The Dam Safety Program consists of modifications to ensure the structural integrity and safe operation of TVA's 49 dams and related structures, instrumentation to monitor dam performance, periodic inspections, maintenance and repairs, and emergency preparedness. Additionally, Dam Safety's scope of responsibility includes saddle dams, dikes, and impoundments in the TVA system.

The objectives of our review were to determine if TVA's Dam Safety Program identified and adequately addressed significant risks; was in compliance with TVA policies and procedures, as well as applicable laws and regulations; and encompassed all aspects

of a comprehensive dam safety program. Our review found TVA was taking steps to identify and mitigate its risks; was adhering to the *Federal Guidelines for Dam Safety*, with a few exceptions; and had a comprehensive dam safety program.

Additionally, there were several issues identified in this review that were previously identified in our Inspections report titled, Review of Kingston Fossil Plant Ash Spill Root Cause Study and Observations about Ash Management (Kingston Report). TVA management agreed with our findings and recommendations and has taken or plans to take corrective actions.





When seven TVA OIG employees got together earlier this year, they might not have known how big of an undertaking they were embarking upon when it came to changing a phone number. After all, getting a phone number changed is a common and simple

process, right? Well, normally it is; but, when that phone number is also a hotline for reporting fraud, waste, and abuse of the largest public power provider in the country, a simple phone number change isn't so simple anymore. On Friday, September 16, 2011, the EmPowerline changed providers and phone numbers. The new provider offers a more robust



case management system with analytical reporting tools and allows users to upload supporting documentation. The switch was successful, and announcements in TVA e-publications about the EmPowerline's new toll-free phone number, (855) 882-8585, started to appear. The EmPowerline Web site, www.oigempowerline.com, received a makeover, and two letters announcing the change were sent out from Inspector General Richard Moore to TVA employees and TVA contractor employees. The new EmPowerline posters were placed in TVA buildings and feature our very own Legal Counsel Charles Kandt's daughter, Anna Marie, who appears as the scuba diver in the picture.

Though the rollout went relatively smoothly, it was not without intensive planning, hard work, and attention to detail. We invite you to take a tour of our new EmPowerline Web page at www. oigempowerline.com.



CYBER INFORMATION SHARING CONFERENCE

The nation's critical infrastructure is a fast-growing target for cyber attacks. The sophistication and frequency of attacks is ever increasing; and, as utilities continue to connect systems to increase efficiency, risks associated with our critical infrastructure increase. A well-orchestrated cyber attack on critical infrastructure could result in cascading effects across multiple sectors. Officials with the U.S. **Department of Homeland Security** (DHS) recently stated not only is the frequency of attacks increasing, but intrusions have occurred.

In response to the increasing threats, TVA OIG and TVA Enterprise Information Security and

Policy (EIS&P) – in conjunction with the Federal Bureau of Investigation (FBI), Oak Ridge National Laboratory (ORNL), DHS, and the National Reconnaissance Office (NRO) – hosted an information sharing conference in Chattanooga, Tennessee on September 13-14, 2011. The primary objective of the conference was to establish a partnership between these agencies to improve threat-information sharing relevant to TVA and its assets.

By bringing together key government organizations, the OIG and TVA have established partnerships with DHS and FBI field offices capable of providing actionable threat information. By establishing these partnerships, we foster an environment of cooperation among agencies to protect our nation and its critical infrastructure. To further this goal, the OIG, TVA, FBI, and ORNL have formed a cyber working group to meet monthly and discuss threats and cases to benefit the group as a whole.





EXECUTIVE OVERVIEW

NAVIGATING Risk | TVA OIG



EXECUTIVE OVERVIEW

Every organization has certain risks; how those risks are managed often divides the best performing organizations from the rest. A principal role of the Office of Inspector General is to help TVA manage risks to avoid both poor operational performance and potential disaster. It has often been said that TVA is a "big ship" and, therefore, slow to change course. It is equally true that TVA navigates treacherous waters and, historically, with varying degrees of success. We see TVA managing risks better than in previous years due to a more robust risk management program and diligent responses to hazards we have identified.

In this semiannual report to Congress, we are focusing on the OIG work which was designed to minimize risks to TVA. As stated in the Message from the IG, it could be said that all of the OIG's work is intended to minimize risk for TVA. In this report, however, we identify key audits, inspections, and investigations that specifically showcase how we elevate and make visible potential hazards in TVA's course to success.

AUDITS

During this reporting period, the OIG completed 26 audits and 19 other projects that identified more than \$6 million in questioned costs and funds which could be put to better use. The OIG also identified numerous opportunities for TVA to improve program operations.

Financial and Operational Audits

In order to ensure that TVA has a reliable system of financial and operational controls, Financial and Operational Audits completed five reviews related to green power pricing accreditation, transmission line inspection and maintenance, burning and receipt of coal, cost recovery for tritium production, and TVA's financial flexibility, including the history and status of TVA's financing as well as its alternatives for the future. The

Financial and Operational Audits section begins on page 27 of this report.

Contract Audits

To support TVA management in negotiating procurement actions, we completed three preaward audits of cost proposals submitted by companies proposing to provide (1) a perimeter stabilization project for a TVA fossil plant, (2) upgrades to TVA's hydro plants, and (3) inspection services. Our audits identified \$4.9 million of potential savings opportunities for TVA to negotiate. We also completed two compliance audits of contracts with expenditures totaling \$11.8 million related to (1) vacuuming services and (2) asbestos abatement and valve refurbishment services. These audits identified potential overbillings of \$1.3 million. Additionally, we performed

an audit of TVA's controls over contract documents and found TVA's Supply Chain was not in compliance with TVA policies regarding the centralized handling of contract documents. The Contract Audits section begins on page 31 of this report.

Information Technology (IT) Audits

To ensure TVA's IT assets are properly secured and appropriate controls are in place, the IT
Audits team completed 11 audits pertaining to: (1) implementation of TVA's new fixed asset system and core network switches;
(2) a follow-up assessment of TVA's IT organization's effectiveness;
(3) granting physical and logical access to nonnuclear contractors;
(4) Internet firewall management; and (5) IT general controls for
(a) a proposed application service provider and (b) TVA processes

for logically and physically protecting data and other IT assets, developing and implementing program changes, computer operations, and configuration management. The IT Audits section begins on page 32 of this report.

Distributor Audits

To ensure compliance with contract terms between TVA and distributors of TVA power, the OIG completed five audits of TVA distributors. We looked at classification and metering issues as well as other contract requirements, including the use of electric funds and cash reserves. We also looked at distributor internal controls and identified opportunities for better oversight of distributors by TVA. The Distributor Audits section begins on page 34 of this report.

INSPECTIONS

In order to ensure TVA programs are efficient, effective, and have proper controls in place, Inspections assessed (1) TVA's groundwater monitoring at coal combustion products disposal areas, (2) TVA's plan for removal of PCB containing equipment, and (3) the Section 26a permitting process. Additionally, an OIG contractor, Marshall Miller, completed a series of peer reviews of geotechnical exploration and slope stability analyses of selected TVA coal combustion products storage areas. The Inspections

section begins on page 37 of this report.

INVESTIGATIONS

This reporting period was an active one for OIG Investigations. Our findings produced results, including five convictions, six indictments, and one pretrial diversion. The individuals were prosecuted in state and federal venues, on various charges such as major fraud, workers' compensation fraud, false statements, and theft. Additionally, one administrative investigation identified wasted funds exceeding \$9.6 million on a fossil plant project, and other investigations garnered restitution, fines, and fees exceeding \$9,000. We opened 190 investigations and closed 228. The highlights and results of our investigations can be found starting on page 45 of this report.

Investigations Opened

Investigations Closed

Other Monetary Loss

Criminal Actions

Recoveries/Savings/Fines/Penalties

Administrative Actions (No. of Subjects)

STATISTICAL HIGHLIGHTS April 1 - September 30, 2011 Audit Reports Issued 26 8 Inspections Completed **Ouestioned Costs** \$1,326,886 **Disallowed Costs** \$655,177 Funds Recovered \$326,352 Funds to be Put to Better Use \$4,945,032 Funds Realized by TVA \$1,162,132

190

228

12

23

\$9,104

\$9,693,195



rganization



Richard W. Moore Inspector General



Ben R. Wagner Deputy Inspector General

Investigations Management Team



John E. (Jack) Brennan Assistant Inspector General, Investigations



Audits & Inspections Management Team

Robert E. Martin Assistant Inspector General Audits & Inspections



Administration Management Team

Jill M. Matthews Assistant Inspector General Administration



Legal Team

Charles A. Kandt Legal Counsel



Nancy J. Holloway Special Agent in Charge





Lisa H. Hammer

Director, Financial

& Operational Audits



Public Affairs Officer

W. David Winstead Deputy Legal Counsel



KHALKIA

Paul B. Houston Special Agent in Charge



Rick C. Underwood, Jr. Director (Acting) **Distributor Audits**



David P. Wheeler **Director, Contract Audits**



Gregory R. Stinson Director, Inspections



John H. Barrow III Project Manager Emerging Issues



Louise B. Beck Audit Quality Manager

The OIG's most important resource is its people. Our team is made up of experienced auditors, investigators, and administrative staff. The OIG is an independent office within TVA and is headquartered opposite TVA corporate offices in TVA's East Tower, overlooking downtown Knoxville. Inspector General Richard Moore believes that in order to effectively provide oversight to TVA, we must be strategic in our placement of OIG employees. As such, the IG has worked to ensure that our office has a presence at or near all major TVA offices/facilities throughout the Tennessee Valley.

The OIG has a major satellite office in the Edney Building in Chattanooga, Tennessee, where the Inspections unit and several investigators are located. There are also staffed field offices at the Watts Bar Nuclear Plant in Tennessee; and also in Nashville, Tennessee; Huntsville, Alabama; and Mayfield, Kentucky.

As of September 30, 2011, the OIG had a total staff of 104. The Audits and Inspections units are composed of 55 employees, the Investigations unit includes 31 people, and the Administrative team is comprised of 18 people.

The number of personnel located at each staffed office is as follows: Knoxville-80, Watts Bar Nuclear Plant-1, Chattanooga-16,

Nashville-2, Huntsville-4, and Mayfield, Kentucky-1.

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 in achieving office goals. Responsibilities include operations for personnel administration, budget and financial management, purchasing and contract services, facilities, conferences, communications and IT support.

AUDITS AND INSPECTIONS

The Audits and Inspections group performs 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 Inspections group makes recommendations to enhance the effectiveness and efficiency of TVA programs and operations.

The group uses an impact- and risk-based approach to develop an annual work plan. The plan considers TVA's strategic plans, major management challenges, TVA's enterprise risk management process, and other input from TVA management. The 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/or congressional interest), and the likelihood it will result in recommendations for cost savings or process improvements. The result of the OIG audits and inspections planning process is a focus on those issues of highest impact and risk of fraud, waste, or abuse.

The Audits team, based in Knoxville, generates and oversees comprehensive financial and performance audits of TVA programs and operations, providing a landscape view of TVA's overall fiscal and operational health.

This dynamic team is made up of four departments—Contract Audits, Distributor Audits, Financial/Operational Audits, and Information Technology Audits.

Contract Audits has lead responsibility for contract compliance and preaward audits. In addition, this group

- performs reviews of TVA contracting processes and provides claims assistance as well as litigation support.
- Distributor Audits has lead responsibility for contract compliance reviews of TVA distributors. This group assesses compliance with the terms of the power contracts between TVA and its distributors.
- Financial/Operational Audits has lead responsibility for oversight of TVA's financial statement audit and related services performed by TVA's external auditor, reviews of TVA's internal controls related to financial reporting, audits of operational efficiency and TVA compliance with laws and regulations as well as operational reviews to

- assess the results and economy and efficiency of TVA programs.
- ➤ 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 group also performs operational reviews of the effectiveness of IT-related functions.

The Inspections team, based in Chattanooga, serves a unique function. This group was created when Inspector General Moore recognized the need for a team that could provide a quick, yet thorough review of TVA functions. We refer to our Inspections group as the "Light Calvary." The methods used by this group allow them to complete reviews quicker than traditional audits by limiting the scopes of the reviews.

However, the team can and does provide larger scope reviews when needed and seeks to ensure that program objectives and operational functions are achieved effectively and efficiently. In accordance with the Quality Standards for Inspections, the objectives of the Inspections group include providing a source of factual and analytical information, monitoring compliance, measuring performance, assessing the efficiency and effectiveness of operations, and conducting inquiries into allegations of fraud, waste, abuse, and mismanagement. Audit and inspection issues vary depending on the objectives of the project. The following graphic shows some representative examples of issues commonly reported by each department.

TYPES OF AUDIT AND INSPECTION ISSUES

Information Technology Audits

- Unauthorized Access
- Inadequate Controls
- Lack of Data Integrity
- Fraud

Financial Audits

- Internal Control Deficiencies
- Material Misstatements
- Legal Noncompliance
- Fraud

Operational Audits

- Operational Inefficiency
- Not Achieving Intended Results
- Inferior Performance
- Legal/Regulatory Noncompliance
- Fraud

Distributor Audits

- Contract Noncompliance
- Misstatement of Power Sales to TVA
- Fraud

Contract Audits

- Inflated Proposals
- Contract Overpayments
- Inferior Performance
- Fraud

Inspections

- Internal Control Deficiencies
- Operational Inefficiency
- Policy Noncompliance
- Fraud

MAJOR CATEGORIES OF INVESTIGATIONS

Contract Fraud

Defrauding TVA through its procurement of goods and services. Fraud schemes may include misrepresenting costs, overbilling charges, product substitution, and falsification of work certifications.

Theft of Government Property and Services

Theft of TVA property and "schemes to defraud...designed to deprive individuals, the people, or the government of intangible rights, such as the right to have public officials perform their duties honestly."

Environmental Crime

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

Health Care Fraud

The intentional misrepresentation of health care services, expenses, billings, needs, or coverage that results in unauthorized payments or other benefits.

Illegal Hacking into TVA Computer Systems

Accessing a computer withou authorization or exceeding authorized access.

Workers' Compensation Fraud

Includes employee fraud, medical fraud, premium fraud, and employer fraud, most often a false claim of disability

Employee Misconduct

Misuse of TVA furnished equipment, travel voucher fraud, and a multitude of miscellaneous matters of abuse.

INVESTIGATIONS

The Investigations team looks for activity related to fraud, waste, and abuse in and of TVA programs and operations. This team performs its investigations in accordance with the Quality Standards for Investigations. The investigators maintain liaison with federal and state prosecutors and file reports with the Department of Justice whenever the OIG has reason to believe there has been a violation of federal criminal law. Our investigators partner with

other investigative agencies and organizations on special projects and assignments, including interagency law enforcement task forces on terrorism, the environment, and health care. Above are 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/

or TVA. Additionally, this team provides legal advice as needed for administrative, audit, inspection and investigative projects. The OIG Legal Counsel also coordinates government relations for the office.



REPRESENTATIVE A U D I T S NAVIGATING Risk | TVA OIG



Summary of

REPRESENTATIVE AUDITS

During this reporting period, the OIG completed 26 audits and 19 other projects and identified more than \$6 million in questioned costs and funds which could be put to better use. The OIG also identified numerous opportunities for TVA to improve program operations. Audits in the following areas: (1) financial and operational; (2) contract preaward and compliance; (3) information technology; and (4) distributors of TVA power were completed this period.

FINANCIAL and OPERATIONAL AUDITS

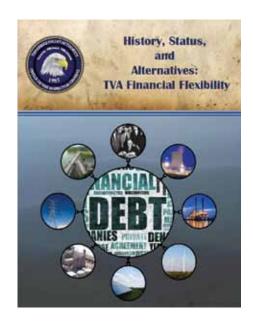
During this semiannual period, **Financial and Operational Audits** assessed TVA's financial flexibility, including the history and status of TVA's financing and its alternatives for the future. The team also audited TVA's cost recovery for tritium production under an interagency agreement with the Department of Energy. Finally, the team reported on controls over the receipt and burning of coal at TVA fossil plants, transmission line inspection and maintenance, as well as green power pricing accreditation.

History, Status, and Alternatives: TVA Financial Flexibility

TVA faces a challenging financial situation, one that requires careful consideration by TVA management, its Board of Directors, and congressional and administration officials. The company is making significant investments to improve the condition of existing assets and bring new generation on-line that

will comply with environmental regulations. At the same time, TVA is approaching a statutorily imposed debt ceiling of \$30 billion, a major impediment to making needed investments. TVA currently projects it will have accumulated approximately \$27.4 billion in debt and debt-like instruments in fiscal year FY 2012. The amount of TVA's debt and debt-like instruments, the debt ceiling, projected capital needs, and statements from TVA executives make it clear that TVA may experience issues with its ability to adequately fund operations, maintenance, and capital projects without increasing the debt ceiling or raising rates. Furthermore, in light of the nation's current weak economy and TVA's increased borrowings being considered part of the federal deficit, TVA could have difficulties in getting the debt ceiling raised.

Our office undertook this review to assess TVA's financial flexibility and identify alternatives for the TVA Board and executives to consider in meeting future financing needs.



Additionally, it is important to note that in the aftermath of the Kingston coal ash spill of December 22, 2008, TVA has committed to being a more transparent agency.

The financial flexibility report presented an opportunity for TVA to continue its commitment to transparency on issues that affect TVA stakeholders. In fact, the TVA Board and TVA management encouraged the OIG to present a fact-based report for TVA's stakeholders to consider. In summary:



- > TVA's \$30 billion debt ceiling was approved by Congress in 1979. In 2010 dollars, the purchasing power of the 1979 \$30 billion debt ceiling is only \$10 billion. Further, if the average annual Consumer Price Indices from 1980 through 2010 were applied on a cumulative basis to the existing debt ceiling, it would inflate to more than \$90 billion in 2010 purchasing power. TVA actually has a more restrictive debt ceiling today than it did in 1979 due to the effects of inflation.
- ➤ TVA's current total financing obligations include statutory debt, energy prepayments, and leaseback obligations.

 TVA's statutory debt balance as of September 30, 2010, was \$23.4 billion and there was an additional \$2.2 billion in energy prepayments and leaseback obligations. For financial planning purposes,

- TVA currently uses an internal borrowing limit of \$28 billion in statutory debt to provide for the unexpected.
- > TVA has undertaken debt reduction efforts in the past, but it has made limited progress compared with its publicly announced goals. Since 2005, there have been efforts to transform TVA's business structure to increase accountability and oversight by changing the TVA Board from three full-time to nine parttime members, establishing a chief executive officer position to supervise its day-to-day activities, and requiring reports to be filed with the Securities and Exchange Commission. Additionally, the TVA Board has established a set of financial principles to bring a new level of discipline to TVA decision making and ensure continued financial health.
- > TVA faces many challenges, including an aging fossil fleet, increased environmental regulations, and a pending pension shortfall. TVA prefers to address these challenges before reaching the \$30 billion statutory debt cap. One alternative to meet these challenges is to increase the debt ceiling. However, increasing the debt ceiling above the current \$30 billion limit would lead to a greater amount of debt for TVA, which could be perceived negatively in the current weak economy and foster uncertainty about how higher debt levels can be sustained. In addition, according to TVA's Office of the General Counsel, because of federal budgetary principles, TVA debt is presented in the budget as being equivalent to TVA's receipt and expenditure of federal appropriations and would cause an equal increase

in the overall federal budget deficit that currently exists. Thus, Congress' current mission to reduce the federal deficit, coupled with resistance from those who generally oppose a debt ceiling increase, could be a constraint to TVA's success in getting the debt ceiling increased.

Based on our review of TVA internal documents, interviews with TVA executives and personnel, discussions with the Tennessee Valley Public Power Association, Inc., Office of Management and Budget (OMB) personnel and consulting staff from PricewaterhouseCoopers, we also presented several alternatives, including the pros and cons of each one, for TVA to consider in addressing its financing challenges. Although increasing the debt ceiling has historically been TVA's approach to meeting its financing needs, it is by no means the only financing strategy. However, debt financing is TVA's least cost option to finance future capital needs. Some of the alternatives discussed in this report include: (1) raising customer rates; (2) defining the debt ceiling in terms of a financial metric rather than a fixed dollar amount; (3) increasing debt ceiling incrementally based on planned capital needs; (4) deferring capital and operations and maintenance costs; (5) increasing the use of alternative financing arrangements (lease-leasebacks, capital leases,

and energy prepayments);
(6) entering into an agreement
with another party for the purpose
of financing new generation
(partnering); and (7) exploring a
combination of these alternatives.

Cost Recovery for Tritium Production

We reviewed TVA's cost recovery for tritium production under an interagency agreement with the Department of Energy (DOE). The audit covered the period, January 2000 through December 2009, with some scope restrictions due to incomplete accounting data. Additionally, we were unable to determine if tritium production costs were accurately identified and invoiced or if any negative impacts on plant operation from tritium production were reimbursed by DOE, due to inadequate documentation. Specifically, we determined: Nuclear Power Group (NPG) did not (1) maintain complete accounting data, (2) negotiate rates that accurately reflected NPG's anticipated costs, (3) address \$9 million in underrecovered overhead identified in the previous OIG audit on the tritium agreement, (4) invoice standby payments and overhead in compliance with the agreement terms, (5) identify all additional operating costs caused by tritium production, (6) retain support for \$22.9 million in expenses and an unknown amount of revenues, and (7) properly classify revenue.

Possible consequences of these findings include noncompliance with both the Economy Act and TVA Act, resulting in ratepayer subsidy of tritium production and unreliable NPG financial/ performance data. TVA management agreed to implement a document retention system to ensure appropriate documents were retained for the life of the tritium program; develop an "economy act model" to estimate tritium production costs over the entire 35-year life of the tritium agreement, and use this model to support tritium negotiations in FY 2011, as well as implement a project management plan and improve relevant project controls.

Fossil Fuel Inventory

TVA's fossil fleet consists of 56 operating units at 11 fossil plants in the Tennessee Valley. Through the third quarter of FY 2010, TVA purchased 25.2 million tons of coal totaling \$1.4 billion and burned 25.7 million tons totaling \$1.5 billion. TVA's fuel inventory as of June 30, 2010, was \$519 million. We assessed the operating effectiveness of controls over the receipt and burning of coal at the fossil plants, including inventory adjustments. Specifically, we determined:

➤ The reports used to track the variances in TVA weights versus vendor weights did not consistently represent the respective coal company, coal



mine, or loading point, which could prevent the identification of significant issues.

- Investigations of variances were not always coordinated between TVA Coal and Gas Services and plant personnel, which could impact the efficiency of the investigations.
- Material tests, which ensure the accuracy of the TVA scales, were not being conducted on all receipt and burn scales annually at the 11 TVA fossil plants.
- Documentation was not consistently maintained for daily belt scale checks, weekly belt scale calibrations, and material flow checks. Therefore, we were unable to determine whether these checks were regularly conducted.
- No formal process existed for conducting investigations on

inventory adjustments that exceeded the tolerable variance limit.

TVA management agreed with our recommendations and is taking corrective action to address these issues.

Effectiveness of TVA's Transmission Line Maintenance Program

TVA owns and operates one of the largest transmission systems in North America, serving some 9 million residents spanning portions of seven states. The TVA transmission system is comprised of approximately 260,000 acres of transmission rights-of-way (ROW), 15,900 circuit miles of transmission lines, and 102,200 transmission line structures. TVA's transmission system moves electric power from the generating plants to distributors of TVA power and to industrial and federal customers across the region. According to

TVA, in FY 2010, the TVA system delivered its eleventh straight year of 99.999 percent reliability.

We reviewed the inspection and maintenance programs for transmission lines/structures and ROW to evaluate the adequacy and effectiveness of the programs. We determined that the transmission line inspection and maintenance program is adequate and effective. Specifically, we identified potential areas of improvement including (1) instances in which transmission lines were not assigned a preventive maintenance inspection interval, (2) improvements that could be made to the manual and system documentation to allow for recording of inspection results and trending of recurring maintenance issues, and (3) improvements that could be made in scheduling preventive maintenance inspections of tower lighting. TVA management generally agreed with our recommendations and

has taken, or is taking, corrective actions to address these issues

TVA's Compliance with the Green Pricing Accreditation Program

TVA's Green Power Switch Program produces electric power from renewable resources such as solar. wind, and methane gas, and adds such sources to TVA's power mix. Both solar and wind power are produced in sufficient quantities to qualify for accreditation standards administered by the **Center for Resource Solutions** (CRS). We completed agreed-upon procedures to assist the CRS in determining TVA's compliance with the annual reporting requirements of CRS' Green Pricing Accreditation Program, Green-e Energy for utility pricing programs, for the year ended December 31, 2010. These procedures included steps to verify that the renewable energy supply was sufficient to meet sales, products met the Green-e criteria and stated product content, and marketing as well as product information was accurate and communicated to customers. The results of the procedures verified that TVA's Green Power sales were based on electricity generated or acquired from eligible renewable sources and otherwise met the above aspects. CRS was provided with the results of our work.

CONTRACT AUDITS

Preaward Contract Reviews

To support TVA management in negotiating procurement actions, we completed three preaward audits of cost proposals submitted by companies proposing to provide (1) a perimeter stabilization project for a TVA fossil plant, (2) upgrades to TVA's hydro plants, and (3) inspection services. Our audits identified \$4.9 million of potential savings opportunities for TVA to negotiate. The savings opportunities were primarily related to ineligible sales taxes and overstated indirect cost recovery rates.

Contract Compliance Reviews

During this semiannual period, we completed two compliance audits

- of contracts with expenditures totaling \$11.8 million and identified potential overbillings of \$1.3 million. Highlights of our completed compliance audits follow.
- ➤ We audited \$2.2 million in costs billed to TVA by a contractor for providing "vacuuming services" at TVA's fossil and nuclear plants. Our objective was to determine if the contractor had billed TVA in accordance with the contract terms and conditions. In summary, we determined the contractor had overbilled TVA \$686,466 including:
 - \$257,807 in unsupported costs related to (1) missing cost details and (2) labor;



- \$ \$6,789 in duplicate billings;
- \$41,123 due to the use of incorrect billing rates;
- \$386,176 of ineligible costs for (1) mobilization/ demobilization, (2) per diem, (3) labor escalation, (4) equipment and materials, and (5) fuel surcharges; and
- Credit for \$5,429 in discounts that had been provided by the contractor.
- ➤ We audited \$9.6 million in costs billed by a subcontractor to a contractor (and subsequently to TVA) for asbestos abatement and valve refurbishment services at Watts Bar Nuclear Plant. In summary, we found the costs billed by the subcontractor were inflated by at least \$624,800 because the hourly rates the subcontractor billed for craft and nonmanual labor included overstated cost allowances. The inflated costs included:
 - \$274,800 of craft labor billings that resulted because the contractor's craft billing rates included overstated allowances for payroll tax costs; and
 - \$350,000 for nonmanual labor because the nonmanual billing rates included excessive wage and burden rates.

Since the contractor added a 2.5 percent markup when it billed TVA, the actual costs TVA paid were inflated to \$640,420. TVA management is reviewing our findings to determine what actions to take.

OTHER CONTRACT REVIEWS

In 2007, TVA issued a procedure to ensure consistency in the tracking and handling of contract documents and associated files across TVA. The procedure established a standard method to be used by all TVA organizations for the storage and retrieval of contract documentation in Contracts Central, TVA's repository for contract records.

We conducted an audit of TVA Supply Chain's centralized handling of contract documents to assess and determine compliance with the policy. In summary, we found Supply Chain was not in compliance with TVA policies regarding the use of Contracts Central. Specifically, our review of 225 contracts found that only 120 contracts (53.3 percent) were available in Contracts Central.

Although we identified several technical reasons for Supply Chain's noncompliance with TVA's policy, overall, it appeared many contract managers and procurement agents did not understand the importance of having contract documents located in a centralized location. Additionally, we found TVA's original Contracts Central

policy had been superseded and much of the pertinent guidance and specific policy information had been omitted.

TVA management agreed with our findings and plans to (1) reinforce the importance and benefits of Supply Chain's use of Contracts Central; (2) correct various technical deficiencies identified; and (3) provide training and enhanced guidance on the handling of contract documents.

IT AUDITS

During this semiannual period, we completed 11 audits pertaining to: (1) implementation of TVA's new fixed asset system and core network switches; (2) a follow-up assessment of the effectiveness of TVA's IT organization; (3) granting physical and logical access to nonnuclear contractors; (4) Internet firewall management; and (5) IT general controls for (a) a proposed application service provider and (b) TVA's processes for logically and physically protecting data and other IT assets, developing and implementing program changes, computer operations, and configuration management. TVA management agreed with our findings and have initiated or completed actions to address our findings.

Pre-Implementation Reviews Identified Process Improvements

Pre-implementation audits are performed to evaluate and test the proposed control environment in

new systems. During this reporting period, the OIG completed preimplementation audits for the new fixed asset application and for the core switch replacement. We found implementation plans and processes were generally adequate regarding project planning and management, as well as IT general controls included in our audit scope. However, we noted two areas of concern during our preimplementation audit for the new fixed asset application related to ensuring technical and functional specification documents are complete and following the change control process for all changes.

Improvements Needed to Increase Effectiveness of IT Organization

In 2007, the OIG completed an IT organizational effectiveness assessment that identified opportunities in the following areas:

- ➤ Integration of IT governance with the TVA business strategy.
- Strategic business partnering and communication with customers.
- Organization and policy changes, performance measures, and service management.
- Aging workforce and knowledge transfer.
- ➤ Enterprise-level governance of TVA IT investments.



In 2010, the OIG completed a follow-up assessment of TVA's IT organization to measure the effectiveness of its organizational structure, performance, cultural maturity, and enterprise risk management. We found the IT organizational effectiveness did not improve, and in many areas had declined, since the OIG's previous audit.

We found that (1) areas of high and significant risk exist within the IT organization; (2) operational maturity has decreased in four of seven areas we reviewed: (3) cultural issues exist in seven of the eight areas we assessed; and (4) IT does not produce reports of total spend or meaningful comparative analysis with other utilities of total spend. We compared the findings in this audit with those identified in the 2007 audit. In general, the opportunities for improvement identified in 2007 still exist.

Granting and Monitoring Access to Nonnuclear Contractors Needs Improvement

The OIG reviewed the IT controls for granting and monitoring nonnuclear contractor access to TVA assets, including general network access. The OIG found TVA's controls over processes for managing and tracking nonnuclear contractor logical and physical access need to be strengthened to reduce the risk of loss or compromise of sensitive TVA data and physical assets.

Weak IT General Controls Found at a Proposed Application Service Provider

We audited the IT general controls for a proposed application service provider. We determined control weaknesses existed in the areas of (1) account management, (2) system configuration management, and (3) computer operations. We recommended that if TVA proceeds in its negotiations

with the vendor, it should coordinate with EIS&P to include contract language to ensure the vendor appropriately remediates the identified information technology security control weaknesses.

IT General Controls Were Generally Effective

When Congress passed the **Consolidated Appropriations Act** of 2005 which established the new nine member board for TVA. it also included requirements that TVA comply with Securities and **Exchange Commission reporting** requirements, including certain provisions of the Sarbanes-Oxley Act. As part of our audit plan, we tested the IT general controls for (1) program development, (2) access to programs and data, (3) computer operations, (4) program changes, and (5) configuration management. Based on the results of our audits, we found 10 of 19 control objectives were being met by existing processes and controls. We also identified opportunities for improvements in both control design and control documentation.

Controls for Internet Facing Firewalls Could Be Improved

The OIG evaluated (1) connectivity and placement of Internet firewalls, (2) firewall configuration, (3) supporting network device configuration, (4) firewall management, and (5) firewall

disaster recovery planning. We found:

- ➤ Internet firewalls and supporting network devices were not physically segregated from other network hardware.

 Such segregation would allow TVA to restrict access to authorized staff and monitor physical access to these devices.
- ➤ One TVA organization has not developed disaster recovery documentation which included a return-to-operations plan.

DISTRIBUTOR AUDITS

TVA sells power under the contracts it has established with 155 distributors—municipalities and cooperatives. These distributors resell the TVA power to consumers across the Tennessee Valley. The sale of power to the distributors comprises about 86 percent of TVA's operating revenue. Distributor Audits assessed compliance with key contract provisions, including accurate reporting of electric sales by customer class to facilitate proper revenue recognition and billing by TVA; nondiscrimination in providing power to consumers in the same rate class; and proper use of power revenues. Additionally, Distributor Audits made recommendations to help distributors improve their internal controls and TVA management to improve its oversight of the distributors.

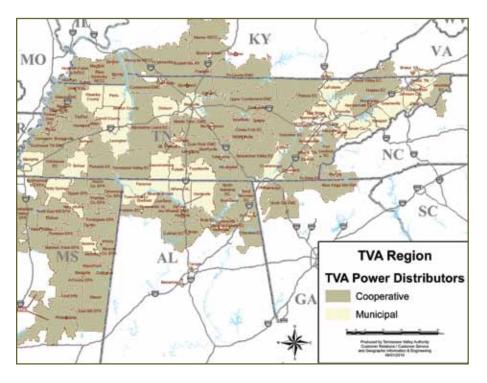
During this semiannual period, the OIG completed five distributor audits. The following describes issues noted in our audits.

Use of Electric System Funds for Nonelectric Purposes

One of the five distributors reviewed used electric department funds for nonelectric purposes, inconsistent with the provisions in its contract with TVA. This distributor used electric system funds to purchase a propane sales subsidiary, pay operating obligations of the propane sales subsidiary, and guarantee lines of credit for the propane sales subsidiary and two other nonelectric businesses the distributor owned or partially owned.

Expenditures of Electric System Revenues Inconsistent with Contract Provisions

The OIG found another distributor that disbursed funds for electric system purposes, but the expenditures were not made in accordance with the terms in its contract with TVA. Specifically, the distributor did not pay all electric system operating obligations incurred; made payments in lieu of taxes during the 24-month audit period before all operating obligations were paid and reasonable reserves were in place; and did not have reasonable cash reserves prior to making payments in lieu of taxes. While TVA and the



distributor did not agree with our findings, actions have been taken by the distributor to address the issues identified.

Opportunities for TVA Oversight Improvements

We identified a new opportunity for TVA to improve its oversight of distributors. Specifically, we found TVA's process for verifying accuracy of Distributor Annual Report financial information did not adequately identify and address reporting errors. We additionally found opportunities to enhance TVA's oversight at three of the five distributors that had also been reported in previous OIG distributor audit reports. In response, TVA agreed to take corrective action on these issues.

Other Contract Requirements

We found distributors were not complying with certain other contract requirements. Specifically, we noted issues with required reporting of financial information to TVA, including (1) incorrect reporting of certain assets, liabilities, expenses, and income in the Distributor Annual Report; (2) incorrectly recording an amount owed to the city's general fund as a portion of the balance of a receivable account showing items due from the city; and (3) not using the account structure prescribed in the Federal Energy Regulatory Commission Uniform System of Accounts as well as not having a reconciliation of the accounts used to the prescribed system of accounts.

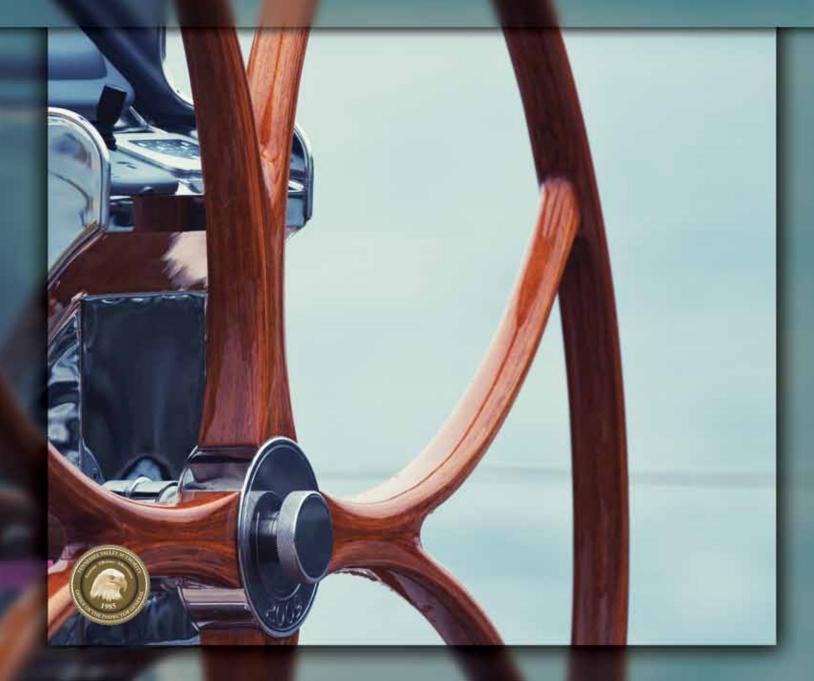
In addition, we noted instances of noncompliance with other contract provisions including: (1) contract demand amounts in the billing systems of two distributors that did not agree with contract demand amounts on the actual contracts; (2) contracts lacking at three distributors for customers whose demand exceeded 1 megawatt; (3) cost allocations applied at one distributor for joint use of property and services not approved by TVA; and (4) no certifications on file at one distributor for customers classified under the manufacturing rate schedule. Generally, the distributors agreed with the findings and have corrected or are taking action to correct these issues.

Classification and Metering

We noted instances where customers were not classified properly and similar customers were not classified the same at all five distributors. The impact of these issues, where we had adequate information to estimate, was not significant. Generally, the distributors agreed with our findings and have corrected or are taking action to correct these issues.



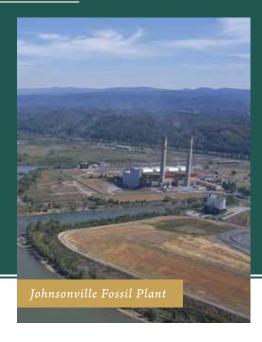
REPRESENTATIVE INSPECTIONS NAVIGATING Risk | TVA OIG



Summary of

REPRESENTATIVE INSPECTIONS

During this semiannual period, Inspections completed eight reviews. Our consultant, Marshall Miller, completed three peer reviews associated with (1) the stability analysis of ash disposal areas 2 and 3 at the Johnsonville Fossil Plant, (2) stability analysis of the gypsum stack at the Widows Creek Fossil Plant, and (3) Johnsonville Fossil Plant dike stability improvements; and a review of the environmental sampling and monitoring plans for the Kingston ash spill. Inspections completed four additional reviews pertaining to (1) TVA groundwater monitoring at coal combustion products disposal areas, (2) TVA's fossil fire protection systems, (3) TVA's plan for removal of equipment containing PCB, and (4) the Section 26a permitting process. More information on each of the reviews can be found below.



MARSHALL MILLER REVIEWS

On December 22, 2008, a retention wall for an ash containment area at the Kingston Fossil Plant failed and resulted in approximately 5.4 million cubic yards of coal ash being released. As a result, TVA commissioned the engineering firm Stantec Consulting Services, Inc. (Stantec), to rigorously inspect, evaluate, and make recommendations on ash storage facilities at all its fossil plants. We retained Marshall Miller to conduct a peer review on selected Stantec reports related to geotechnical exploration and slope stability, as well as documents for proposed improvements to the stability of one site. Additionally, we retained Marshall Miller's service to evaluate the adequacy and completeness of TVA's environmental recovery plans related to the Kingston ash spill. These reports conclude a series of reports related to the Kingston ash spill in which we used Marshall Miller to assess TVA's progress and actions. The details of the specific reviews are discussed below.

Peer Review of the Stability Analysis of Ash Disposal Areas 2 and 3 at the Johnsonville Fossil Plant

Marshall Miller conducted a peer review of the Stantec report on geotechnical exploration and slope stability for ash disposal areas 2 and 3 at the Johnsonville Fossil Plant. Marshall Miller contended Stantec's evaluation provided a reasonable assessment of the margin of safety associated with the evaluated conditions, which indicated that the facility was not in danger of imminent failure.

In Marshall Miller's opinion,
Stantec followed generally
accepted practices and arrived
at reasonable predictions of exit
gradients. Marshall Miller found
Stantec arrived at reasonable
shear strength properties for the
generalized material layers and
zones.

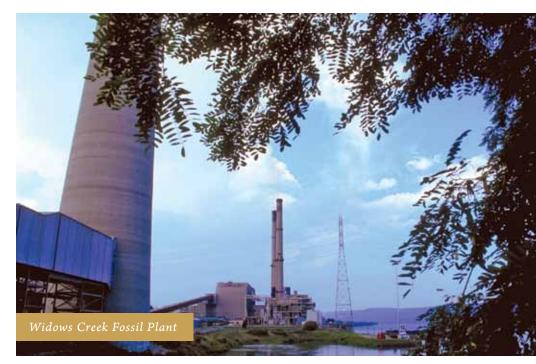
Based on the review of Stantec's slope stability analyses, it was Marshall Miller's opinion Stantec performed stability analyses for static, long-term load conditions using appropriate methodologies and reasonable material properties. TVA management and its contractor, Stantec, provided additional information to address Marshall Miller's findings and recommendations identified in its report. Marshall Miller concluded the additional information

adequately addressed the concerns and recommendations identified in the report.

Peer Review of the Stability Analysis of the Gypsum Stack at the Widows Creek Fossil Plant

Marshall Miller conducted a peer review of the Stantec report on geotechnical exploration and slope stability for the gypsum stack at the Widows Creek Fossil Plant. Marshall Miller stated Stantec's evaluations of the Widows Creek gypsum stack provided a reasonable assessment of the margin of safety associated with the evaluated conditions, which indicated the facility was not in danger of imminent failure.

Marshall Miller did find additional analyses and corresponding documentation was needed in order to assess the overall safety factor of the stack in the mid- and long-term. Marshall Miller also found Stantec used a model that was 20 feet lower than the final height of the stack which does not reflect the final conditions of the pile. Additionally, Marshall Miller found Stantec did not (1) perform adequate testing to support reliance on historical data and shear strength characterization of some materials, (2) calculate and document the exit gradient and factors of safety against piping for the five year build-out configuration, and (3) perform sufficient investigation of the clay foundation soils.



TVA management and its contractor, Stantec, provided additional information to address the findings and recommendations. Marshall Miller concluded the additional information provided adequately addressed the concerns and recommendations it identified in the report.

Peer Review of Johnsonville Fossil Plant Dike Stability Improvements

Marshall Miller conducted a peer review of the Stantec documents for proposed improvements to the stability of the Northeast Dike of the Ash Disposal Area No. 2 of the Johnsonville Fossil Plant. Based on Marshall Miller's technical review, Stantec used generally accepted methods and practices to design the stability improvements.

Marshall Miller found the plans for construction prepared by Stantec provided suitable guidance for

construction; however, they found that the details of the graded filter portion of the stabilization berm did not conform closely to current standards of practice and presented constructability issues at locations where the installation conditions were more challenging. TVA management and its contractor provided additional information to address the findings and recommendations. Marshall Miller concluded the additional information provided adequately addressed its concerns and recommendations identified in the report.

Review of the Environmental Sampling and Monitoring Plans for the Kingston Ash Spill

Marshall Miller was hired by the OIG to review the sampling and monitoring plans for the ash release that occurred at the Kingston Fossil Plant on December 22, 2008. Marshall Miller evaluated the adequacy and completeness of TVA environmental recovery plans to determine whether the plans provided comprehensive and effective measures to adequately monitor the potential short- and long-term impacts to human and ecological receptors. The scope of the review included TVA environmental recovery plans available through June 2010. In summary, Marshall Miller found no significant deficiencies in the plans or procedures TVA or its contractors used in characterizing impacts resulting from the ash release or recovery efforts. It should be noted that the assessment of long-term impacts will be ongoing during and after the recovery effort.

While Marshall Miller did not find any significant deficiencies early in the recovery process, some of the analytical results did not pass prescribed quality assurance/ quality control standards, and the data were invalidated. When the deficiency was noted, TVA took appropriate steps to correct the situation, and it does not appear any decisions regarding the cleanup efforts were affected by the data quality.

Marshall Miller noted the following:

➤ Bureau Veritas Laboratories used an incorrect analytical method for particulate monitoring from September 2009 to January 2010. This resulted in

the Environmental Protection Agency invalidating the Particulate Matter data.

- There has been limited research on how the ash and the metals associated with ash will affect the various organisms in the river system. Additional investigations by a variety of research organizations are underway, primarily in support of the River System Engineering Evaluation/Cost Assessment.
- ➤ Data from air testing for metals and groundwater testing are not readily available to the public.
- ➤ Due to "legacy" contaminants in the sediment in the lower 1.8 miles of the Emory River (associated with activities at the ORNL) and the difficulty in removing the ash without disturbing existing "legacy" and

native river sediments, some ash will remain in the river after dredging is complete.

TVA management agreed with Marshall Miller's recommendations and has taken or plans to take action based on the recommendations.

TVA's Groundwater Monitoring at Coal Combustion Products Disposal Areas

This review was initiated because of questions raised during congressional testimony following the Kingston ash spill in December 2008. The objectives of this review were to determine whether TVA (1) performed groundwater monitoring as prescribed by the permits and (2) found levels of constituents monitored that exceeded regulatory limits and,



if so, implemented required corrective actions.

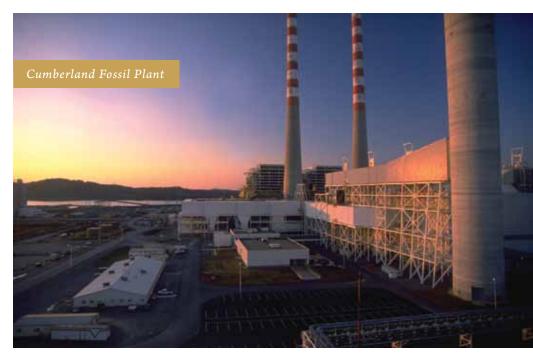
The burning of coal at TVA's fossil plants produces coal combustion products. Coal combustion products consist of fly ash, bottom ash, and gypsum. Currently, TVA ash and gypsum are stored in a landfill or a pond, disposed of off-site, or beneficially used. If coal combustion products are stored in a landfill, the coal combustion products are regulated in Tennessee and Kentucky, but not in Alabama, under solid waste regulations. Solid waste regulations in Tennessee and Kentucky require groundwater monitoring. Coal combustion products contain heavy metals and other constituents that can migrate into groundwater. High concentrations of constituents could potentially pose health problems ranging from mild irritation to death.

During our review, we found, in some instances, TVA was not performing monitoring as prescribed by the permits. For calendar years 2008 and 2009, TVA was monitoring for the required constituents and performing tests within the required time frames at ten coal combustion product (CCP) areas at seven fossil plants. However, TVA was not monitoring for all permit-required constituents at Cumberland and Johnsonville Fossil Plants. TVA requested

a minor modification of both permits to remove the constituents that were not being monitored, and Tennessee Department of Environment and Conservation personnel stated this would be approved.

Additionally, exceedances were found at eight of the nine fossil plants where monitoring was being conducted. TVA has two plants in Tennessee that have chemical components in the CCP which may be present in groundwater that exceeded health-based limits. The plants were working through the corrective action process described in Tennessee Rule 1200-1-7, Solid Waste Processing and Disposal. An additional two plants in Tennessee have been placed in the second highest phase of assessment, which occurs when there is a statistically significant increase above background levels for a constituent. Finally, TVA installed 29 monitoring wells at nine sites in 2010 and has committed to conducting at least one sampling event at each site by the end of 2011 as part of a commitment to the Utility Solid Waste Activity Group (USWAG). USWAG is an association of the Edison Electric Institute, the American Public Power Association, the National Rural Electric Cooperative Association, and approximately 80 electric utility operating companies. USWAG has an action plan focused on having groundwater monitoring wells installed at all active CCP disposal areas. In December 2007, TVA notified USWAG of its intent to endorse the voluntary commitments prescribed in the action plan.

We recommended the Senior Vice President for Environment & Technology continue (1) plans to





implement monitoring at all active CCP disposal areas, and (2) with the assessment plan and initiate corrective actions for Cumberland and Gallatin Fossil Plants. TVA management agreed with these recommendations.

Review of TVA's Fossil Fire Protection

Fire hazards such as large quantities of fuel, combustible/ flammable liquids, electrical hazards, combustible dusts, and warehousing are common in electric generating plants. Although fires are not a daily occurrence at TVA, they could cause severe property damage and business interruption. Fire protection systems are a combination of mechanical and electrical components and, like power generation equipment, need regular attention. If these systems are needed, they are counted upon to perform reliably and protect vital plant equipment from

damage. However, every year, fire protection systems throughout the industry fail to operate satisfactorily in fire situations. In about onethird of these cases, the cause is inadequate inspection, testing, and maintenance.

The objective of this review was to determine if TVA fire protection systems were adequately maintained and mitigating actions were taken to minimize the impacts of fires at TVA fossil plants. During our review, we identified a number of issues related to fire protection at TVA fossil plants. We found numerous fire protection systems out of service (impairments) at a number of sites, and most systems were not returned to service in a timely manner. During calendar year 2010, there were 30 impairments at Cumberland, 10 at Gallatin, 6 at John Sevier, 20 at Paradise, and 49 at Shawnee. The impairments in 2010 that have since been resolved lasted between 40 and 158 days, depending on the site. The average number of days far exceeds the maximum 48-hour time frame for system repairs to occur as laid out in the TVA Fire Protection System Impairment policy.

We also found some fire brigade members who were concerned about fire response preparedness. At TVA's coal-fired plants, a number of plant personnel participate as fire brigade members. These individuals take on the responsibilities of fire brigade members in addition to their normal job duties. Their concerns included poor fitting equipment, condition of the fire trucks, an inadequate staging area, bad communication equipment, not enough training, and insufficient staffing.

Additionally, we found lessons learned from fire events were not consistently communicated across

the fleet. Lessons learned were shared in different ways and were not always shared with fire brigade members. We also identified opportunities for improvement with fire prevention. During our review, we observed areas of significant coal dust accumulation and evidence of smoking at several sites. Lastly, we found instances of noncompliance with TVA policy regarding testing, inspection, and maintenance of fire protection equipment, pre-fire plans, and use of fire equipment. We identified some systems that were not inspected and tested as required, pre-fire plans in need of updating, and fire hoses being misused.

We recommended the Senior Vice President, Fossil Generation, (1) take immediate steps to restore all impaired fire protection systems to service and determine if additional personnel or resources are needed to expedite repairs of fire protection systems in the future; (2) determine (a) the equipment needs of fire brigade members, including protective equipment and emergency communication devices, and take steps to provide that equipment, (b) what additional training is needed for fire brigade members and take steps to provide that training, and (c) if increased staffing is warranted for fire brigades; (3) create and implement a formal process for capturing and sharing lessons learned from fire events across the fleet, and capture all



fire incidents and report them in a consistent manner to the Operations Information Center; (4) perform regular coal washdowns at all the plants to minimize coal dust accumulations, and strictly enforce TVA's "No Smoking" policy; and (5) evaluate whether additional personnel are needed to properly inspect, test, and maintain fire protection equipment, update pre-fire plans to reflect current conditions, and reinforce that fire equipment is only to be used by fire brigade personnel. TVA management agreed with the recommendations.

TVA's Plan for Removal of Polychlorinated Biphenyl Containing Equipment

This review was a follow-up to previous reviews performed by the OIG in this area. The objective

of this review was to determine whether the TVA is meeting all requirements and planned actions for the removal of equipment containing PCBs.

PCBs are toxic and persistent chemicals primarily used as insulating fluids in heavy-duty electrical equipment in power plants, industries, and large buildings across the country. PCBs, valued for chemical stability and fire resistance, were manufactured and processed from 1929 through the late 1970s.

In 1979, the Environmental Protection Agency banned the manufacture of PCBs through the Toxic Substances Control Act. Since the ban, no new equipment containing PCBs at concentrations greater than or equal to 50 parts

per million has been manufactured in the United States. The number of PCB transformers in the United States is decreasing, but many are still in use. As the useful life of transformers is typically no more than 30 to 40 years, PCB-containing equipment is nearing the end of its expected useful life. Equipment is increasingly vulnerable to leaks as it becomes older.

In 2008 TVA issued an environmental policy that contained the following PCB critical success factor: "Further reduce the risk of polychlorinated biphenyl (PCB) releases to the environment over time by eliminating use of PCBs in large electrical equipment."

During our review, we found there were currently no requirements for the removal of PCB equipment and previous planned actions for PCB equipment removal by TVA were not completed. Additionally, we found TVA was at significant risk from the continued use of PCBcontaminated equipment, as (1) TVA maintains one of the largest inventories of PCB equipment in the electric utility industry, (2) the condition of some PCB equipment at TVA increases the risk of an incident, and (3) TVA does not have an accurate inventory of its PCBcontaminated equipment.

We recommended the Chief Operating Officer (1) expedite the removal of PCB equipment by (a) providing dedicated funding

and (b) developing a standard methodology for assessing the risk of PCB equipment to prioritize its removal; and (2) provide dedicated funding to expedite efforts to determine the PCB-contaminated inventory in order to prioritize and allocate funding for the removal of this equipment. Until the PCB-contaminated equipment inventory is completed, TVA should treat all fires involving electrical equipment as if they contained PCBs until determined otherwise. TVA management agreed with the recommendations.

Efficiency and Effectiveness of the Section 26a Permitting Process

At the request of TVA's CEO, we evaluated key aspects of TVA's Section 26a process for effectiveness and efficiency. Under Section 26a of the TVA Act of 1933, TVA has the authority to regulate land use and development along the river system's 11,000 miles of public shoreline. Section 26a requires TVA approval prior to the construction, operation, or maintenance of any obstruction affecting navigation, flood control, or public land or reservations along the Tennessee River and its tributaries. Obstructions could include structures such as boat docks, piers, boathouses, shorelinebased shelters, commercial marinas, community docks, barge terminals, bridges, and culverts.

During the review, we determined that while TVA's Land and Stewardship Management has a defined listing of estimated ranges for how much an applicant may pay, a listing of predetermined standard fees to be charged, methods for tracking application costs and cycle time, and means for assessing customer satisfaction, use of these tools could be improved. Specifically, we determined (1) costs for cost recoverable permits may not be fairly and consistently applied and opportunities exist to improve the cost recovery process, (2) processes could be improved for the examination and use of customer satisfaction survey results, and (3) fee waivers were not properly documented. We also identified two other issues related to the segregation of duties for receiving and refunding of application fees. We made recommendations to which TVA management agreed to take corrective action.





REPRESENTATIVE INVESTIGATIONS NAVIGATING Risk | TVA OIG



Summary of

REPRESENTATIVE INVESTIGATIONS

This reporting period was an active one for OIG Investigations. Our findings produced results including five convictions, six indictments, and one pretrial diversion. The individuals were prosecuted in state and federal venues, on various charges such as major fraud, workers' compensation fraud, false statements, and theft. Additionally, one administrative investigation identified wasted funds exceeding \$9.6 million on a fossil plant project, and other investigations garnered restitution, fines, and fees exceeding \$9,000. Administrative cases resulted in process improvements as well. We opened 190 investigations and closed 228. Highlights of our investigative accomplishments follow.

Contract Medical Case Manager Indicted for Scheme to Defraud

We previously reported a TVA contractor company entered into a Civil False Claims Act agreement to pay TVA \$6.2 million (double damages) to resolve a contract fraud investigation related to its injury-reporting practices. The company's contract with TVA was valued at more than \$8 million and provided additional performance-based fee payments to the company if certain goals were met. One such payment was tied to personnel safety and was measured by injury rates and the total number of injuries at each of the TVA nuclear facilities where the company employed workers.

We have since investigated criminal allegations against the company's medical case manager. The manager was responsible for reviewing and classifying the contractor-company employees' injuries sustained while working at three TVA nuclear sites. The

manager is alleged to have regularly misclassified injuries by downgrading the severity of the injuries or falsely claiming the injuries were not work-related, resulting in false reports being submitted to TVA.

During this semiannual period, our investigation resulted in a federal 11-count indictment against the former medical case manager. The indictment charges the case manager with fraudulently manipulating injury reports to allow the manager's employer to receive safety bonuses exceeding \$1.5 million for its nuclear work at TVA. Specifically, as a result of his alleged participation, the case manager was charged with nine counts of major fraud, conspiracy to commit wire fraud, and conspiracy to commit money laundering.

Two Nuclear Contractor Employees Prosecuted for Falsification of Quality Control Documents

We previously reported a WBN contractor electrician was indicted in federal court on two felony counts of knowingly making written, material false statements within the jurisdiction of a federal agency. Recently, the individual pled guilty to one count of the indictment. He stipulated in the plea agreement he completed TVA forms purporting to state micrometer readings of cables that were installed to provide energy to equipment, including safety equipment, inside the containment structure at WBN Unit 2. After approximately 200 such entries were submitted, it was discovered the entries were either inaccurate or purported to be measurements of cables that did not exist. Recently, the contractor employee's supervisor also was charged with one felony count of making false statements by attesting with

his signature the questioned micrometer readings had been completed when he knew they had not.

Investigation Results in Conviction for False Statements Related to Clean Water Act Violations

As members of the Environmental Crimes Joint Task Force, we investigated allegations against a Niota, Tennessee, sewage treatment plant operator/ employee. As a result of our findings, the former operator was charged with violating the Clean Water Act by falsifying chlorine records and dischargemonitoring reports 72 times over a two-year period, affirming wastewater was chlorinated at correct levels, when, in fact, nondisinfected wastewater was discharged into the Little North Mouse Creek (a tributary of the Hiawassee River and part of the Tennessee River Watershed management area). The individual subsequently pled guilty to 12 counts of the indictment and awaits sentencing.

Former TVA Employee Indicted for Workers' Compensation Fraud

An investigation revealed a former fossil plant employee received total disability benefits under the Office of Workers' Compensation Program (OWCP) while actively employed in the Chattanooga area. A one-count federal indictment charged her with knowingly defrauding

the program to receive benefits to which she was not entitled.

Former TVA Employee Convicted on Theft for TVA Credit Card Misuse and Fraudulent Direct Billing to TVA

A TVA Human Resources review showed a former Financial Services employee used a TVA credit card to make unauthorized personal charges exceeding \$2,500. His management subsequently discovered he direct-billed TVA for hotel stays after his resignation. TVA was held liable for paying the credit card and was unable to recoup the funds after several attempts. We investigated this matter, and the individual was prosecuted for theft in the State of Tennessee. He was convicted during this reporting period and sentenced to 11 months and 29 days of unsupervised probation (suspended sentence) and paid more than \$4,000 in court costs and restitution to TVA.

Former Contractor Employee Indicted for Theft and Misuse of TVA Gas Card

It was reported to us a TVA credit card designated for gas expenses was missing; the vehicle it was assigned to had not been driven; and an unknown person had used the card multiple times at various locations. Our inquiry, which included reviewing convenience store security tapes, identified the gas card user as a TVA hydro contractor employee. As a result of



our investigation, he was indicted and subsequently arrested. He now faces a one-count indictment in federal court for his unauthorized use of the card.

Drug Sweep at John Sevier Combined Cycle (JCC) Construction Site Resulted in Four Arrests

During this semiannual period, the OIG assisted TVA Police, along with local law enforcement personnel and K-9 officers, in conducting a search for illegal drugs at the JCC construction site. The search was initiated based on two construction contractor employees' recent drug arrests near the site and concern about JCC copper-tool thefts. (Stolen copper can be an indicator of illegal drug activity; it is often sold to finance drug abuse.)

As a result of the sweep, four persons contracted to the same construction company were arrested. Drugs found included crack cocaine, marijuana, and Schedule III and IV prescription

medication. Additionally during the search, a prohibited weapon (SWAT knife) was confiscated from a contractor employee's vehicle, and containers of urine were found on two of the arrested individuals, who were additionally charged with attempting to falsify a drug test.

The construction company's management cooperated fully with the investigative team. Other agencies (all State of Tennessee) included Hawkins, Greene, and Knox County sheriffs' offices; Greeneville, Knoxville, and Morristown police departments; the Highway Patrol; and other members of Tennessee's Drug Diverson Task Force.

\$9,693,195 Waste Identified at Colbert Fossil Plant (COF)

The OIG investigated, but did not substantiate, an allegation that contractors at COF falsified technical documents. However, during the course of the investigation, the OIG identified issues in a contractor company's

work that resulted in avoidable power replacement costs related to the COF Unit 5 precipitator overhaul. Criminal activity was not found; however, we found avoidable and costly project delays by the contractor that were attributed to the following: (1) a flawed original structural design and lack of design analysis; (2) the impact of differing center-line points (construction point versus structural design point); and (3) damage to precipitator collector plates, requiring unscheduled straightening of 75 to 80 percent of the plates. TVA calculated the difference between the total cost of the unplanned outage extension due to these factors and the total cost to operate the unit as \$9,693,195. (TVA's Office of General Counsel [OGC] could not find grounds in the terms of the contract to allow TVA to recover from the contractor the identified

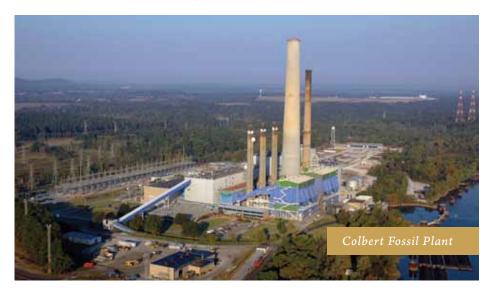
Clearance Requirements to Access TVA Critical Assets Revised

We determined Power Control System contractors, serving as system administrators, were working in critical TVA facilities and accessing critical TVA cyber assets even though TVA had only conducted a minimal inquiry into their backgrounds. We found three contractors serving in these positions without necessary clearances. They were restricted from the site until appropriate inquiries were completed.

All personnel with access to TVA critical assets will be required to obtain at least a TVA Critical Sensitive clearance. A team consisting of representatives from TVA Police and Physical Security, Human Resources, and Labor Relations is scheduled to develop an implementation timeline and communications plan to notify labor unions, management, and employees of this change. In addition, all TVA officers have been mapped to a required clearance level and investigations have been initiated and conducted for those who did not meet the required clearance level.

Nuclear Contractor Company Formalizes Checkout Process

A Watts Bar Nuclear Plant (WBN) Unit 2 contractor employee was terminated for sexual harassment early this year. Two months



cost.)



later, former coworkers were alarmed to find this person back on site, working for a different TVA contractor company. TVA Personnel Security had not been notified by the contractor's company to block the person's access to the site, although the company had documented internally the individual was not to be rehired. Subsequently, TVA had the individual removed from WBN, and Personnel Security denied this individual access to all TVA nuclear sites.

As a result of our involvement, including discussing the matter

with the contractor-company management, the company determined its checkout processes were inadequate and established formal guidelines for its WBN Unit 2 personnel. These processes, formally effected this reporting period, delineate checkout procedures and specifically reference TVA nuclear policy on proper reporting of suspensions, for-cause terminations, and voluntary or involuntary separations. In addition, the company required management training on these issues.

Investigators and Auditors Conduct Joint Review on Mineral Rights

The Senior Vice President, Fossil Generation Development and Construction (FGD&C), requested the OIG review the mineral rights leased to four coal corporations. TVA owns 773.6 million tons of coal in reserve in three states and has leased these rights to the four companies. In addition to mining the property for coal, the leased mineral rights allow TVA and/or the companies to build roads, construct power lines, or conduct other activities necessary to mine coal. Both OIG auditors and investigators participated in the review. Our objective was to determine if TVA received appropriate payments as outlined in the various leases and whether contract terms were being followed.

Our resulting report outlined the status of each contract with respect to coal being mined, whether payments were current, and the reclamation status of the various properties. The review found for three of the four leases the payments were current and in compliance with contract terms. One lease, because it had been reassigned, was not current; and, as a result of our report, FGD&C has met with the new leaseholders to bring the payments current. Other recommendations included establishing tracking and documentation methods, improving training, and ensuring ongoing communication between FGD&C business services and operations to account for, manage, and track the mineral leases.

Process Improvement Will Result in Savings to TVA

TVA management reported a nuclear manager received more than \$90,000 in reimbursements for travel to his official duty station during a three and a half year period. We found the individual's approving officer, who is no longer employed at TVA, had authorized travel reimbursement contrary to TVA policy from the individual's out-of-state residence to his TVA duty station. TVA management, Human Resources, and the OGC determined the individual will reimburse TVA the entire sum.

The OIG issued a report, and our recommendations were

implemented as follows.

Accounting Services established controls in the Expense
Reimbursement System to disallow reimbursement for travel to an employee's official duty station.

Additionally, Accounting Services is in the process of identifying other employees who may have received reimbursement for travel to their official stations before the new controls were in place and will review these reimbursements and notify the OIG as necessary.

Falsification of Benefit Plan Records Resulted in Employment Termination and Initiation of Process Improvements

Our investigation determined a nuclear employee listed his former wife as his spouse for benefit purposes on TVA documents when he first became employed in 2006, ten years after they divorced. In addition, he added two other persons – a live-in companion and her daughter - to his benefit plan in 2009, even though the couple was not married and the daughter was not related to him, making them ineligible for coverage. The employee stated he believed his ex-spouse was legitimately covered and his companion was covered, under the umbrella of common-law marriage.

As a result of our investigation, the individual's employment was terminated (prosecution declined), and Employee Benefits will review best practices for dependent verification and explore options for strengthening its existing process, including the audit process.

With the next revision of the medical plan description and open enrollment communications, Employee Benefits plans to add language that common-law spouses may be eligible for plan coverage if the employee resides in a state that recognizes common-law marriage.

Employee Reimbursed TVA for Improper Benefits Payments

It was brought to our attention a fossil plant employee listed a live-in companion and her children as dependents on an OWCP benefits request form. This allegation was substantiated, and we found the employee received a small payment for which he was ineligible as a result. Since the amount was low, OWCP did not pursue reimbursement, but uncovering the ineligible beneficiaries saved nine percent of any future salary-related payments the individual would have received.

During our inquiry, we researched the employee's other benefit plans (medical and dental) and discovered he had failed to remove his ex-wife as a beneficiary when they divorced in 2004 and she became ineligible to receive benefits. We found she improperly received \$2,672 in medical and dental payments as late as 2007.

As a result of our investigation, the individual paid full restitution to TVA. (Prosecution was declined.)

TVA OIG Helps U.S. Attorney's Office (USAO) Collect Court-Ordered Restitution

During a prior semiannual period, we reported two individuals were convicted of bank fraud, mail fraud, and money laundering related to misuse of loans obtained from TVA's Economic Development program and the Citizens Bank of Hickman, Kentucky. The two were sentenced to incarceration and jointly and severally ordered to pay restitution (\$420,733 to TVA and \$4,104,563 to Citizens Bank).

During this semiannual period, the USAO, Western District of Kentucky, requested our assistance to recover the court-ordered restitution. One of the individuals was believed to be hiding assets to prevent forfeiture by the USAO. Due to our assistance, the USAO has recovered a total of \$619,856 to-date from the individual and was able to obtain a \$900,000 judgment against a Missouri business the individual had concealed through an associate. The expected sale of forfeited assets is expected to bring an additional \$500,000 to \$1 million.



LEGISLATION & REGULATION & NAVIGATING Risk | TVA OIG



LEGISLATION & REGULATIONS

In fulfilling its responsibilities under the IG Act of 1978, as amended, the OIG follows and reviews existing and proposed legislation and regulations that relate to the mandate, operations and programs of TVA. Although TVA's OGC reviews proposed or enacted legislation that could affect TVA activities, the OIG independently follows and reviews proposed legislation that affects the OIG and/or relates to economy and efficiency or waste, fraud, and abuse of TVA programs or operations.

The TVA OIG has been tracking the following major pieces of legislation during the past six months:

HR 209 – REDUCING INFORMATION CONTROL DESIGNATIONS ACT

Representative Jackie Speier, D-CA, introduced this bill, which was referred to the Committee on Oversight and Government Reform. The purpose of the bill is to increase governmentwide information sharing and availability of information to the public by reducing and minimizing information control designations. It requires each agency to implement regulations promulgated by the Archivist. The bill further provides that the IG of each federal agency, in consultation with the Archivist, shall randomly audit unclassified information with information control designations for compliance with the applicable rules and regulations.

S 241 – NON-FEDERAL EMPLOYEE WHISTLEBLOWER PROTECTION ACT OF 2011

Senator Claire McCaskill, D-MO, introduced this bill, which repeals and replaces provisions prohibiting reprisals against employees of government contractors for disclosing to a federal official information relating to gross mismanagement, waste, danger to safety, abuse of authority, or violation of law related to an agency contract, subcontract or grant. The bill also provides the complainant access to the IG's investigative file. The bill has been referred to the Committee on Homeland Security and Government Affairs.

S 300 – GOVERNMENT CHARGE CARD ABUSE PREVENTION ACT OF 2011

This bill, introduced by Senator Chuck Grassley, R-IA, requires agencies to increase regulations and enforcement to safeguard government purchase card



expenditures. The bill also requires agency Inspectors General to:
(1) report to the Director of OMB semiannually on violations of this Act if the agency incurs more than \$10 million in purchase card or convenience check spending, and (2) conduct periodic assessments of purchase card or convenience check programs to identify and analyze risks of illegal, improper, or erroneous purchases and payments in order to develop a plan for periodic audits of card and check transactions.

S 413 – CYBERSECURITY AND INTERNET FREEDOM ACT OF 2011

Senator Joseph Lieberman, I-CT, introduced this bill which has had hearings held before the Committee on Homeland Security and Government Affairs. Among other things, the bill prohibits the government from turning off the Internet, establishes an Office of Cyberspace Policy to oversee and coordinate federal policies on Internet security and resiliency, establishes the National Center for Cybersecurity and

Communications (NCCC) within the DHS, establishes within the NCCC the United States Computer Emergency Readiness Team, and establishes in the executive branch a Federal Information Security Taskforce, which shall be the principal interagency forum for collaboration regarding best practices and recommendations for agency information security and the security of the federal information infrastructure. The bill requires each agency with an Inspector General appointed under the IG Act of 1978 to assess the

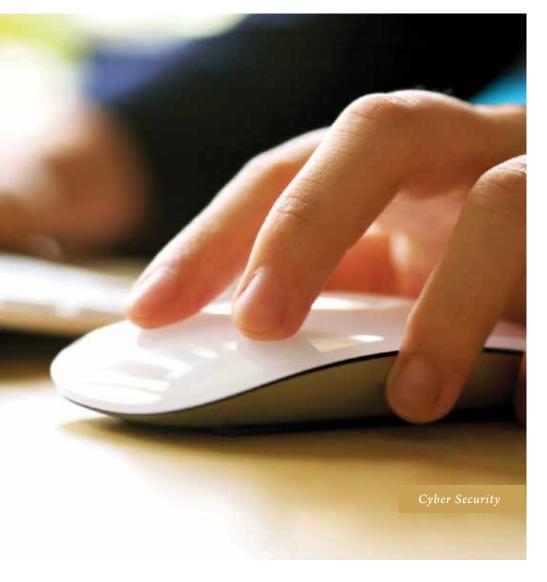
adequacy and effectiveness of the information security program and evaluations, those assessments to be performed in accordance with standards developed by the Government Accountability Office, in collaboration with CIGIE, with assistance from the Taskforce.

HR 1136 – EXECUTIVE CYBERSPACE COORDINATION ACT OF 2010

This bill, introduced by Representative James Langevin, D-RI, establishes a National Office of Cyberspace, with oversight responsibilities for information security policies and practices, including requiring each agency to perform an annual independent audit of the information security program and practices of that agency to determine the effectiveness of such program and practices. For each agency with an IG appointed under the IG Act of 1978 or any other law, the annual audit required by this bill shall be performed by the IG or by an independent external auditor, as determined by the IG of the agency.

S 717 – PUBLIC ONLINE INFORMATION ACT OF 2011 HR 1349 – PUBLIC ONLINE INFORMATION ACT OF 2011

These companion bills, introduced by Senator Jon Tester, D-MT, and Representative Steve Israel, D-NY, establish a Public Online Information Advisory Committee



to: (1) coordinate and encourage the government's efforts to make information from all three branches of government available on the Internet, and (2) issue and update nonbinding guidelines on how the government should make public information available. The bills also provide the IG of each agency will conduct periodic reviews regarding agency compliance with Internet publication requirements.

S 743 – WHISTLEBLOWER PROTECTION ENHANCEMENT ACT OF 2011

Senator Daniel Akaka, D-HI, introduced this bill to expand the types of disclosures that are protected whistleblower disclosures; and to amend the IG Act of 1978 to: (1) allow federal agency employees who intend to report a complaint or information with respect to an urgent concern to Congress to report such complaint or information to the Inspector General of their agency, and (2) provide for the appointment of a Whistleblower Protection Ombudsman in the OIG to educate agency personnel about whistleblower rights. This bill was returned to the Senate on October 19 for consideration by the Senate as a whole.



HR 1875 – BUILDING OUR CLEAN ENERGY FUTURE NOW ACT

Representative David Cicilline, D-RI, introduced this bill to provide grants for the use of clean fuel in public transportation vehicles, establish a program to provide federal employees with a fringe benefit for using public transit, and require that public utilities develop a plan to support plug-in hybrid and electric vehicles.

The public transit fringe benefit for federal employees requires that each agency conduct a review of the program the first year after its implementation and every three years thereafter. The review will contain information on the total number of employees of the agency participating in the

program, the number of single occupancy vehicles removed from the roadway, energy savings and emissions reductions, reduced congestion and improved air quality, and ways to increase participation in the program. The review will also contain a summary of any audits or investigations of the program conducted by the IG of the agency.

S 1030 – FREEDOM FROM RESTRICTIVE EXCESSION EXECUTIVE DEMANDS AND ONEROUS MANDATES ACT OF 2011

Introduced by Senator Olympia Snowe, R-ME, this bill requires federal agencies to periodically review agency rules which have a significant adverse economic impact on small entities (small



businesses, organizations, and governmental jurisdictions).
Compliance guidance provided to these small entities is also reviewed.
Such reviews are to be conducted every nine years.

Within six months of the date the review is to be completed, the agency IG will determine whether the review was done appropriately. The IG will notify the head of the agency as to whether the review was proper and whether there were any issues preventing the IG from making such a determination.

The agency will have six months to correct any deficiencies in the review. If the agency IG determines the deficiencies still exist after the agency has had six months to correct the review, the IG will notify Congress.

S 1212 – GEOLOCATIONAL PRIVACY AND SURVEILLANCE ACT

Under this bill introduced by Senator Ron Wyden, D-OR, intercepting the geolocation information of another person will be prohibited as a general rule. Examples of exceptions include emergency situations, prior consent and by warrant. Penalties for violations are included and persons whose geolocation information is improperly obtained or used may recover civil damages.

If a court or agency finds an agency employee may have willfully violated this act, the agency will review the situation to determine if disciplinary action against the employee is appropriate. If the agency decides not to take disciplinary action, the agency



head will notify the appropriate IG of the reasons underlying the decision.

S 1246 – ACT TO REDUCE THE NUMBER OF NON-ESSENTIAL NEW VEHICLES PURCHASED AND LEASED BY THE FEDERAL GOVERNMENT

Senator Tom Coburn, R-OK, introduced this bill which requires agencies to determine the number and cost of nontactical and civilian vehicles purchased or leased in 2010. Agency budgets for 2012

will then be reduced by 20 percent of the total 2010 cost for such vehicles. The money saved will be returned to the Treasury.

Agency Inspectors General will review the agency's system for monitoring the nonofficial use of government vehicles. Once the review is complete, the results will be reported to Congress.

HR 2340 – TRANSPARENCY IN GOVERNMENT ACT

Representative Mike Quigley, D-IL, introduced this bill. The primary purpose of the bill is to create more transparency in Congress. However, Section V amends the Federal Funding and Accountability Act (FFAA) of 2006, by requiring Inspectors General to periodically audit the data provided to the OMB Web site, www.usaspending.gov, which provides information about entities receiving federal funds.

S 1338 – REGULATOR CAPTURE ACT OF 2011

This bill, introduced by Senator Sheldon Whitehouse, D-RI, creates the Office of Regulatory Integrity within the OMB to be headed by an administrator.

The administrator is tasked with investigating the influence of concentrated economic interests on agencies which results in actions or regulations that do not advance the goals of the agency or cause the public to lose confidence in the agency regulatory process. The IG of an agency will be informed

when such an investigation is initiated and the Administrator may coordinate investigative efforts with the agency IG.

S 1409 – IMPROPER PAYMENT ELIMINATION AND RECOVERY ACT

Introduced by Senator Tom Carper, D-DE, this bill seeks to strengthen last year's Act of the same name and attempts to identify, reduce and recover payments made by the federal government in error or because of fraud. The bill tasks the Director of OMB to identify federal spending that is highly susceptible to improper payments. Such a list will be created annually. The director will also coordinate with the heads of agencies to set targets and take actions to reduce improper payments.

Under this bill, each agency will report any high dollar improper payments to that agency's IG on a quarterly basis. Such reports will also be made public minus any referrals to the Department of Justice. Upon receiving the report, the IG will assess the quality of the improper payment estimate, determine the level of risk associated with the program, review the adequacy of internal controls, and make recommendations to improve the program.



APPENDICES NAVIGATING Risk | TVA OIG



INDEX OF REPORTING REQUIREMENTS UNDER THE INSPECTOR GENERAL ACT

| REPORTING | REQUIREMENT | PAGE |
|--------------------------------|---|------------|
| Section 4(a)(2) | Review of Legislation and Regulations | 51-55 |
| Section 5(a)(1) | Significant Problems, Abuses, and Deficiencies | 27-49 |
| Section 5(a)(2) | Recommendations With Respect to Significant Problems, Abuses, and Deficiencies | 27-49 |
| Section 5(a)(3) | Recommendations Described in Previous Semiannual Reports in 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 Inspection Reports | Appendix 2 |
| Section 5(a)(7) | Summary of Particularly Significant Reports | 27-49 |
| Section 5(a)(8) | Status of Management Decisions for Audit and Inspection Reports Containing Questioned Costs | Appendix 3 |
| Section 5(a)(9) | Status of Management Decisions for Audit and Inspection Reports Containing Recommendations That Funds Be Put to Better Use | Appendix 3 |
| Section 5(a)(10) | Summary of Audit and Inspection Reports Issued Prior to the Beginning of the Reporting Period for Which No Management Decision Has Been Made | 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 | None |
| Section 5(a)(14) | Appendix of 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 8 |
| 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 |
| Section 5(a)(16) | List of 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 implemented. | None |

OIG AUDIT REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED SEPT. 30, 2011

| Report Number and Date | Title | Questioned Costs | Unsupported Costs | Funds Put To Better Use |
|--------------------------|---|---------------------|----------------------|----------------------------|
| CONTRACT A | UDITS | | | |
| 2011-13741 05/24/2011 | Proposal for Perimeter Stabilization Project | \$0 | \$0 | \$1,162,132 |
| 2010-13466 05/31/2011 | Review of Supply Chain's Controls Over Contract Documents | 0 | \$0 | \$0 |
| 2010-13104 06/02/2011 | Pressures On, Inc. | \$686,466 | \$300,290 | \$0 |
| 2011-13918 09/14/2011 | Proposal for Hydro Modernization Alliance | \$0 | \$0 | \$3,569,000 |
| 2010-13678 09/15/2011 | Williams Specialty Services - Subcontractor to Bechtel Power Corporation | \$640,420 | \$640,420 | \$0 |
| 2011-14104 09/30/2011 | Proposal to Provide Quality Control Services | \$0 | \$0 | \$213,900 |
| DISTRIBUTOR | RAUDITS | | | |
| 2010-13284 04/06/2011 | Distributor Audit of Florence Utilities | \$0 | \$0 | \$0 |
| 2010-13286 07/06/2011 | Distributor Audit of Warren Rural Electric Cooperative Corporation | \$0 | \$0 | \$ |
| 2010-13661 07/07/2011 | Distributor Audit of Sevier County Electric System | \$0 | \$0 | \$ |
| 2009-12595 07/14/2011 | Distributor Audit of City of Oak Ridge | \$0 | \$0 | \$ |
| 2010-13660 09/28/2011 | Distributor Audit of BVU Authority | \$0 | \$0 | \$ |
| FINANCIAL A | ND OPERATIONAL AUDITS | | | |
| 2009-12763 05/04/2011 | Review of Fossil Fuel Inventory | \$0 | \$0 | \$ |
| 2010-13013 05/16/2011 | Audit of TVA Tritium Program Under DOE/TVA Interagency Agreement | \$0 | \$0 | \$ |
| 2011-13891 06/01/2011 | Performance of Agreed Upon Procedures for CRS Green E-Energy Program Reporting Year 2010 | \$0 | \$0 | \$ |
| 2010-13280 07/11/2011 | Review of the Effectiveness of TVA's Transmission Line Maintenance Program | \$0 | \$0 | \$0 |
| INFORMATIO | N TECHNOLOGY AUDITS | | | |
| 2010-13366 04/05/2011 | Audit of Information Technology Organizational Effectiveness | \$0 | \$0 | \$0 |
| 2010-13570 06/01/2011 | Review of the Core Switch Replacement Project | \$0 | \$0 | \$ |
| 2010-13132 06/15/2011 | Review of Physical and Logical Access for Contractors | \$0 | \$0 | \$ |
| 2011-13828 06/30/2011 | Audit of Information Technology General Controls - Program Development | \$0 | \$0 | \$ |
| 2011-13818 07/14/2011 | Audit of Information Technology General Controls - Access to Programs and Data | \$0 | \$0 | \$ |
| 2011-13820 07/14/2011 | Audit of Information Technology General Controls - Configuration Management | \$0 | \$0 | \$ |
| 2011-13826 07/18/2011 | Audit of Information Technology General Controls - Computer Operations | \$0 | \$0 | \$ |

OIG AUDIT REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED SEPT. 30, 2011 (Continued)

| Report Number and Date | Title | Questioned Costs | Unsupported Costs | Funds Put To Better Use |
|--------------------------|--|---------------------|----------------------|----------------------------|
| 2011-13944 07/20/2011 | Audit of General Controls for Proposed System Replacement | \$0 | \$0 | \$0 |
| 2011-13819 07/21/2011 | Audit of Information Technology General Controls - Program Changes | \$0 | \$0 | \$0 |
| 2010-13128 07/28/2011 | Pre-Implementation Review of the PowerPlant System | \$0 | \$0 | \$0 |
| 2011-13995 09/07/2011 | Review of Internet Facing Firewalls | \$0 | \$0 | \$0 |
| TOTAL AUDITS (26) | | \$1,326,886 | \$940,710 | \$4,945,032 |

OIG INSPECTION REPORTS • ISSUED DURING THE SIX-MONTH PERIOD ENDED SEPT. 30, 2011

| Report Number and Date | Title | Questioned Costs | Unsupported Costs | Funds Put To Better Use |
|-----------------------------|---|---------------------|----------------------|----------------------------|
| 2009-12991 06/21/2011 | Review of TVA's Groundwater Monitoring at Coal Combustion Products Disposal Areas | \$0 | \$0 | \$0 |
| 2009-12910-03 06/27/2011 | Peer Review of the Stability Analysis of Ash Disposal Areas 2 and 3 at the Johnsonville Fossil Plant | \$0 | \$0 | \$0 |
| 2009-12910-04 06/27/2011 | Peer Review of the Stability Analysis of the Gypsum Stack at the Widows Creek Fossil Plant | \$0 | \$0 | \$0 |
| 2009-12910-05 06/27/2011 | Peer Review of Johnsonville Fossil Plant Dike Stability Improvements | \$0 | \$0 | \$0 |
| 2008-12283-07 06/30/2011 | Review of the Environmental Sampling and Monitoring Plans for the Kingston Ash Spill | \$0 | \$0 | \$0 |
| 2010-13407 09/07/2011 | Section 26a Process Review | \$0 | \$0 | \$0 |
| 2009-12943 09/29/2011 | TVA's Plan for Removal of Polychlorinated Biphenyl Equipment | \$0 | \$0 | \$0 |
| 2010-13530 09/30/2011 | Review of TVA's Fossil Fire Protection Systems | \$0 | \$0 | \$0 |
| TOTAL INSPECTIONS (8) | | \$0 | \$0 | \$0 |

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

TABLE I \cdot TOTAL QUESTIONED AND UNSUPPORTED COSTS \cdot 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 | \$1,326,886 | \$940,710 |
| Subtotal (A+B) | 2 | \$1,326,886 | \$940,710 |
| C. For which a management decision was made during the reporting period | 11 | \$686,466 | \$300,290 |
| 1. Dollar value of disallowed costs | 1 | \$655,177 | \$274,277 |
| 2. Dollar value of costs not disallowed | 1 | \$31,289 | \$26,013 |
| D. For which no management decision has been made by the end of the reporting period | 1 | \$640,420 | \$640,420 |
| E. For which no management decision was made within six months of issuance | 0 | \$0 | \$0 |

¹The total number of reports for which a management decision was made during the reporting 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.

TABLE I • TOTAL QUESTIONED AND UNSUPPORTED COSTS • INSPECTIONS

| Inspection 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 |
| E. For which no management decision was made within six months of issuance | 0 | \$0 | \$0 |

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

| Audit Reports | Number of Reports | Funds To Be Put To Better Use |
|--|----------------------|-------------------------------------|
| A. For which no management decision has been made by the commencement of the period | 2 | \$18,843,000 |
| B. Which were issued during the reporting period | 3 | \$4,945,032 |
| Subtotal (A+B) | 5 | \$23,788,032 |
| C. For which a management decision was made during the reporting period | 3 | \$20,005,132 |
| 1. Dollar value of recommendations agreed to by management | 3 | \$20,005,132 |
| 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 | 2 | \$3,782,900 |
| E. For which no management decision was made within six months of issuance | 0 | \$0 |

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

| Inspection 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 |
| E. For which no management decision was made within six months of issuance | 0 | \$0 |
| | | |

AUDIT AND INSPECTION REPORTS WITH CORRECTIVE ACTIONS PENDING

As of the end of the semiannual period, final corrective actions associated with seven audits and four inspections were not completed within twelve months of the final report date. Presented below for each audit and inspection are the report number and date and a brief description of the open recommendations and date management expects to complete final action.

| Audit Report Number and Date | Report Title and Recommendation(s) for which Final Action is Not Complete |
|---------------------------------|--|
| 2007-11216 06/02/2008 | Review of TVA Actions to Protect Social Security Numbers and Eliminate Their Unnecessary Use TVA agreed to implement protective measures for applications and reports containing social security numbers, such as restricting access and logging downloads. Management expects final action to be completed by October 31, 2011. |
| 2007-11388 08/21/2008 | Sequoyah Nuclear Plant – Cyber Security Assessment TVA agreed to conduct risk assessments on the use of identified third-party applications and evaluate the elimination of clear text protocols where technically feasible. Management expects final action to be completed by August 30, 2012. |
| 2008-12127 09/24/2009 | Hydroelectric Plant Automation – General, Physical, and Security Controls Review TVA agreed to implement the new access control system at all sites and further restrict access to key components. Management expects final action to be completed by June 1, 2013. |
| 2009-12697 01/25/2010 | Federal Information Security Management Act Evaluation TVA agreed to improve reporting, monitoring, and remediate security weaknesses, as well as improve efforts to meet remediation due dates. Management expects final action to be completed by December 31, 2011. |
| 2009-12650 05/19/2010 | Use and Protection of Personally Identifiable Information (PII) TVA agreed to improve the privacy program by (1) logging changes of PII data, (2) deploying encryption and controls over PII data, (3) reducing the use of social security numbers, (4) improving tracking of PII systems, (5) defining security officer responsibilities, (6) defining and monitoring proper use of temporary and open shares, and (7) updating the privacy assessment process. Management expects final action to be completed by September 30, 2012. |
| 2009-12510 08/10/2010 | Distributor Audit of Scottsboro Electric Power Board (Scottsboro) TVA agreed to work with Scottsboro and address all recommendations, including recovery of a customer's demand charges. Additionally, Scottsboro agreed to (1) create an internal loan document, (2) allocate operational and maintenance costs and (3) allocate large expenses between the electric and cable systems. Final action is expected to be completed by December 31, 2011. |
| 2010-13162-01 09/08/2010 | Audit of Process Improvements to Manage the Physical Environment TVA management agreed to evaluate options for replacement of the HALON fire suppression system and develop an implementation plan. Management expects final action to be completed by July 31, 2012. |

AUDIT AND INSPECTION REPORTS WITH CORRECTIVE ACTIONS PENDING (CONTINUED)

| Inspection Report Number and Date | Report Title and Recommendation(s) for which Final Action is Not Complete |
|--------------------------------------|---|
| 2005-518I 08/31/2005 | Review of Physical and Environmental Controls for the Chattanooga Data Center TVA agreed to replace the Chattanooga office complex telephone system with a system operating on the Internet Protocol to eliminate three specific failure modes which could hamper or eliminate TVA's communication ability. Implementation of the new communication system has been delayed by management due to what is considered higher priority projects. Management is targeting final action to be completed by December 31, 2012. |
| 2008-12007 05/13/2009 | Distributor Review of Monroe County Electric Power Authority TVA agreed to (1) consider feasibility of a comprehensive guideline for permissible expenditures, (2) recommend to the Board that additional financial metrics, including when cash reserves become excessive, be implemented in the rate setting process. Management expects final action to be completed by November 30, 2011. |
| 2008-12040 05/13/2009 | Distributor Review of Lewisburg Electric System TVA agreed to (1) consider feasibility of a comprehensive guideline for permissible expenditures, and (2) recommend to the Board that additional financial metrics, including when cash reserves become excessive, be implemented in the rate setting process. Management expects final action to be completed by November 30, 2011. |
| 2008-11829 06/02/2010 | Review of TVA Records Retention TVA agreed to continue current plans to replace EDMS and implement further cleanup initiatives when feasible. Management expects final action to be completed by December 31, 2013. |

INVESTIGATIVE REFERRALS AND PROSECUTIVE RESULTS¹

| 22 |
|----|
| 3 |
| |
| 6 |
| 5 |
| 1 |
| 14 |
| |

¹These numbers include task force activities and joint investigations with other agencies.

HIGHLIGHTS – STATISTICS

| | SEPT 30, 2011 | MAR 31, 2011 | SEPT 30, 2010 | MAR 31, 2010 | SEPT 30 2009 |
|--|------------------|---------------------|------------------|--------------------|-----------------|
| AUDITS | 2011 | 2011 | 2010 | 2010 | 2009 |
| AUDIT STATISTICS | | | | | _ |
| Carried Forward | 46 | 40 | 60 | 44 | 70 |
| Started | 16 | 29 | 28 | 46 | 46 |
| Canceled | (2) | (3) | (7) | (4) | (6) |
| Completed | (26) | (20) | (41) | (26) | (66) |
| In Progress at End of Reporting Period | 34 | 46 | 40 | 60 | 44 |
| AUDIT RESULTS (Thousands) | | | | | |
| Questioned Costs | \$1,327 | \$4,846 | \$2,713 | \$980 | \$6,744 |
| Disallowed by TVA | \$655 | 1,303 | 1,879 | 2,255 | 2,799 |
| Recovered by TVA | \$326 | 763 | 1,9211 | 2,655 ² | 909 |
| Funds To Be Put To Better Use | \$4,945 | \$24,963 | \$13,696 | \$9,703 | \$50,570 |
| Agreed to by TVA | \$20,005 | 7,450 | 149 | 8,853 | 4,723 |
| Realized by TVA | \$1,162 | 12,750 ³ | 2,091 | 480 | 4,395 |
| OTHER AUDIT-RELATED PROJECTS | | | | | |
| Completed | 19 | 13 | 27 | 10 | 16 |
| Cost Savings Identified/Realized (Thousands) | \$0 | \$0 | \$0 | \$0 | \$0 |
| Cost Savings Identified/Realized (Tilousands) | 30 | 3 0 | 30 | \$ 0 | \$(|
| INSPECTIONS | | | | | |
| Completed | 8 | 3 | 9 | 2 | 2 |
| Cost Savings Identified/Realized (Thousands) | \$0 | \$0 | \$0 | \$0 | \$0 |
| INVESTIGATIONS ⁴ | | | | | |
| INVESTIGATION CASELOAD | | | | | |
| Opened | 190 | 190 | 199 | 168 | 194 |
| Closed | 228 | 161 | 221 | 198 | 223 |
| In Progress at End of Reporting Period | 163 | 199 | 167 | 189 | 25 |
| INVESTIGATIVE RESULTS (Thousands) | | | | | |
| Recoveries | \$8 | \$2,144 | \$36.2 | \$41.8 | \$20.0 |
| Savings | 0 | 2,515 | 4,028 | 0 | 472. |
| Fines/Penalties | 1 | 453 | 8 ⁵ | 5.9 | ي. م |
| Other Monetary Loss | \$9,693 6 | | | | |
| MANAGEMENT ACTIONS | | | | | |
| Disciplinary Actions Taken (# of Subjects) | 23 | 7 | 14 | 7 | (|
| Counseling/Management Techniques Employed (# of Cases) | 18 | 24 | 31 | 25 | 10 |
| Debarment | 0 | 17 | | | |
| PROSECUTIVE ACTIVITIES (# of Subjects) | | | | | |
| Referred to U.S. Attorneys | 22 | 22 | 51 | 16 | 4: |
| Referred to State/Local Authorities | 3 | 1 | 2 | 2 | 4. |
| Indicted | 6 | 1 | 7 | 4 | 3 |
| Convicted | 5 | 1 | 8 | 3 | 3 |
| Pretrial Diversion | 1 | 0 | 1 | 2 | (|

 $^{^{\}rm 1}$ Adjusted to correct amount reported in prior semiannual reports. $^{\rm 2}$ Ibid.

 $^{^{\}scriptscriptstyle 3}$ Includes \$304,036 savings realized in excess of amounts identified in the audits.

⁴ These numbers include task force activities and joint investigations with other agencies.

⁵ Adjusted to correct amount reported in prior semiannual reports.

⁶ Category added in semiannual period ended September 30, 2011.
⁷ Category added in semiannual period ended March 31, 2011.



APPENDIX 7

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, OIG issued no contract review reports under this requirement.

PEER REVIEWS OF THE TVA OIG

Audits Peer Review

IG 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* (Yellow Book). Federal audit organizations can receive a rating of pass, pass with deficiencies, or fail. TVA OIG was the subject of a peer review of its audit organization in the prior semiannual period. The review was performed by an ad hoc team appointed by CIGIE and led by the U.S. Department of Education (Education) OIG. Education OIG issued the report, dated March 21, 2011, in which it concluded that the TVA OIG audit organization's system of quality control for the year ended September 30, 2010, was suitably designed and complied with to provide the OIG with reasonable assurance of performing and reporting in conformity with applicable professional standards in all material respects. Accordingly, TVA OIG received a rating of pass. The peer review report is posted on our Web site at http://oig.tva.gov/peer-review.html.

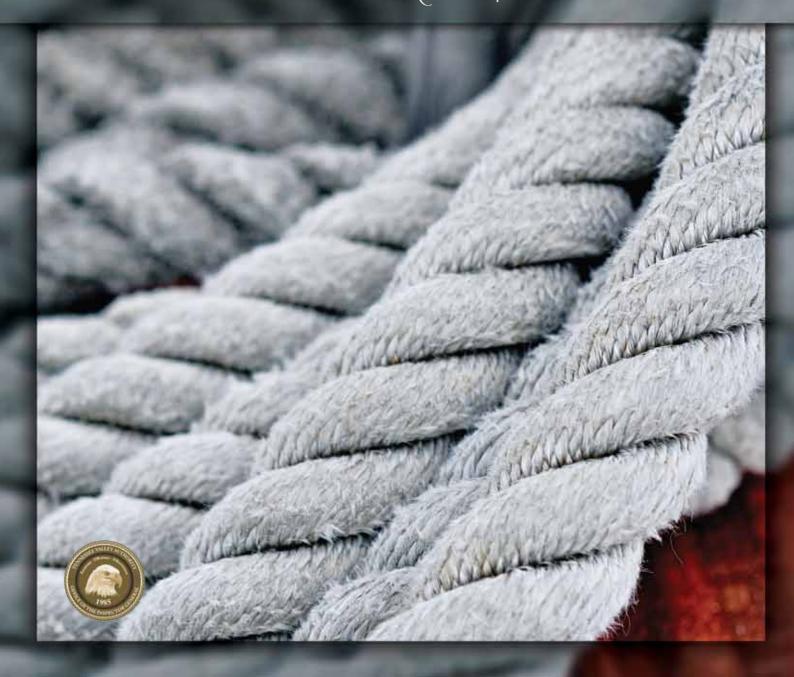
Investigations Peer Review

Investigative operations undergo an external peer review, Quality Assessment Review (QAR), at least once every three years. During the prior semiannual period, the Office of Personnel Management (OPM) OIG conducted a QAR of the TVA OIG Investigative Operations. The OPM OIG found the "...system of internal safeguards and management procedures for the investigative function of the TVA OIG in effect for the year ending August 1, 2010, is in compliance with the Quality Standards for Investigations and the Attorney General guidelines. These safeguards and procedures provide reasonable assurance of conforming with professional standards in the conduct of investigations." The QAR report can be found on our Web site at http://oig.tva.gov/peer-review.html.





GLOSSARY, ABBREVIATIONS & A C R O N Y M S NAVIGATING Risk | TVA OIG



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.

Management Decision - The 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 Costs - A cost that is questioned because of the lack of adequate documentation at the time of the audit.

The following are acronyms and abbreviations widely used in this report.

| CEO |
|---|
| COF |
| COSO |
| CRS Center for Resource Solutions Dam Safety Dam Safety Organization DHS U.S. Department of Homeland Security DOE Department of Energy Education U.S. Department of Education EIS&P Enterprise Information Security and Policy ERM Enterprise Risk Management FBI Federal Bureau of Investigation FFAA Federal Funding and Accountability Act FGD&C Fossil Generation Development and Construction FY Fiscal Year IG Inspector General IT Information Technology JCC John Sevier Combined Cycle Kingston Report Review of Kingston Fossil Plant Ash Spill Root Cause Study and Observations About Ash Management Marshall Miller Review of Kingston Fossil Plant Ash Spill Root Cause Study and Observations About Ash Management Marshall Miller Marshall Miller & Associates, Inc. NCCC National Center for Cybersecurity and Communications NPG Nuclear Power Group NRO National Reconnaissance Office OGC Office of the General Counsel OIG Office of the Inspector General OMB Office of Personnel Management ORNL Oak Ridge National Laboratory |
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| OWCP |
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| QAR |
| ROW |
| SAR Semiannual Report |
| Stantec Stantec Consulting Services, Inc. |
| TVA |
| USAO |
| USWAG |
| WBN |



OFFICE of the INSPECTOR GENERAL

400 West Summit Hill Drive Knoxville, Tennessee 37902

The OIG is an independent organization charged with conducting audits, inspections, 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 as well as 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 is administered by a third-party contractor and 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). You may report your concerns anonymously or you may request confidentiality.

Report concerns to the OIG Empowerline





The TVA OIG strives to be a high performing organization made up of dedicated individuals who are empowered, motivated, competent, and committed to producing high quality work that improves TVA and life in the Valley.

Each of us has important leadership, management, team, and technical roles. We value integrity, people, open communication, expansion of knowledge and skills, creative problem solving and collaborative decision making.

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