



Memorandum from the Office of the Inspector General

May 30, 2018

Rebecca C. Tolene, WT 7B-K  
Diane T. Wear, WT 4B-K

REQUEST FOR FINAL ACTION – AUDIT 2017-15500 – EARLY PAYMENT DISCOUNTS  
ON VENDOR INVOICES

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 or wish to discuss our findings, please contact Stephanie L. Simmons, Senior Auditor, at (423) 785-4820 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.

David P. Wheeler  
Assistant Inspector General  
(Audits and Evaluations)  
WT 2C-K

SLS:FAJ  
Attachment  
cc (Attachment):

TVA Board of Directors  
Janet J. Brewer, WT 7C-K  
Robertson D. Dickens, WT 9C-K  
M. Scott Fugate, WT 3A-K  
William D. Johnson, WT 7B-K  
Janet D. Jones, WT 4A-K  
Dwain K. Lanier, MR 6D-C

Justin C. Maierhofer, WT 7B-K  
Jill M. Matthews, WT 2C-K  
Michael D. Skaggs, WT 7B-K  
John M. Thomas III, MR 6D-C  
Gabriel A. Trotter, BR 5A-C  
OIG File No. 2017-15500



Office of the Inspector General

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## *Audit Report*

To the Vice President,  
Supply Chain and  
To the Vice President  
and Controller,  
Corporate Accounting

# **EARLY PAYMENT DISCOUNTS ON VENDOR INVOICES**

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Audit Team  
Stephanie L. Simmons  
Chasity W. Scantling

Audit 2017-15500  
May 30, 2018

## **ABBREVIATIONS**

CO	Contracting Officer
DS	Disbursement Services
EAM	Enterprise Asset Management
FIA	Field Invoice Approver
PO	Purchase Order
SPP	Standard Programs and Processes
TVA	Tennessee Valley Authority

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AND DIANE T. WEAR TO DAVID P. WHEELER



# Audit 2017-15500 – Early Payment Discounts on Vendor Invoices

## EXECUTIVE SUMMARY

### Why the OIG Did This Audit

We included an audit of the Tennessee Valley Authority's (TVA) management of early payment discounts on vendor invoices in our annual audit plan as a follow-up to an audit of a TVA contract<sup>i</sup> where we reported TVA missed early payment discount opportunities of \$1,029,965. Early payment discounts are offered by some contractors for payments made prior to the due dates on invoices.

Our audit objective was to determine if early payment discounts are appropriately managed by TVA. Our audit scope included invoices from Supply Chain contracts and purchase orders with greater than \$1 million in spending in any one fiscal year from October 1, 2014, through July 31, 2017.

### What the OIG Found

We found TVA's management of early payment discounts needs improvement. TVA missed early payment discount opportunities of \$932,340 out of \$4,879,957 in early payment discounts available during our audit period. We identified two areas TVA management should address to increase the percentage of early payment discounts taken.

- Thirty-five percent of the invoices where early payment discounts were not taken were not received until after the discount period had expired. The most frequent explanations given for invoices received after the discount period expired were (1) contractors generated invoices too early before submitting them to TVA, and (2) invoices were resubmitted to TVA after corrections were made due to errors found during the invoice review but the invoice date was not updated.
- Field invoice approvers (FIA) are not aware when invoices have an early payment discount unless a vendor or contracting officer has specifically told them about the discount. The FIAs receive an e-mail notification letting them know there is an invoice ready to review in Maximo.<sup>ii</sup> However, the e-mail does not let them know the invoice contains an early payment discount. While early payment discount term information is available in Maximo under the contract and/or purchase order screens, it is not shown on the invoice approval screens.

<sup>i</sup> Audit Report 2015-15318, ABB, Inc. – Contract No. 4645, dated July 7, 2016.

<sup>ii</sup> TVA utilizes several systems to process/approve invoices; however, all invoices are authorized for payment using Maximo (TVA's supply chain system) or Comtrac (TVA's fuel management system). Our audit scope was limited to invoices approved in the Maximo system.



## Audit 2017-15500 – Early Payment Discounts on Vendor Invoices

### EXECUTIVE SUMMARY

In addition, we found early payment discount terms were generally entered accurately into Maximo. However, we noted a few exceptions where Maximo's payment terms did not accurately reflect the contractual payment terms.

#### What the OIG Recommends

We recommend the Vice President, Supply Chain, take the following actions:

1. Require contractors to submit invoices within a defined number of days of the actual invoice date so TVA can make payments in time to receive early payment discounts.
2. Require contractors to update the invoice date on any invoice that requires corrections and has to be resubmitted to TVA.
3. Include early payment discount information in the e-mail notifications sent to the FIAs when an invoice is ready for review.
4. Consider modifications in Maximo that would identify invoices with early payment discounts for FIAs.
5. Update contractual documents to accurately reflect payment terms.

#### TVA Management's Comments

TVA management concurred with each of our recommendations and provided the actions they plan to take to address each of our recommendations. See Appendix C for TVA management's complete response.

## **BACKGROUND**

We included an audit of the Tennessee Valley Authority's (TVA) management of early payment discounts on vendor invoices in our annual audit plan as a follow-up to an audit of a TVA contract<sup>1</sup> where we reported TVA missed early payment discount opportunities of \$1,029,965. Early payment discounts are offered by some contractors for payments made prior to the due dates on invoices.

Two TVA Standard Programs and Processes (SPP), TVA-SPP-13.009, Accounts Payable Process, and TVA-SPP-04.004, Invoice Review and Approval, document the roles, responsibilities, and financial systems associated with paying for goods and services purchased by TVA and provide guidelines for review and approval of supplier invoices. The roles and responsibilities of the contracting officer (CO), field invoice approver (FIA) and Disbursement Services (DS)<sup>2</sup> personnel are shown in Table 1.

<b>Roles and Responsibilities in the Invoice Approval Process</b>	
<b>Role</b>	<b>Responsibilities</b>
<b>CO*</b>	Responsible for (1) defining commercial terms including developing clear pricing structures and ensuring invoice requirements are incorporated into their contracts/purchase orders (PO), (2) conducting contract pricing and invoice reviews, and (3) managing all commercial contractual matters.
<b>FIA</b>	Responsible for (1) successfully completing TVA's FIA training and participating in refresher training; (2) receiving invoices for approval through TVA's Enterprise Asset Management (EAM) system; (3) coordinating with the CO to understand the pricing structure of the contract; (4) verifying the amounts are within the PO limits by reviewing contract documentation and reviewing the record in the EAM; (5) reviewing all commercial details such as PO amount, pricing structure, rates, shipping charges, per diem rates, appropriate vehicle use, etc., and verify accuracy of any calculations employed in the invoice; (6) coordinating with the Contract Technical Steward, the task manager or others as needed to confirm validation of deliverables; and (7) approving or disapproving the invoice after review and validation has been completed.
<b>DS</b>	Responsible for (1) receiving invoices from the supplier and entering them into EAM system for review by the FIA, (2) processing payment in accordance with the contract's payment terms once the invoice is approved, (3) approving any exceptions to this process and providing advice to FIA on any unusual payment terms, (4) resolving payment issues and serving as a customer service contact for suppliers, and (5) optimizing early payment discounts.
* CO refers to TVA's Supply Chain personnel responsible for establishing and maintaining contracts with suppliers including contract managers and procurement agents.	

**Table 1**

Invoices for nonreceiving contracts should be sent to DS directly from the supplier or the FIA. DS enters all invoices received into Maximo<sup>3</sup> and scans and

<sup>1</sup> Audit Report 2015-15318, ABB, Inc. – Contract No. 4645, dated July 7, 2016.

<sup>2</sup> DS was formerly called Accounts Payable.

<sup>3</sup> TVA utilizes several systems to process/approve invoices; however, all invoices are authorized for payment using Maximo (TVA's supply chain system) or Comtrac (TVA's fuel management system). Our audit scope was limited to invoices approved in the Maximo system.

attaches a copy of the invoice to Maximo's invoice panel. An electronic notification is routed to the FIA identified on the PO who is responsible for the review and approval for payment of supplier invoices (with the exception of material receiving invoices discussed below). If the FIA finds an error on the invoice, the FIA is responsible for rejecting the invoice in Maximo and should return the invoice for correction to the invoice entry person in DS if a correction is needed.

Materials receiving invoices require the receipt of materials by the responsible TVA employee to be recorded in Maximo, triggering invoice approval. Once the approval process is complete, invoices are authorized for payment in Maximo by DS and are then exported to Oracle (TVA's payment processing system), which processes the payments. Based on the supplier data included in the system, during the daily processing of invoices, Oracle automatically calculates discounts on invoices from suppliers offering discounts and late payment penalties for invoices paid after the payment due date. According to the Prompt Payment Act, the period available to take advantage of the discount is determined by the contractor's invoice date. Specifically, 31 United States Code Section 3904, Limitations on Discount Payments states:

The head of an agency offered a discount by a business concern from an amount due under a contract for property or service in exchange for payment within a specified time may pay the discounted amount only if payment is made within the specified time. For the purpose of the preceding sentence, the specified time shall be determined from the date of the invoice.

Contractors can also build and submit invoices through the supplier portal in Maximo. TVA Supply Chain management stated contractors' use of this tool improves billing accuracy with parameters preventing common invoicing errors. The portal also displays payment term options, which allows TVA to offer the contractor early payment on invoices in exchange for a discount on contracts that do not already have negotiated discounts.

We limited our scope to contracts and POs with greater than \$1 million in spending in any one fiscal year from October 1, 2014, through July 31, 2017. During this period, TVA Supply Chain had 593 contracts and 20 POs with greater than \$1 million in spending in any one fiscal year with a total cost of approximately \$9.7 billion. Of these contracts/POs, 85 contracts, which had a total cost of approximately \$419 million during the period, had early payment discounts included in the payment terms. Early payment discount rates ranged between 0.05 percent and 3.00 percent.

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

Our audit objective was to determine if early payment discounts are appropriately managed by TVA. For information pertaining to our objective, scope, and methodology, see Appendix A.



## **FINDINGS**

We found TVA's management of early payment discounts needs improvement as 19 percent of available discounts were not taken during our audit period. We also found early payment discount terms were generally entered accurately into Maximo. However, we noted a few exceptions where Maximo's payment terms did not accurately reflect the contractual payment terms.

### **EARLY PAYMENT DISCOUNTS NOT TAKEN**

We found TVA's management of early payment discounts needs improvement. As summarized in Table 2, early payment discounts were not taken on 26 percent of the invoices accounting for 19 percent of the early payment discounts available. TVA missed early payment discount opportunities of \$932,340 out of \$4,879,957 available during our audit period.

<b>Analysis of Early Payment Discounts For the Period October 1, 2014 – July 31, 2017*</b>				
<b>Description</b>	<b>No. of Invoices</b>	<b>Percentage of Invoices</b>	<b>Discount Total</b>	<b>Dollar Percentage</b>
<b>Discounts Taken</b>	27,622	74%	\$3,947,617	81%
<b>Discounts Not Taken</b>	<u>9,709</u>	26%	<u>932,340</u>	19%
<b>Total</b>	<b>37,331</b>		<b>\$4,879,957</b>	

\* The discounts taken or not taken are from contracts and PO's that had more than \$1 million in spending in a fiscal year.

**Table 2**

The payment terms for the discounts not taken by TVA ranged from a minimum of 0.05 percent 15 days/Net 45 days to a maximum discount of 3 percent 10 days/Net 45 days. We determined the effective interest rates<sup>4</sup> for the discounts TVA did not take ranged of a low of 0.6 percent to a high of 149 percent (see Appendix B). TVA's average short-term borrowing rate was 0.32 percent between October 1, 2014, and September 30, 2017—between 0.28 and 148.62 percentage points less than the lowest and highest effective interest rates respectively. The effective interest rate was at least 5 percent for \$921,012 of the lost discounts. As a result, TVA's cost of money for not taking the early payment discounts far exceeded TVA's short-term borrowing rate.

<sup>4</sup> The effective interest rate is TVA's cost of money when the discount is not taken. The rates were calculated based on TVA paying 100 percent of the invoice amount on the last net day payment is due rather than the discounted invoice amount on the last discount day.

We identified two areas TVA management should address to increase the percentage of early payment discounts taken.

- Thirty-five percent of the invoices where early payment discounts were not taken were not received until after the discount period had expired.
- FIAs are not aware when invoices have an early payment discount unless a vendor or CO has specifically told them about the discount.

### **Invoices Received After Discount Period Expired**

We noted 35 percent of the invoices, where early payment discounts were not taken, were received after the discount period had expired. These represented \$328,120 of the lost discounts during the audit period. As previously discussed, the discount period begins on the invoice date. We interviewed FIAs and COs to discuss these situations and obtained feedback on the early payment discount process. The most frequent explanations given for invoices received after the discount period expired were (1) contractors generated invoices too early before submitting them to TVA, and (2) invoices were resubmitted to TVA after corrections were made due to errors found during the invoice review but the invoice date was not updated.

When payment terms include an early payment discount, requiring contractors to submit invoices within a certain amount of days of the invoice date would allow TVA the opportunity to take advantage of more discounts. Additionally, requiring contractors update the invoice date on resubmitted/corrected invoices should also allow TVA the opportunity to take advantage of more discounts. This would be consistent with TVA-SPP-04.004, Invoice Review and Approval, which states that “for purpose of prompt payment, the payment time frame does not start until an error free invoice is received.” Accordingly, the early discount period should not start until an error free invoice is received.

### **FIA Should Be Notified When Invoice Has Early Payment Discount**

During interviews, FIAs informed us they are not aware when invoices have an early payment discount unless a vendor or CO has specifically told them about the discount. The FIAs receive an e-mail notification letting them know there is an invoice ready to review in Maximo. However, the e-mail does not let them know the invoice contains an early payment discount.

One of the FIAs’ most frequent suggestions for improvement was to add the ability in Maximo to see whether an invoice has an early payment discount available during the invoice approval process. While early payment discount term information is available in Maximo under the contract and/or PO screens, it is not shown on the invoice approval screens. Additionally, FIAs cannot see how much time is left in the discount period to get an invoice approved in time for TVA to take advantage of an early payment discount.

Increasing the visibility of early payment discounts in the invoice approval process and/or flagging invoices with early payment discounts awaiting approval would allow FIAs to prioritize the approval of invoices with early payment

discounts. This may help TVA take advantage of more early payment discounts in the future.

## **MAXIMO CONTRACT PAYMENT TERMS WERE GENERALLY ACCURATE**

We found early payment discount terms were generally entered accurately into Maximo. We selected 109 items for testing from our population of 613 Supply Chain contracts and POs in our audit scope and verified Maximo accurately reflected the payment terms for 106 of the 109 contracts tested. As summarized below, the three exceptions noted did not result in missed discount opportunities for TVA.

- The early payment discount in Maximo for two contracts did not agree with the contractual payment terms which did not include early payment discounts. According to the CO for one of the contracts, the early payment discount was agreed upon verbally with the contractor. Regarding the second contract, Supply Chain management informed us it is acceptable for COs to negotiate and document more favorable payment terms at the work release or PO level in order to capture additional savings for TVA.
- The net payment days in Maximo for one contract did not agree with the contractual net payment days. However, since the contract did not include an early payment discount there were no missed discount opportunities.

Although the three discrepancies did not result in lost discounts to TVA, Maximo is a system TVA uses for processing invoices. Since the information contained within Maximo is not legally binding, TVA should update contracts and POs to accurately reflect changes in payment terms.

## **RECOMMENDATIONS**

We recommend the Vice President, Supply Chain, take the following actions:

1. Require contractors to submit invoices within a defined number of days of the actual invoice date so TVA can make payments in time to receive early payment discounts.

**TVA Management's Comments** – TVA management stated their Contract Managers will remind contractors with early payment discount language in their contracts to submit invoices promptly after their invoice is developed and dated and in accordance with applicable contract requirements. They also stated Supply Chain's T-CAT<sup>5</sup> team that is working with the Office of General Counsel to improve TVA's standard terms and conditions will review whether TVA's contract language regarding early payment discounts and prompt invoice submission can be clarified or enhanced. See Appendix C for TVA management's complete response.

<sup>5</sup> Terms and Conditions Authoring Tool

2. Require contractors to update the invoice date on any invoice that requires corrections and has to be resubmitted to TVA.

**TVA Management's Comments** – TVA management stated their Contract Managers will notify contractors with early payment discount language in their contracts to revise the date on invoices requiring correction so that the invoice date correlates to submission of the corrected invoice. TVA management also stated (1) Supply Chain will look for contracts where it may be beneficial to require the contractor to informally submit a draft invoice for TVA's review, which then ensures that the invoice, when formally submitted, is correct and its date is current, and (2) the T-CAT team will review whether TVA's contract language regarding early payment discounts and prompt invoice submission can be clarified or enhanced with respect to the resubmission of invoices that require correction. See Appendix C for TVA management's complete response.

3. Include early payment discount information in the e-mail notifications sent to the FIAs when an invoice is ready for review.

**TVA Management's Comments** – TVA management stated they agree that this capability would be very helpful to FIAs and will explore how to revise Maximo so that it can automatically create such a notification. See Appendix C for TVA management's complete response.

4. Consider modifications in Maximo that would identify invoices with early payment discounts for FIAs.

**TVA Management's Comments** – TVA management stated they agree that this capability would be very helpful to FIAs and will explore how to revise Maximo so that it can automatically identify for the FIA invoices that have early payment discounts. See Appendix C for TVA management's complete response.

5. Update contractual documents to accurately reflect payment terms.

**TVA Management's Comments** – TVA management stated Supply Chain will update contracts to reflect actual agreed payment terms or payment practices when they become aware of a discrepancy. See Appendix C for TVA management's complete response.

## OBJECTIVE, SCOPE, AND METHODOLOGY

Our audit objective was to determine if early payment discounts are appropriately managed by the Tennessee Valley Authority (TVA). The scope of the audit included invoices from Supply Chain contracts and purchase orders (PO) with greater than \$1 million in spending in any one fiscal year from October 1, 2014, to July 31, 2017.

To achieve our audit objective, we:

- Reviewed TVA policies and procedures effective during the audit period for administering and monitoring the invoice review, approval, and payment process.
- Obtained invoice data for Supply Chain contracts and POs with greater than \$1 million in spending in any one fiscal year from October 1, 2014, to July 31, 2017, to determine the population of contracts and POs during the audit period.
- Selected samples of contracts with greater than \$1 million in spending in any one fiscal year from October 1, 2014, to July 31, 2017, as shown in Table 1 and reviewed contracts to determine if payment terms were accurate in Maximo (TVA's supply chain system). Since these were nonstatistical samples, the results of the samples cannot be projected to the population.

Contract Spend (in millions)	Population		Judgmental Sample		Nonstatistical Random Sample	
	No. of Items	Total Spend	No. of Items	Total Spend	No. of Items	Total Spend
> \$50	31	\$4,864,493,576	8	\$1,523,239,930	10	\$1,272,812,788
\$10-\$50	128	3,125,456,208	24	606,821,863	10	216,443,721
< \$10	454	1,682,600,582	47	186,158,623	10	69,327,943
<b>Total</b>	<b>613</b>	<b>\$9,672,550,366</b>	<b>79</b>	<b>\$2,316,220,416</b>	<b>30</b>	<b>\$1,561,584,452</b>

Table 1

- Judgmental Sample – Selected 79 contracts with approximately \$2.3 billion in total spend during the audit period. Our sample selection was based on (1) unusual discount percentages, (2) net payment days that appeared unusually long or short, (3) payment terms that varied between multiple contracts for one vendor, (4) payment terms that appeared unusual based on the type of contact, or (5) contracts without early payment discounts available where a discount had been taken.
- Nonstatistical Random Sample – Stratified the population and selected a nonstatistical random sample of 30 contracts with approximately \$1.56 billion in total spend during the audit period. We selected 10 contracts from those with greater than \$50 million in total spending during the audit period, 10 contracts from those with \$10 million to \$50 million in total spending during the audit period, and 10 contracts from those with less than \$10 million in total spending during the audit period using a random number generator.

- Performed data analysis to identify (1) the frequency of lost versus taken early payment discounts and (2) reasons for lost early payment discounts.
- Interviewed field invoice approvers and contracting officers to determine reasons for lost early payment discounts.

We did not identify internal controls significant to our audit objectives; therefore, internal controls were not tested as part of this audit. 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.

<b>Early Payment Discounts Taken and Lost October 1, 2014, to July 31, 2017</b>				
<b>Payment Terms</b>	<b>Discounts Taken</b>	<b>Discounts Lost</b>	<b>Effective Interest Rate*</b>	<b>Percentage of Discounts Lost</b>
2% 10 Disc Days, 15 Net Days	103,754	34,678	149.0%	25.1%
2% 15 Disc Days, 30 Net Days	134,645	63,692	49.7%	32.1%
2% 30 Disc Days, 45 Net Days	58,185	1,196	49.7%	2.0%
1% 21 Disc Days, 30 Net Days	11,775	1,169	41.0%	9.0%
2% 10 Disc Days, 30 Net Days	161,709	35,434	37.2%	18.0%
1% 20 Disc Days, 30 Net Days	27,273	11,237	36.9%	29.2%
3% 10 Disc Days, 45 Net Days	3,737	40,931	32.3%	91.6%
2% 19 Disc Days, 45 Net Days	16,456	0	28.6%	0.0%
1% 16 Disc Days, 30 Net Days	57,299	6,094	26.3%	9.6%
2% 16 Disc Days, 45 Net Days	1,627,058	251,255**	25.7%	13.4%
2% 15 Disc Days, 45 Net Days	157,796	21,765	24.8%	12.1%
1% 15 Disc Days, 30 Net Days	333,669	56,939	24.6%	14.6%
1% 30 Disc Days, 45 Net Days	8,435	20,382	24.6%	70.7%
2% 10 Disc Days, 45 Net Days	85,311	31,443	21.3%	26.9%
1.5% 15 Disc Days, 45 Net Days	44,190	4,136	18.5%	8.6%
1% 10 Disc Days, 30 Net Days	74,963	85,299	18.4%	53.2%
1% 21 Disc Days, 45 Net Days	6,297	9,994	15.4%	61.3%
0.5% 18 Disc Days, 30 Net Days	29,950	3,843	15.3%	11.4%
0.75% 10 Disc Days, 30 Net Days	5,931	2,580	13.8%	30.3%
1% 18 Disc Days, 45 Net Days	62	205	13.7%	76.8%
1% 16 Disc Days, 45 Net Days	112,335	45,151	12.7%	28.7%
1% 15 Disc Days, 45 Net Days	234,552	40,710	12.3%	14.8%
0.5% 30 Disc Days, 45 Net Days	65,667	1,562	12.2%	2.3%
1% 14 Disc Days, 45 Net Days	86	0	11.9%	0.0%
1% 13 Disc Days, 45 Net Days	11	0	11.5%	0.0%
1% 11 Disc Days, 45 Net Days	68	0	10.8%	0.0%
1% 10 Disc Days, 45 Net Days	257,045	60,269	10.5%	19.0%
1% 7 Disc Days, 45 Net Days	28,344	19,026	9.7%	40.2%
0.5% 11 Disc Days, 30 Net Days	0	241	9.7%	100.0%
0.5% 10 Disc Days, 30 Net Days	89,471	31,435	9.2%	26.0%
0.7% 15 Disc Days, 45 Net Days	2,470	15,947	8.6%	86.6%
0.75% 10 Disc Days, 45 Net Days	7,944	3,314	7.9%	29.4%
0.5% 15 Disc Days, 45 Net Days	11,115	5,746	6.1%	34.1%
0.25% 30 Disc Days, 45 Net Days	43,311	3,519	6.1%	7.5%
0.25% 15 Disc Days, 30 Net Days	3,844	602	6.1%	13.5%
0.5% 10 Disc Days, 45 Net Days	18,630	11,218	5.2%	37.6%
0.25% 15 Disc Days, 45 Net Days	15,060	3,954	3.0%	20.8%
0.05% 10 Disc Days, 30 Net Days	1,736	656	0.9%	27.4%
0.05% 15 Disc Days, 45 Net Days	278	448	0.6%	61.7%
1% 45 Disc Days, 45 Net Days	49,865	854	N/A	1.7%
1% 10 Disc Days, 10 Net Days	33,491	750	N/A	2.2%
2% 15 Disc Days, 15 Net Days	23,712	4,664	N/A	16.4%
1% 15 Disc Days, 15 Net Days	87	2	N/A	2.2%
<b>Totals</b>	<b>\$3,947,617</b>	<b>\$932,340</b>		<b>19.1%</b>

\* The effective interest rate is TVA's cost of money when the discount is not taken. The rates were calculated based on TVA paying 100 percent of the invoice amount on the last net day payment is due rather than the discounted invoice amount on the last discount day.

\*\* \$4,800 of the \$251,255 in lost discounts were previously reported in Audit Report 2015-15318, ABB, Inc. – Contract No. 4645, July 7, 2016.

Table 1

May 16, 2018

David P. Wheeler, ET 3C-K

RESPONSE TO REQUEST FOR COMMENTS – DRAFT AUDIT 2017-15500-EARLY  
PAYMENT DISCOUNTS ON VENDOR INVOICES

Reference: Memorandum from you to Rebecca Tolene and Diane Wear dated April 25, 2018

TVA's Supply Chain and Accounts Payable organizations have reviewed the draft Audit referenced above and wish to provide following responses for each recommendation from the Office of Inspector General (OIG):

- 1. Require contractors to submit invoices within a defined number of days of the actual invoice date so TVA can make payments in time to receive early payment discounts.**  
TVA's Contract Managers will remind contractors with early payment discount language in their contracts to submit invoices promptly after their invoice is developed and dated and in accordance with applicable contract requirements. Supply Chain's T-CAT team that is working with the Office of General Counsel to improve TVA's standard terms and conditions will review whether TVA's contract language regarding early payment discounts and prompt invoice submission can be clarified or enhanced.
- 2. Require contractors to update the invoice date on any invoice that requires corrections and has to be resubmitted to TVA.**  
TVA's Contract Managers will notify contractors with early payment discount language in their contracts to revise the date on invoices requiring correction so that invoice date correlates to submission of the corrected invoice. Separately, Supply Chain will look for contracts where it may be beneficial to require the contractor to informally submit a draft invoice for TVA's review, which then ensures that the invoice, when formally submitted, is correct and its date is current. Finally, the T-CAT team described above will review whether TVA's contract language regarding early payment discounts and prompt invoice submission can be clarified or enhanced with respect to the resubmission of invoiced that required correction.
- 3. Include early payment discount information in the e-mail notifications sent to the Field Invoice Approvers (FIAs) when an invoice is ready for review.**  
TVA agrees that this capability would be very helpful to FIAs and will explore how to revise Maximo so that it can automatically create such a notification.
- 4. Consider modifications in Maximo that would identify invoice with early payment discounts for FIAs.**  
TVA agrees that this capability would be very helpful to FIAs and will explore how to revise Maximo so that it can automatically identify for the FIA invoices that have early payment discounts.



David P. Wheeler  
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May 16, 2018

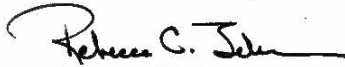
**5. Update contractual document to accurately reflect payment terms.**

Supply Chain will update current contracts to reflect actual agreed payment terms or payment practices when we become aware of a discrepancy.

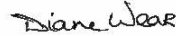
**Conclusion**

Supply Chain and Accounts Payable concur with each of the OIG's recommendations and will take action to implement them as described above. Please accept this correspondence as TVA's Management Decision.

We would like to thank Stephanie L. Simmons, Rick C. Underwood and the OIG staff for their professionalism and cooperation in conducting this audit. If you have further questions please contact Allan Trotter, Director – Sourcing, at 423-751-2913.



Rebecca C. Tolene  
Vice President, Supply Chain  
BR 5A-C



Diane T. Wear  
Vice President & Controller  
WT 4B-K

TLK:SAE:LEC

cc: Harvey R. Collins III, BR 5A-C  
Robertson D. Dickens, WT 9C-K  
M. Scott Fugate, WT 3A-K  
Janet D. Jones, WT 4A-K  
Dwain K. Lanier, MR 6D-C  
Michael D. Skaggs, WT 7B-K  
John M. Thomas III, MR 6D-C  
Gabriel A. Trotter, BR 5A-C