



Memorandum from the Office of the Inspector General

June 7, 2024

James R. Dalrymple

REQUEST FOR FINAL ACTION – AUDIT 2023-17426 – TVA FIXED-WING AIRCRAFT USAGE

Attached is the subject final report for your review and final action. Your written comments, which addressed your management decision and actions planned or taken, have been included in the report. Please notify us when final action is complete. In accordance with the Inspector General Act of 1978, as amended, the Office of the Inspector General is required to report to Congress semiannually regarding audits that remain unresolved after 6 months from the date of report issuance.

If you have any questions, please contact Michael C. Cook, Senior Auditor, at (865) 633-7365 or Rick C. Underwood, Director, Financial and Operational Audits, at (423) 785-4824. We appreciate the courtesy and cooperation received from your staff during the audit.

A handwritten signature in black ink that reads "David P. Wheeler".

David P. Wheeler  
Assistant Inspector General  
(Audits and Evaluations)

MCC:KDS

Attachment

cc (Attachment):

TVA Board of Directors  
Janda E. Brown  
Samuel P. Delk  
Buddy Eller  
David B. Fountain  
Philip C. Kanagy  
Jeffrey J. Lyash

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OIG File No. 2023-17426



Office of the Inspector General

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# *Audit Report*

To the Senior Vice President,  
Resource Management and  
Operations Services

# **TVA FIXED-WING AIRCRAFT USAGE**

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Audit Team  
Michael C. Cook  
Ala H. McAfee

Audit 2023-17426  
June 7, 2024

## **ABBREVIATIONS**

CEO	Chief Executive Officer
CFR	Code of Federal Regulations
CNO	Chief Nuclear Officer
COO	Chief Operating Officer
FAIRS	Federal Aviation Interactive Reporting System
FTR	Federal Travel Regulation
FWA	Fixed-Wing Aircraft
GSA	General Services Administration
OGC	Office of General Counsel
SFTR	Senior Federal Travel Reporting
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority
TVA Board	TVA Board of Directors

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## Audit 2023-17426 – TVA Fixed-Wing Aircraft Usage

### EXECUTIVE SUMMARY

#### Why the OIG Did This Audit

The Tennessee Valley Authority (TVA) has two fixed-wing aircraft (FWA)<sup>i</sup> that are to be used for mission-related transportation and business travel. According to TVA Standard Programs and Processes 32.041, *Use of TVA Fixed Wing Aircraft*, its FWA are to be used in support of TVA's mission and congressionally mandated programs, in alignment with TVA Board Practice,<sup>ii</sup> the Federal Travel Regulation, and other pertinent regulatory governance.

In 2018, we performed an audit of TVA's FWA and found TVA was not complying with various federal regulations and TVA policies and procedures regarding the use of its FWA.<sup>iii</sup> Due to the high number of issues found during our previous audit, we performed this follow-up audit to determine if TVA is complying with applicable laws and regulations and TVA policies and procedures regarding the use of its FWA. Our audit scope included all flight legs<sup>iv</sup> by TVA's FWA between January 1, 2021, and January 31, 2023.

#### What the OIG Found

We determined TVA was not in compliance with federal regulations related to (1) performing cost comparisons, (2) obtaining management authorizations to fly, and (3) reporting appropriate flight data to the General Services Administration. Additionally, TVA was not in compliance with its policies and procedures regarding (1) approving exceptions to flight restrictions, (2) documenting flight authorizations and business justifications, (3) providing timely flight approvals, and (4) performing semi-annual audits. In addition, we noted a lack of clarity in TVA policies and procedures regarding required use travel.

<sup>i</sup> TVA's FWA include two Cessna Citation XLS+ jets.

<sup>ii</sup> The TVA Board Practice, *Use of TVA Aircraft*, sets forth general guidelines for use of TVA aircraft by members of the TVA Board of Directors, executives, and employees. The TVA Board Practice provides authorization to individual directors, the CEO, senior executives who report directly to the CEO, and their direct reports to conduct travel for business purposes on all TVA aircraft between their official duty locations or a nearer location and temporary duty locations.

<sup>iii</sup> Audit 2017-15470, *TVA's Fixed-Wing Aircraft*, March 29, 2018

<sup>iv</sup> A flight leg represents a single flight between one origin and one destination. For example, Knoxville to Chattanooga would be a single flight leg, while Knoxville to Chattanooga to Memphis and back to Knoxville would represent three separate flight legs.



## Audit 2023-17426 – TVA Fixed-Wing Aircraft Usage

### EXECUTIVE SUMMARY

#### What the OIG Recommends

We made twelve recommendations to TVA management to (1) improve compliance with federal regulations, (2) improve compliance with TVA policies and procedures, and (3) clarify TVA's guidance on required use travel.

#### TVA Management's Comments

In response to our draft report, TVA provided actions they plan to take to address each of our recommendations. See Appendix B for TVA management's complete response.

#### Auditor's Response

We agree with TVA management's planned actions.

## **BACKGROUND**

The Tennessee Valley Authority (TVA) has two fixed-wing aircraft (FWA)<sup>1</sup> that are to be used for mission-related transportation and business travel. According to TVA Standard Programs and Processes (SPP) 32.041, *Use of TVA Fixed Wing Aircraft*, TVA's FWA are to be used in support of TVA's mission and congressionally mandated programs, in alignment with TVA Board Practice,<sup>2</sup> the Federal Travel Regulation (FTR), and other pertinent regulatory governance.

### **Applicable Laws and Regulations**

FTR, Title 41, Code of Federal Regulations (CFR), Chapters 300 through 304 (41 CFR §§ 300-1.1 – 304-9.7), implements statutory requirements and executive branch policies for travel by federal civilian employees and others authorized to travel at government expense. 41 CFR § 301–10.261 states:

You may use government aircraft–

- For official travel only when (1) no scheduled commercial airline service is reasonably available (i.e., able to meet your departure and/or arrival requirements within a 24-hour period, unless you demonstrate that extraordinary circumstances require a shorter period) to fulfill your agency's travel requirement; or (2) the cost of using a Government aircraft is less than the cost of city-pair<sup>3</sup> fare for scheduled commercial airline service or the cost of the lowest available full coach fare if a city-pair fare is not available.
- For required use travel only when you are required to use Government aircraft for bona fide communications (e.g., 24-hour secure communications), security reasons (e.g., highly unusual circumstances that present a clear and present danger), or exceptional scheduling requirements (e.g., a national emergency or other compelling operational considerations).

41 CFR § 301–10.262 allows the TVA Board of Directors (TVA Board), as the agency head, to determine that all travel by certain employees or travel in specified categories qualifies as required use travel. Such written explanation must state the specific basis for the determination.

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<sup>1</sup> TVA's FWA include two Cessna Citation XLS+ jets.

<sup>2</sup> The TVA Board Practice, *Use of TVA Aircraft*, sets forth general guidelines for use of TVA aircraft by members of the TVA Board, executives, and employees. The TVA Board Practice provides authorization to individual Directors, the chief executive officer (CEO), senior executives who report directly to the CEO, and their direct reports to conduct travel for business purposes on all TVA aircraft between their official duty locations or a nearer location and temporary duty locations.

<sup>3</sup> The City Pair Program procures and manages discounted air passenger transportation services for federal government travelers.

TVA also submits information to the General Services Administration (GSA) under the following federal regulations:

- 41 CFR §§ 102–33.380 – 33.390 requires an executive agency who owns government aircraft to report cost and utilization data on federal aircraft to GSA through the Federal Aviation Interactive Reporting System (FAIRS). FAIRS is a management information system operated by GSA to collect, maintain, analyze, and report information on federal aircraft inventories, cost, and usage of federal aircraft. In addition, 41 CFR § 102–33.405 requires agencies submit cost and utilization data through FAIRS at the end of every quarter of the fiscal year.
- 41 CFR §§ 301-70.906 - 70.907 requires agencies report to GSA information about senior federal officials and nonfederal travelers who fly aboard a government aircraft using the GSA Senior Federal Travel Reporting (SFTR) tool on a semi-annual basis.

### **Applicable Policies and Procedures**

TVA Board Practice, *Use of TVA Aircraft*, sets forth general guidelines for use of TVA aircraft by members of the TVA Board, executives, and employees. In this guidance, the TVA Board authorizes individual directors, the CEO, senior executives who report directly to the CEO, and their direct reports to conduct travel for business purposes on all TVA aircraft between their official duty locations or a nearer location and temporary duty locations. The TVA Board Practice “recognizes that the use of TVA aircraft for travel may be required because of a need to communicate in a secure setting while traveling, or to satisfy scheduling requirements dictated by short-notice travel, multiple destinations, or limited available time, which makes commercial transportation unacceptable.”

The TVA Board Practice also gives the CEO, or an executive designated by the CEO, the authority to “ensure processes and procedures are in place to govern the use of TVA aircraft for travel and other purposes.” TVA has established TVA-SPP-32.041, *Use of TVA Fixed Wing Aircraft*, and TVA-SPP-32.040, *Use of TVA Aviation Assets*, which incorporate the TVA Board Practice, FTR requirements such as required use, and additional guidance for TVA FWA usage.

According to both TVA FWA SPPs, TVA’s Aviation Services is responsible for (1) overseeing the planning, organizing, and direction of the FWA and (2) ensuring flights are scheduled economically. Aviation Services utilizes the Professional Flight Management system for scheduling flights and creates trip packets that consist of required documentation and support for each flight (See Figure 1 on the following page). The general manager, Aviation Services, is responsible for ensuring required documentation is completed prior to the flight. This information is later compiled into a trip packet maintained by Aviation Services. One of the required elements of a trip packet are travel authorizations, which according to TVA FWA SPPs are “written permission to travel on official business” and are required on a trip-by-trip basis for individuals not preauthorized by the TVA Board Practice.



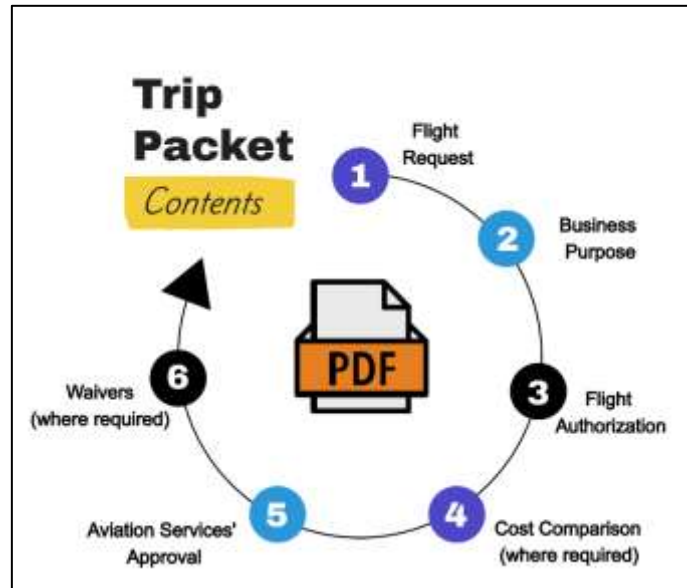


Figure 1

The TVA FWA SPPs define three primary types of travel:

- Required Use – When commercial travel does not meet business needs due to exceptional scheduling requirements (short-notice travel, multiple destinations, or limited available time), or privacy concerns (need to communicate in a secure setting while traveling).
- Ordinary Official – Air travel conducted because it is needed for business purposes and is the most cost-effective means of conducting travel.
- Space Available – Travel in space available on a government aircraft that is already scheduled for an official purpose.

When required by the TVA FWA SPPs for certain travel, Aviation Services should perform economic justifications for using TVA's FWA utilizing the cost comparison tool developed by Aviation Services. The tool considers the hourly cost to operate the FWA, crew and passenger travel costs such as per diem rates, and the cost of any lost production time<sup>4</sup> of the employee. Aviation Services considers time on board TVA's FWA as productive work time and time on board commercial air travel as lost work time. The TVA FWA trip costs should then be compared to a commercial trip's total cost to determine if the flight is economically justified. Additionally, TVA-SPP-32.040 requires semi-annual audits of the policy and compliance with associated regulations be performed by Aviation Services in conjunction with Financial Services and the Office of General Counsel (OGC).

<sup>4</sup> Lost production time is based on a tiered hourly rate based on the passenger's position at TVA. Aviation Services receives the tiered hourly rates from TVA Financial Services.

Travelers preauthorized by the TVA Board Practice to use the FWA are broken into two tiers in TVA FWA SPPs and have different requirements for using the FWA.

- Tier 1 passengers include TVA Board members, the CEO, and senior executives reporting directly to the CEO. Tier 1 passengers are not required to provide economic justification for required use travel when using the FWA.
- Tier 2 passengers include TVA leadership positions that report to executives who report directly to the CEO. Economic justifications (i.e., cost comparisons) are required for Tier 2 passengers unless they are flying with a Tier 1 passenger.

Both Tier 1 and Tier 2 personnel can authorize other personnel to travel on the FWA.

### **Internal Control**

Flight approvals of the aircraft requests prior to flights is a control that we determined to be significant to the audit objective. The approval process is designed to ensure TVA's FWA is used for mission related transportation and business travel in support of TVA's mission and congressional mandated programs, in alignment with the TVA Board Practice, the FTR, and other pertinent regulatory governance. According to Aviation Services personnel, the general manager of Aviation Services and the FWA manager are required to approve each trip and provide flight request approval. Specifically, TVA FWA SPPs require Aviation Services to review authorizations, business justifications, and verify flights are scheduled economically to ensure cost effective operations. Additionally, according to TVA-SPP-32.040, the Senior Vice President of Resource Management and Operations Services is responsible for performing executive review of all federal travel-related flight requests.

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

In 2018, we performed an audit of TVA's FWA and found TVA was not complying with various federal regulations and TVA policies and procedures regarding the use of the FWA.<sup>5</sup> In response to that audit, TVA revised its policies and procedures and implemented controls to better manage the use of the FWA. Due to the high number of issues found during our previous audit, we performed this follow-up audit to determine if TVA is complying with applicable laws and regulations and TVA policies and procedures regarding the use of its FWA. Our audit scope included all 1,230 flight legs by TVA's FWA between January 1, 2021, and January 31, 2023.<sup>6</sup> A complete discussion of our audit objective, scope, and methodology is included in the Appendix.

<sup>5</sup> Audit 2017-15470, *TVA's Fixed-Wing Aircraft*, March 29, 2018

<sup>6</sup> A flight leg represents a single flight between one origin and one destination. For example, Knoxville to Chattanooga would be a single flight leg, while Knoxville to Chattanooga to Memphis and back to Knoxville would represent three separate flight legs.

## **FINDINGS AND RECOMMENDATIONS**

We determined TVA was not in compliance with federal regulations related to (1) performing cost comparisons, (2) obtaining management authorizations to fly, and (3) reporting appropriate flight data to the GSA. Additionally, TVA was not in compliance with its policies and procedures regarding (1) approving exceptions to flight restrictions, (2) documenting flight authorizations and business justifications, (3) providing timely flight approvals, and (4) performing semi-annual audits. In addition, we noted a lack of clarity in TVA policies and procedures regarding required use travel. Details of our findings are discussed below.

### **NONCOMPLIANCE WITH FEDERAL REGULATIONS**

Our review of documentation related to 63 trips<sup>7</sup> and other required reports found instances of noncompliance with various federal regulations, regarding the use of FWA. Specifically, we determined:

- Cost comparisons were not consistently performed.
- Management authorizations to fly were not always obtained.
- Reporting to GSA was inaccurate and incomplete.

As discussed in detail below, failure to follow federal regulations could prevent TVA from ensuring travel on its FWA is appropriately authorized, justified, and the most cost-effective mode of transportation.

#### **Cost Comparisons Were Not Consistently Performed**

41 CFR § 301-70.802 states the agency must ensure that travel on a government aircraft is the most cost-effective alternative that will meet the travel requirement. The designated travel approving official must:

- (1) Compare the cost of all travel alternatives, as applicable, that is—
  - (i) Travel on a scheduled commercial airline;
  - (ii) Travel on a federal aircraft;
  - (iii) Travel on a government aircraft hired as a commercial aviation service; and
  - (iv) Travel by other available modes of transportation.
- (2) Approve only the most cost-effective alternative that meets the agency's needs.

We determined TVA did not consistently perform cost comparisons to choose the most cost-effective travel alternative. When cost comparisons were performed, we determined the comparisons were inaccurate or incomplete, resulting in understated cost for use of TVA's FWA. By not accurately comparing the cost of

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<sup>7</sup> We judgmentally sampled 20 in-valley trips, 20 out-of-valley trips, 20 short roundtrips, and 3 international trips.

all travel alternatives before using its FWA, TVA may not be using the most cost-effective mode of transportation.

### Some Cost Comparisons Were Not Performed

We found instances where TVA did not perform cost comparisons. We selected a sample of 63 trips for testing to determine if the most cost-effective alternative was selected. As discussed in the background section of this report, TVA's FWA SPPs require cost comparisons for economic justification of FWA use for all employees other than Tier 1 required use travel. Thirty-nine of the 63 trips were required use due to having Tier 1 passengers on board and did not require cost comparisons. Our review of the 24 trips without Tier 1 passengers on board determined cost comparisons were not performed for 13 trips.

We noted that 8 of the 13 trips with no cost comparisons were short roundtrips<sup>8</sup> from Knoxville, Tennessee, to Blountville, Tennessee, for work related to Boone Dam. While flying is generally faster than driving, TVA personnel flying from Knoxville (McGhee Tyson airport) to Blountville (Tri-Cities airport) still have to commute to the Knoxville airport and then commute from the Tri-Cities airport to Boone Dam. When total travel time was factored in, we determined that flying from Knoxville to Blountville only saved the travelers minimal time each way. Although TVA's FWA SPPs do not require employees to compare travel by other modes of transportation, 41 CFR § 301-70.802 does. Accordingly, driving should be considered as an alternative travel mode for short roundtrips where the difference of lost productive time is minimal.

### Cost Comparisons Were Not Performed Completely and Accurately

Our review of the 11 trips with cost comparisons identified several issues regarding how the cost comparisons were performed:

- Ten of the 11 cost comparisons understated the cost to use TVA's FWA because an incorrect hourly variable cost rate was used in the comparisons. TVA used an hourly rate of \$1,548 on the cost comparisons but was unable to provide support for this figure. Aviation Services personnel stated they think the actual hourly rate was "in the \$2,000-\$2,200 range the last few years." Aviation Services provided us with a third-party estimate that indicated the hourly cost estimate was \$2,022 as of February 2023.<sup>9</sup> Our previous report noted the third party estimate as of May 2017 was \$1,852.
- Four of the 11 cost comparisons for out-of-valley trips did not document if city-pair fares were considered when comparing the cost to use TVA's FWA to commercial carriers, as required by 41 CFR § 301-10.261.

<sup>8</sup> We considered short roundtrips to be trips where the same passengers flew 100 nautical miles or less (one-way) and the trip consisted of a flight leg from Point A to Point B, and the next flight leg was back to Point A.

<sup>9</sup> As a result of recommendations from our previous FWA audit, TVA stated they would use third-party estimates for their cost comparison until they could accumulate enough actual cost data to use. However, TVA has not yet captured historical flight data to establish a more accurate cost to operate its FWA.

- Three of the 11 cost comparisons did not take into account the cost of flight legs where the aircraft flew empty to pick up passengers for the purpose of the scheduled trip.
- One of the cost comparisons for a trip from Chattanooga, Tennessee, to Las Vegas, Nevada, concluded flying TVA's FWA was less expensive than flying commercial. However, we determined the cost comparison was inaccurate because the estimate for the use of the FWA used the incorrect hourly rate (discussed above) and did not include lodging and per diem costs for the two TVA pilots.

**Recommendations** – We recommend the Senior Vice President, Resource Management and Operations Services:

1. Develop a process to verify cost comparisons are performed in accordance with the FTR as required in TVA FWA SPPs prior to scheduling fixed-wing flights.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will ensure trips that require a cost comparison are captured in the trip request tool. Those flights will have the cost justification attached prior to approval. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

2. Update TVA FWA SPPs to align with FTRs to include consideration of other modes of transportation capable of meeting the travel requirement as a factor to be considered when performing economic justifications.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will ensure that TVA-SPP-32.041 will consider all other practical modes of transportation prior to the trip approval for trips requiring such approval and alternative transportation consideration. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

3. Update TVA FWA SPPs to require Aviation Services to run the third-party operating cost and performance guide at certain intervals to obtain up-to-date costing information for use in cost comparisons or use historical flight data to establish a more accurate cost to operate FWA.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will update TVA-SPP-32.041 to utilize historical flight data on an annual basis to update the operating costs used in the cost comparison model. If historical flight data is unavailable, then a third-party cost comparison will be used. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

## **Management Authorizations to Fly Were Not Always Obtained**

The FTR requires every traveler to obtain written travel authorization before flying on a government aircraft. However, we determined there were TVA employees and nonfederal employees who were allowed to fly without the proper written travel authorizations.

### Missing Flight Authorizations for Some Employees

We determined 20 out of 63 (32 percent) trips in our sample were missing required management authorizations. 41 CFR § 301-70.904 states every traveler must have a written travel authorization from an authorizing executive agency, and he or she must present that authorization before the flight to the aircraft management office or its representative in the organization that owns or hires the government aircraft.

As discussed in the background section of this report, Tier 1 and Tier 2 employees are authorized to conduct travel for business purposes on all TVA aircraft. These individuals can authorize other TVA personnel to use the aircraft as specified in written TVA policies. Additionally, TVA FWA SPPs state “travel authorizations are written permission to travel on official business” and are required on a trip-by-trip basis for individuals not preauthorized by the TVA Board Practice. The 20 trips missing management authorizations had passengers who were not Tier 1 or Tier 2.

### Missing OGC Approval for Nonfederal Travelers

We determined four trips with a nonfederal traveler in our sample had not received OGC approval in advance and in writing. 41 CFR § 301-70.803 states if you are the sponsoring agency for a nonfederal traveler, your senior legal official or his/her deputy must authorize all travel on a government aircraft by that nonfederal traveler on a trip-by-trip basis, in advance and in writing. However, TVA’s FWA SPPs do not require OGC approval for nonfederal passengers. Two of the four trips missing OGC approval were the spouse of the CEO accompanying him on board the aircraft. The other two trips missing OGC approval included nonfederal travelers accompanying TVA personnel for economic development purposes and a plant tour.

**Recommendations** – We recommend the Senior Vice President, Resource Management and Operations Services:

4. Develop a procedure to verify management authorizations are obtained prior to use of TVA’s FWA for travelers without blanket authorizations.

**TVA Management’s Comments** – In response to our draft report, TVA management stated Aviation Services will update the trip request tool to use electronic approval and/or electronic storage and organization of management authorizations for travelers without blanket authorizations. See Appendix B for TVA management’s complete response.

**Auditor’s Response** – We agree with TVA management’s planned actions.



5. Update TVA's FWA SPPs to improve compliance with the FTR and provide guidance on requirements of OGC approval for nonfederal travelers.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will update TVA-SPP-32.041 to include guidance regarding nonfederal travelers, including a process to identify nonfederal travelers in the trip request tool and submit nonfederal travelers to OGC for approval. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

### **TVA's Reporting to GSA Was Inaccurate and Incomplete**

We determined TVA did not submit accurate, complete, and timely reports to GSA.<sup>10</sup> Specifically, TVA's (1) SFTR submissions were inaccurate and incomplete and (2) submissions of cost and utilization data to FAIRS were inaccurate and not submitted quarterly, as required.

#### Senior Federal Travel Reporting

41 CFR § 301-70.906 requires federal agencies report to GSA on a semi-annual basis, information about senior federal officials<sup>11</sup> and nonfederal travelers who fly aboard a government aircraft. We determined TVA's semiannual submissions to GSA regarding senior federal officials and nonfederal travelers who use TVA's FWA were inaccurate and incomplete. Specifically, we found nine TVA Board members with 42 flight legs and five nonfederal passengers with 16 flight legs who were not included for SFTR for the period of April 1, 2022, through March 31, 2023. Aviation Services personnel stated they do not consider TVA Board members as senior federal travelers; however, TVA FWA SPPs categorize TVA Board members as Tier 1 and "Senior Federal Officials."

#### Federal Aviation Interactive Reporting System

41 CFR § 102-33.405 requires TVA submit cost and utilization data to the FAIRS at the end of every quarter of the fiscal year. TVA cost data includes labor, fuel, maintenance, and overhead costs. We found TVA's quarterly submission of cost and utilization data to FAIRS was inaccurate and not submitted quarterly. For example, during our review of FAIRS reports, we noted fuel costs were reported to total \$0.43 and -\$34.82 during the second and third quarters of fiscal year 2021. Additionally, Aviation Services was unable to provide support or justification for the incorrect fuel costs reported to GSA.

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<sup>10</sup> Inaccurate and incomplete data submitted to GSA was also a finding in our previous audit of TVA's FWA.

<sup>11</sup> The FTR considers a senior federal official as "an individual who is paid according to the Executive Schedule established by 5 U.S.C. 53, Subchapter II, including Presidential appointees who are confirmed by the Senate; employed in the U.S. Government's Senior Executive Service or an equivalent "senior" service."

**Recommendations** – We recommend the Senior Vice President, Resource Management and Operations Services:

6. Verify all senior federal travelers and nonfederal travelers are reported in the SFTR semiannually.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will verify that all senior federal travelers and nonfederal travelers are reported to the GSA on a semiannual basis. Additionally, Aviation Services will work with OGC to determine TVA senior federal travelers for GSA reporting. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

7. Work with applicable TVA groups to ensure complete and accurate FAIRS data is being obtained and submitted to GSA on a quarterly basis.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will work with Financial Services to ensure that accurate financial and utilization data is entered. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

## **NONCOMPLIANCE WITH TVA POLICIES AND PROCEDURES**

Our review of flight documentation found several areas of noncompliance with TVA-SPP-32.041, *Use of TVA Fixed Wing Aircraft*, and TVA-SPP-32.040, *Use of TVA Aviation Assets*. Specifically, we determined:

- Exceptions for passenger restrictions were not always approved.
- Required documentation was missing for some flights.
- Timely approvals were not consistently provided.
- Required semi-annual audits were not performed.

Failure to follow TVA policies and procedures can lead to use of the FWA that is not cost effective.

### **Exceptions for Passenger Combination Restrictions Were Not Approved**

TVA FWA SPPs state "the risk associated with an aircraft accident involving multiple key personnel from a business unit must be adequately considered before approving travel. Good judgment should be applied for all travel planning purposes, and the number of key personnel from the same TVA business unit should be kept to a minimum." Exceptions may be approved by the CEO with concurrence from the OGC and documented on the aircraft request. According



to TVA's SPPs, the following combinations of key personnel being on flights together are not allowed without the appropriate approvals:

- The CEO, Chief Operating Officer (COO), and Chief Nuclear Officer (CNO)
- The CEO and more than two direct reports
- The COO and the CNO
- The CNO and more than 2 of his direct reports
- The COO and more than 3 of the reports to the COO
- Any direct report to the CEO and more than half of that executive's direct reports

Of the 63 trips in our samples, we identified 3 trips that had disallowed combinations of key personnel on TVA's FWA with no waiver in the aircraft request documenting CEO approval and OGC concurrence. The disallowed combinations were:

- Two flight legs where the COO and the CNO were on board the aircraft at the same time.
- One flight leg where the CEO and more than two direct reports were on board the aircraft at the same time and one flight leg where the COO and CNO were on board at the same time.
- Two flight legs where the CEO, COO, and CNO were all on board the aircraft at the same time.

**Recommendation** – We recommend the Senior Vice President, Resource Management and Operations Services:

8. Implement a process to ensure that exceptions to restrictions for allowed passengers are documented with CEO and OGC concurrence prior to flights.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will work with OGC to determine passenger restrictions and required approvals. Once this is determined, Aviation Services will update TVA-SPP-32.041 with the restricted passenger list and approvals required. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

### **Required Documentation Was Missing for Some Flights**

We determined TVA did not have flight documentation required by its policies and procedures for some flights. Specifically, we identified flights that were missing (1) trip packets with required flight documentation and (2) business justifications.

### Trip Packets Were Not Always Maintained

According to FWA SPPs, individual(s) with a need to travel for mission related services can request use of TVA's FWA by submitting a flight request to Aviation Services. As discussed in the background section of this report, Aviation Services compiles required flight documentation such as flight authorizations, business justifications, and cost comparisons (if applicable), in a trip packet prior to scheduling the flight. According to Aviation Services, the trip packet serves as a final record of the trip and is maintained electronically. However, we determined 3 out of the 63 (5 percent) trips in our sample were missing a trip packet which should contain items such as a flight request, business purpose, and associated approval.

### Business Justifications of Flights Were Not Consistently Documented

TVA Board Practice requires business justifications for use of TVA's FWA be documented and maintained for a reasonable time. Both of TVA's FWA SPPs state the aircraft should be used for business purposes (or emergency) and that business purpose documentation should be provided in the aircraft request to Aviation Services. We identified 4 trips out of our sample of 63 (6 percent) that took place without a business justification documented as part of the aircraft request in the trip packet. (Note: based on our review of the other information provided for these 4 trips, we did not find any evidence that the trips were for nonbusiness purposes.)

**Recommendation** – We recommend the Senior Vice President, Resource Management and Operations Services:

9. Reinforce the requirement in TVA-SPP-32.040 that Aviation Services conduct a full review of all travel related flights to ensure adequate documentation and authorization is maintained for every flight.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will continue to audit the trip documentation and authorization records on a monthly basis. Aviation Services' FWA manager will meet with the program manager and the scheduler to review monthly. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

### **Aviation Services Did Not Consistently Provide Timely Approval**

As discussed in the background section of this report, the general manager of Aviation Services and the FWA manager are required to provide flight request approval after reviewing authorizations and business justifications and verify flights are scheduled economically to ensure cost effective operations. Additionally, the Senior Vice President of Resource Management and Operations Services is required to perform executive review of all aircraft requests.

We considered the approvals of the aircraft requests significant to the audit objective. The design of the control appears adequate and is capable of achieving the objective of ensuring TVA is complying with applicable laws and regulations and TVA policies and procedures regarding the use of its FWA. The control implementation also appears adequate as it exists and approval requirements have been placed into operation by inclusion in TVA FWA SPPs. However, based on our review of 63 trip packets documenting approvals, we determined the approval process control is not operating effectively. Specifically, we found:

- Eleven out of 63 (17 percent) trips received approval from Aviation Services and Senior Vice President concurrence after the flight occurred.
- Fourteen out of 63 (22 percent) trips received Senior Vice President concurrence after the flight occurred.
- Three out of 63 (5 percent) trips did not have any flight documentation, including evidence of Aviation Services approval. These are the same three trips discussed in the finding above regarding required documentation missing for flights.
- Three of the 63 (5 percent) trips, although they had timely approval, had at least one passenger added to the flight after Aviation Services approved the initial request and passenger list for the flight.

In summary, 49 percent of our 63 sampled trips had at least one issue with Aviation Services' approval or Senior Vice President concurrence.

**Recommendation** – We recommend the Senior Vice President, Resource Management and Operations Services:

10. Develop a process to ensure Aviation Services' approval, and executive review, occur prior to each flight.

**TVA Management's Comments** – In response to our draft report, TVA management stated Aviation Services will utilize the trip request tool to ensure that approval and executive review occur prior to the flight. Prior to releasing the flight, Scheduling will ensure required documentation has been obtained. See Appendix B for TVA management's complete response.

**Auditor's Response** – We agree with TVA management's planned actions.

### **Semi-Annual Audit Not Being Performed**

TVA-SPP-32.040, *Use of TVA Aviation Assets*, states, "Aviation Services in conjunction with Financial Services and the Office of the General Counsel will perform a semi-annual audit of this procedure and compliance with associated regulations." However, Aviation Services personnel informed us the audits are not being performed. Periodic review of the FWA SPP ensures compliance with the FTR and other pertinent legal guidelines.

**Recommendation** – We recommend the Senior Vice President, Resource Management and Operations Services:

11. Reinforce requirement to perform semi-annual audits.

**TVA Management’s Comments** – In response to our draft report, TVA management stated TVA agrees with the OIG recommendation to reinforce periodic review. Aviation Services will update TVA-SPP-32.040 audit requirements from semi-annual to once every 3 years in alignment with the SPP review cadence. Aviation Services will continue to conduct a monthly review of all travel-related flights to ensure adequate documentation and authorization. See Appendix B for TVA management’s complete response.

**Auditor’s Response** – We agree with TVA management’s planned actions.

## **LACK OF CLARITY REGARDING REQUIRED USE TRAVEL**

As stated previously, the FTR allows for required use of a government aircraft only when you are required to use government aircraft for bona fide communications (e.g., 24-hour secure communications), security reasons (e.g., highly unusual circumstances that present a clear and present danger), or exceptional scheduling requirements (e.g., a national emergency or other compelling operational considerations). The TVA Board Practice states that the Board recognizes that use of the TVA aircraft may be required because of a need to communicate in a secure setting while traveling or to satisfy scheduling requirements dictated by short-notice travel, multiple destinations, or limited available time, which makes commercial transportation unacceptable.

According to Aviation Services personnel, they consider any flight that has a Tier 1 passenger as required use travel and therefore Aviation Services does not perform a cost comparison. However, neither the TVA Board Practice nor TVA FWA SPPs explicitly state that all travel by Tier 1 passengers should be considered required use travel. This lack of clarity can lead to the FWA being used for flights that may not be in TVA’s best interests, may not be cost effective, and could lead to increased reputational risk.

During our audit period, there were 25 short roundtrips between Knoxville and Chattanooga by Tier 1 passengers. For 13 of the trips the Tier 1 passenger was the only passenger on board.<sup>12</sup> In our opinion, TVA considering all trips taken by Tier 1 passengers as required use increases the risk that use of the FWA is not the most cost-effective mode of transportation. It also could potentially pose a reputational risk to TVA because some flights may have the appearance that they are for the convenience of the person flying and not required use travel.

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<sup>12</sup> An additional 8 trips had only 2 passengers on board.

**Recommendation** – We recommend the Senior Vice President, Resource Management and Operations Services:

12. Work with TVA OGC and the TVA Board to update TVA Board Practice “Use of TVA Aircraft” to explicitly state the Board’s intent regarding whether all travel by Tier 1 passengers should be considered required use.

If the TVA Board’s intent was not that all travel by Tier 1 passengers be considered required use travel, require all requests for use of the FWA to identify the travel as either official travel, required use travel, or space available travel, and document the reason for the determination in compliance with FTR § 301–10.261 and TVA FWA SPPs.

**TVA Management’s Comments** – In response to our draft report, TVA management stated Aviation Services will work with OGC and the TVA Board to clarify the intent of the TVA Board Practice “Use of TVA Aircraft”. See Appendix B for TVA management’s complete response.

**Auditor’s Response** – We agree with TVA management’s planned actions.

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

Due to issues identified during a previous audit of the Tennessee Valley Authority's (TVA) fixed-wing aircraft (FWA), we performed a follow-up audit of TVA's FWA. Our audit objective was to determine if the TVA is complying with applicable laws and regulations and TVA policies and procedures regarding the use of its FWA. Our audit scope included all 1,230 flight legs by TVA FWA between January 1, 2021, and January 31, 2023. To achieve our objective, we:

- Reviewed TVA's FWA standard policies and procedures (SPP), TVA-SPP-32.041, *Use of TVA Fixed Wing Aircraft*, and TVA-SPP-32.040, *Use of TVA Aviation Assets* in addition to the applicable TVA Board Practice.
- Reviewed laws and regulations that pertain to the usage of FWA to determine their applicability to TVA.
- Interviewed TVA Aviation Services personnel to gain an overall understanding of the administrative roles and responsibilities for TVA's FWA.
- Obtained an understanding of internal controls associated with administering, using, and monitoring TVA's FWA. We identified flight approvals of the aircraft requests prior to the flight as the key internal control significant to the audit objective. Our primary method for testing the operating effectiveness of this control was reviewing trip packets documenting Aviation Services' and Senior Vice President of Resource Management and Operations Services approvals.
- Obtained TVA flight data, including dates, airport locations of flight legs (departure and arrival), take-off and landing times of flight legs, passengers, duration of flight legs, and distance of flight legs for each aircraft from the Professional Flight Management system.
- Purchased available flight data from FlightAware for our audit period and used that data to validate the accuracy and completeness of data obtained from TVA's Professional Flight Management system.
- Performed analytical review of all Professional Flight Management data during the audit period to identify any outliers in aircraft usage. This includes but is not limited to the top origins and destinations the FWA flew, the top short roundtrip passengers, the top overall FWA users, number of days both FWA flew, etc.
- Reviewed Professional Flight Management information on passengers who traveled during the audit period to determine if they were employees or nonemployees (e.g., TVA Board of Directors, executives, nonexecutives or government officials, spouses, or other).
- Selected four judgmental samples of 20 short roundtrips, 20 in-valley trips, 20 out-of-valley trips, and all of the international trips (three trips) in our population, for a total of 63 trips. For each of the 63 trips, we obtained and reviewed supporting documentation provided to test compliance with the requirements in the effective FWA SPPs as well as the accuracy of the

Professional Flight Management data. Because these were judgmental samples, we did not project the results to the population.

- For short roundtrip flights (i.e., where a flight leg was 100 nautical miles or less), we judgmentally selected 20 trips, which consisted of 40 flight legs, out of 76 short flight legs. We chose trips with a variety of passenger names and positions and number of passengers on each trip. A roundtrip was considered a flight leg from Point A to Point B, and then the next flight leg was back to Point A.
- For in-valley flights, we randomly selected 20 flight legs from 1,162 in-valley flight legs in our population. In-valley refers to flights where the origin and destination are within TVA's seven state service area.
- For out-of-valley flights, we judgmentally selected 20 flight legs from 88 total out-of-valley flight legs. Out-of-valley refers to flights where the destination is outside TVA's seven state service area. We chose flights with a variety of destinations and number of passengers that were outside the seven-state region.
- For international flights, we tested all 3 international trips, consisting of 15 total flight legs, in our audit population due to the low occurrence of these flights.
- Requested trip packets with the following information, either required by the applicable SPP or listed in Professional Flight Management for the selected trips:
  - Date and times of flight
  - Aircraft tail number
  - Departure and arrival airports and city
  - Management authorizations, when not preauthorized by TVA Board Practice.
  - Business justification/purpose of the trip
  - Cost comparison analyses, if applicable
  - Aviation Services' approval for each flight
  - Executive review for each flight
  - Waivers for disallowed passengers and nonfederal travelers
- Compared the passenger list for the selected trips to the disallowed passenger restrictions listed in the SPPs to determine if the combination of passengers were in compliance with the SPP.
- Reviewed the aircraft operating cost and performance guide of TVA's third-party vendor, where available, to verify the hourly operating rate for each aircraft.
- Obtained TVA information submitted to the Federal Aviation Interactive Reporting System and Senior Federal Travel Reporting information submitted to the General Services Administration by TVA.

- Compared the fuel, labor, overhead, and maintenance cost amounts provided by TVA Aviation Services to determine if the amounts agreed with reports submitted to the General Services Administration under the Federal Aviation Interactive Reporting System requirement.
- Reviewed all nonfederal passenger legs for existence in reports submitted to the General Services Administration under the Senior Federal Travel Reporting requirement.
- Reviewed Aviation Services' personnel and their access to the Professional Flight Management system to determine whether their access is appropriate for their job duties.
- Reviewed evidence of monthly audits performed by Aviation Services personnel.
- Requested evidence of semi-annual audits from Aviation Services.

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



May 31, 2024

David P. Wheeler  
TVA Office of Inspector General

RESPONSE - DRAFT AUDIT 2023-17426 -TVA FIXED-WING AIRCRAFT USAGE

This letter is in response to the TVA Office of Inspector General's (OIG) DRAFT AUDIT 2023-17426 -TVA FIXED-WING AIRCRAFT USAGE. TVA appreciates the efforts put forth by the OIG auditors, Michael C. Cook and Ala H. McAfee. Thank you for the opportunity to review and respond.

TVA management has reviewed the report and offers the following responses:

Recommendations

1. Develop a process to verify cost comparisons are performed in accordance with the FTR as required in TVA FWA SPPs prior to scheduling fixed-wing flights.

Response:

TVA Aviation Services will ensure trips that require a cost comparison are captured in the trip request tool. Those flights will have the cost justification attached prior to approval.

2. Update TVA FWA SPPs to align with FTRs to include consideration of other modes of transportation capable of meeting the travel requirement as a factor to be considered when performing economic justifications.

Response:

TVA Aviation Services will ensure that TVA-SPP-32.041 will consider all other practical modes of transportation prior to the trip approval for trips requiring such approval and alternative transportation consideration.

3. Update TVA FWA SPPs to require Aviation Services to run the third-party operating cost and performance guide at certain intervals to obtain up-to-date costing information for use in cost comparison or use historical flight data to establish a more accurate cost to operate FWA.

Response:

TVA Aviation Services will update TVA-SPP-32.041 to utilize historical flight data on an annual basis to update the operating costs used in the cost comparison model. If historical flight data is unavailable (e.g. operating a different model of aircraft for which historical data does not exist) then a third-party cost comparison will be used.

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4. Develop a procedure to verify management authorizations are obtained prior to use of TVA's FWA for travelers without blanket authorizations.

Response:

TVA Aviation Services will update the trip request tool to use electronic approval and/or electronic storage and organization of management authorizations for travelers without blanket authorizations.

5. Update TVA FWA SPPs to improve compliance with the FTR and provide guidance on requirements of OGC approval for nonfederal travelers.

Response:

TVA Aviation Services will update TVA-SPP-32.041 to include guidance regarding nonfederal travelers, including a process to identify nonfederal travelers in trip request tool and submit nonfederal travelers to OGC for approval.

6. Verify all senior federal travelers and nonfederal travelers are reported in the SFTR semiannually.

Response:

TVA Aviation Services will verify that all senior federal travelers and nonfederal travelers are reported to the GSA on a semiannual basis. TVA Aviation Services will work with OGC to determine TVA senior federal travelers for GSA reporting.

7. Work with applicable TVA groups to ensure complete and accurate FAIRS data is being obtained and submitted to GSA on a quarterly basis.

Response:

TVA Aviation Services will work with Financial Services to ensure that accurate financial and utilization data is entered.

8. Implement a process to ensure that exceptions to restrictions for allowed passengers are documented with CEO and OGC concurrence prior to flights.

Response:

TVA Aviation Services will work with OGC to determine passenger restrictions and required approvals. Once this is determined, Aviation Services will update TVA-SPP-32.041 with the restricted passenger list and approvals required.

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9. Reinforce the requirement in TVA-SPP-32.040 that Aviation Services conduct a full review of all travel related flights to ensure adequate documentation and authorization is maintained for every flight.

Response:

TVA Aviation Services will continue to audit the trip documentation and authorization records on a monthly basis. Aviation Services' Fixed Wing Manager will meet with the Program Manager and the Scheduler to review monthly.

10. Develop a process to ensure Aviation Services' approval, and executive review, occur prior to each flight.

Response:

TVA Aviation Services will utilize the trip request tool to ensure that approval and executive review occur prior to the flight. Prior to releasing the flight, Scheduling will ensure required documentation has been obtained.

11. Reinforce requirement to perform semi-annual audits.

Response:

TVA agrees with the OIG recommendation to reinforce periodic review. Aviation Services will update TVA-SPP-32.040 audit requirements from semi-annual to once every 3 years in alignment with the SPP review cadence. Aviation Services will continue to conduct a monthly review of all travel-related flights to ensure adequate documentation and authorization.

12. Work with TVA OGC and the Board to update TVA Board Practice "Use of TVA Aircraft" to explicitly state the Board's intent regarding whether all travel by Tier 1 passengers should be considered required use.

Response:

TVA Aviation Services will work with OGC and the Board to clarify the intent of the Board Practice "Use of TVA Aircraft".

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If you have any questions or need additional information, please reach out to me via email at [jrdalrymple@tva.gov](mailto:jrdalrymple@tva.gov).



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