Department of Energy

Bonneville Power Administration
P.O. Box 3621
Portland, Oregon 97208-3621

PUBLIC AFFAIRS

December 15, 2006

In reply refer to: DK-7

Mr. Ted Sickinger
The Oregonian
1320 SW Broadway
Portland, OR 97201

RE: FOIA Request 07-004

Dear Mr. Sickinger:

This letter is in response to your request for information that you made to the Bonneville Power Administration (BPA), under the Freedom of Information Act (FOIA), 5 U.S.C. 552 on November 20, 2006, and logged in as request 07-004.

BPA has enclosed the responsive documents to meet your request regarding copies of "All Reports, audits, investigations concerning BPA's information technology contracting, budgeting and procurement processes. A list of IT vendors and contractors, and accounting of spending by project from FY 2000 to date."

Enclosures are as listed:

1. BPA Memorandum to Chuck Meyer – TM, dated January 10, 2003, Subject: Fact-Finding on Contract Payment Dispute in its entirety.
2. U.S. Department of Energy, Office of Inspector General, Office of Audit Services, Audit Report; dated February 2003, entitled "Information System Development Practices at the Bonneville and Western Area Power Administration."
3. BPA Memorandum with Enclosures, to Jane Selby – TM-DITT2, dated April 14, 2003, Subject: TM IT Project Procedures Flowchart in its entirety.
4. BPA Memorandum to Jan Selby – TM, dated September 4, 2003, Subject: Review of Softsmiths (Contract No. 00001236) withheld certain material pursuant to Exemption 4. Exemption 4 purpose is to "protect trade secrets and commercial or financial information obtained from a person that is privileged or confidential" and "could cause substantial harm to the competitive position of the person from whom the information was obtained. . . ."
5. OIG Memorandum with Attachments, to Stephen J. Wright, Administrator, Bonneville Power Administrator – dated February 4, 2004, Subject Audit Report on "Electricity Transmission Scheduling at the Bonneville Power Administration" in its entirety.

6. IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)
   (10/01/1999 to 12/13/2006)
7. IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)
   (10/01/1999 to 12/13/2006)

If you are dissatisfied with this determination, you may make an appeal within thirty (30) days of receipt of this letter to the Director, Office of Hearings and Appeals, Department of Energy, 1000 Independence Avenue SW, Washington, D.C. 20585. Both the envelope and the letter must be clearly marked "Freedom of Information Act Appeal."

I appreciate the opportunity to assist you with this matter. If you have any questions about this response, please contact my office at (503) 230-7303.

Sincerely,

/s/ Christina J. Brannon

Christina J. Brannon
Freedom of Information Officer

Enclosures

DOE F 1325.8e Electronic Form Approved by CILR – 10/08/2002
(06-89)

United States Government | Department of Energy

Bonneville Power Administration

memorandum

DATE: January 10, 2003

REPLY TO ATTN OF: KN-7

SUBJECT: Fact-Finding on Contract Payment Dispute

TO: Chuck Meyer - TM

During the week of December 8, 2002, Mr. Jim Stovel of Knowmatic, Inc. asked you to help resolve a payment dispute the company was having with BPA regarding Contract 00004844, Modification 13. He told you that Knowmatic had not been paid for licensed software (20 KM.Server licenses and 20 KM.Studio licenses) it had delivered to BPA pursuant to Modification 13. He said that he had been unable to resolve the matter with Mark Reynolds, the Contracting Officer's Technical Representative (COTR) and project manager for the contract, and Robert Gable, the Contracting Officer. You told Mr. Stovel that you would investigate the matter and get back to him. That same week, Mr. Reynolds told you that Mr. Stovel was misrepresenting the facts involved. He said that he had negotiated an option, not a firm order to purchase the Knowmatic licenses, and that BPA has no payment obligation. Subsequently, you asked us to review the circumstances surrounding Knowmatic's claim, including determining whether Mr. Reynolds authorized a firm order or merely an option to purchase, whether the transaction was properly budgeted for (i.e., capital or expense), and whether the purchased software had been properly delivered, installed, and/or secured.

In response, we interviewed the persons involved with the Knowmatic contract and Modification 13, and reviewed the contract files. The following is a summary of our findings. Also attached is a chronology of the events that gave rise to the dispute.

Modification 13 is order to purchase licenses and consulting services

All of the persons involved with negotiating Modification 13, including Mr. Reynolds, told us that the language in the modification represents an order to purchase 20 KM.Server and 20 KM.Studio licenses, as well as 6,000 hours of consulting services, for $2 million. We concur with this conclusion.

Vendor and BPA-TM lacked mutual understanding of BPA's acquisition intent

Mr. Reynolds said that, during the negotiation meetings on August 28 and 29, 2002, he told the attendees that (1) due to BPA's worsening financial condition, BPA-TM lacked funds to expand KM.Server licenses in FY02; (2) there was no formal matrix team action underway to purchase these licenses with capital funds; (3) the purchase would be subject to pressures on TM's expense budget and budgets of other using organizations; (4) BPA-TM had no intended application need for additional licenses; (5) BPA-TM did not have servers on which to install the licenses; and (6) pre-purchasing 6,000 service hours was inconsistent with BPA procurement policy. Mr. Reynolds said that, because of time constraints, he signed the cover sheet for Modification 13 without reviewing the modification and believed he was signing an option rather than a firm order to purchase.

In contrast, Burt Buser and Scott Selby (former Knowmatic, Inc. employees and parties to the negotiations) said they never heard Mr. Reynolds say that BPA-TM would purchase the software "as needed," or that he viewed the modification as an option to purchase and not a firm order. It was their impression that Mr. Reynolds (BPA-TM) wanted the licenses. Mr. Buser confirmed that Mr. Reynolds did not review the modification in detail when he signed the cover sheet.

Vendor employees' monetary interest may influence their recollection of negotiations

Both Mr. Buser and Mr. Selby told us their compensation with Knowmatic included a percentage of new revenue. Mr. Buser said that his compensation percentage for Modification 13 is 8 percent of the transaction value (8% x $2,000,000 = $160,000), and that he believed Mr. Selby's is 2 percent (2% x $2,000,000 = $40,000). Mr. Selby's monetary interest in the transaction was confirmed when you told us that Mr. Selby was considering withdrawing his compensation interest in the transaction (which he said was $40,000) because of conflict of interest concerns between him, his wife Jane Selby, and BPA.

Mr. Buser did not know Mr. Stovel's percentage interest in the transaction, but because Mr. Stovel was his senior, he believes it likely that Mr. Stovel would have an interest at least equal to his. Since two (and probably all) of the Knowmatic employees who negotiated Modification 13 would personally benefit if BPA purchased the software, their recollection of the negotiations surrounding that modification may be biased.

Vendor's delivery of software not consistent with established business practices

As summarized in the chronology, during the first half of September 2002, Mr. Greg Cermak, a Knowmatic consultant, delivered 20 KM.Server and 20 KM.Studio software licenses, valued at $2 million, to Mr. Reynolds' assistant, without obtaining a receipt of acceptance and with no apparent followup (such as e-mail) to inform Mr. Reynolds of the delivery.

BPA project managers, CO, COTR, and employees who use Knowmatic software told us that (1) they were not aware of any BPA employee ever installing Knowmatic software on BPA or customer equipment; (2) the business practice with Knowmatic involved the company or its subcontractor, Avanade, Inc., installing the software; and (3) the service arrangement with Knowmatic included installation and maintenance of that software. We believe the business practices between Knowmatic and BPA require that equipment be available to install the software on, and that Knowmatic or its subcontractor is responsible for installation as directed by BPA.

Mr. Reynolds said that, during negotiations on August 27 and 28, 2002, he told Knowmatic one reason BPA could not purchase the software at that time was because BPA-TM did not have servers to install it on and lacked a clear business application for its use. Mr. Buser also told us the BPA-TM servers were not available for immediate installation, but said he assumed BPA would purchase the equipment or reconfigure existing servers.

Considering established business practices with BPA-TM, Knowmatic should have known that BPA would not take delivery 'all at once,' nor commit to buy the software, until it had an application for its use and the equipment to install it on (or business plan to acquire the equipment in the near future). Because Knowmatic's delivery of the software is contrary to the established business practices described above, we doubt its delivery qualifies as a completed business transaction.

Authority for COTR to obligate BPA not given

Contract 00004844, Section 14-2 (b), states that the COTR is "...authorized to act on behalf of the Contracting Officer in all matters pertaining to the contract except: (1) contract modifications that change the contract price, technical requirements or time for performance, unless delegated field modification authority (see clause 24-25)." [Underlining added] Clause 24-25 (delegated modification authority) was not inserted in the contract.

We found no contractual language giving Mr. Reynolds authority to authorize amendments (modifications) that change the contract price. However, since the inception of the contract, the established business practices between the CO, Knowmatic, and the COTR conferred that authority on Mr. Reynolds.

Modification 13 not budgeted for and not entered into the work order accounting system

Based on our review of current task orders under Contract 00004844, we noted that the last task order entered into BPA-TBL's work order accounting system (PassPort) is Amendment 12 for $1,050,000 for FY 02, and that the total value of the contract to date is $4,451,250. We were told that Modification 13 was never entered into PassPort because the CO and COTR do not believe BPA-TM negotiated a firm order and the software had not been installed, and the CO, pursuant to contract clause 20-2 (a), will terminate the contract (Modification 13) for the convenience of the government.

If you have any additional questions regarding our findings or inquiry please contact Fred Lehr at extension 3537.

Mike Sparks, Manager
Internal Audit

Attachment

cc:
F.Lehr – KN
Official File (MN-17-11/36196-12)

FLehr/MSparks:jp:1/14/03(ReportTBLPaymentDispute.doc)

CHRONOLOGY

The following chronology is based on interviews and review of documentation involving Contract 00004844, and subsequent modifications.

Knowmatic contract - May 11, 2001

On May 11, 2001, the Bonneville Power Administration Transmission Business Line (BPA/TBL) entered into a time and materials contract with Knowmatic, Inc. (Contract No. 00004844) for the purchase of Knowmatic commercial software (KM.Server and KM.Studio), technical support, and custom application software development, for $409,375. During the subsequent fifteen months there were 12 non-contested modifications to the contract (Modification 12 was dated August 30, 2002) for a total value of $4,451,250.

While the contract did not give the Contracting Officer's Technical Representative (COTR), Mr. Mark Reynolds, the authority to sign contract modifications in BPA's behalf, the established business practices between Knowmatic and BPA-TBL shows that most of the contract modifications, including Modification 12 and the controversial Modification 13, were approved by Mr. Reynolds.

Proposal to acquire 20 additional KM.Server licenses - Week of Aug. 4, 2002

During the first week of August 2002, Mr. Reynolds recalls that Mr. Burt Buser of Knowmatic proposed that BPA acquire the option to purchase 20 additional KM.Server licenses and to extend the services of Knowmatic and its subcontractor (Avanade, Inc.) for an additional 12 months, and secure the hourly rate (i.e., raise the contract cost ceiling by $550,000).

Knowmatic reinterpretation of 3rd party licensing - Week of Aug. 12, 2002

During the second week of August 2002, Mr. Reynolds recalls discussing with Ms. Tara Exe (BPA-TM Project Manager on the Automated Scheduling Customer Interface – ASCI Project) Knowmatic's re-interpretation of its 3rd party licensing agreement with BPA and the company's Multiple Transmission Contract Holder (MTCH) definition. Mr. Reynolds said he asked Ms. Exe to have Mr. Robert Gable, BPA/Knowmatic Contracting Officer (CO), review Knowmatic's interpretation of 3rd party licensing to ensure that Knowmatic's MTCH definition was consistent with BPA policy/DOE regulations and commercial software practices. Mr. Reynolds said that, since he was never told that Knowmatic's MTCH definition was not consistent with BPA policy or DOE regulations, he assumed the definition was correct.

Negotiation meeting - Aug. 28, 2002

On August 28, 2002, Mr. Reynolds, and Mr. Jim Stovel, Mr. Buser, and Mr. Scott Selby of Knowmatic negotiated an increase in the contract ceiling by $550,000, and contract Modification 12 involving MTCH – ASCI. During that meeting the question of whether BPA should acquire 20 additional KM.Server licenses was also discussed.

Mr. Reynolds said Mr. Stovel wanted BPA to execute an additional task order to show expanding sales for its third quarter financial statements, which would favorably encourage the company's venture capital partners. Mr. Reynolds said he asked Knowmatic to put together a cost proposal and assumed the proposal involved an option to purchase.

Mr. Buser said that Mr. Reynolds asked Knowmatic to put together a cost proposal for the 20 licenses, and that the only issue for Mr. Reynolds was in which fiscal year the transaction should occur (i.e., FY 2002 or FY 2003). Mr. Selby said that, because he left the meeting temporarily, he did not hear Mr. Reynolds ask Knowmatic to put together a cost proposal. He said he was later told by Mr. Buser and Mr. Stovel that, during his absence, Mr. Reynolds had (1) said BPA-TM had additional funds to spend and wanted to use them to buy additional Knowmatic products and services, and (2) asked Knowmatic to put together the cost proposal (Modification 13). During the meeting summary, Mr. Selby said one of the action items that the attendees all agreed on (including Mr. Reynolds) was that Knowmatic would put together the cost proposal involving the 20 KM.Server licenses.

Mr. Buser said that he and Mr. Stovel had prepared the cost proposal for Modification 13 after they met on August 28, 2002. He said that he included the 6,000 hours in the proposal to ensure that the licenses would be properly used by BPA and to structure the transaction to allow BPA to capitalize the costs. Mr. Selby also said that, during the August 28, 2002, someone (he couldn't recall whether it was Mr. Reynolds, or Mr. Buser) suggested that including the 6,000 hours in the invoice was a way to capitalize the costs. Mr. Buser said that Knowmatic was giving BPA a best and final volume price.

Cost increase, modifications 12 and 13 acceptance/authorization lunch meeting - Aug. 29, 2002

On August 29, 2002, Mr. Reynolds, Mr. Stovel, Mr. Selby, and Mr. Buser met to finalize the $550,000 increase in the contract cost ceiling and the MTCH ASCI contract modification (Modification 12 for $750,000). During that meeting Knowmatic presented its cost proposal for the purchase of 20 additional KM.Server licenses and 6,000 hours of on-site consulting services (Modification 13).

Mr. Reynolds said that, due to time constraints, he never reviewed the proposal (Modification 13) before he signed the document, and assumed it was an option to purchase. Mr. Reynolds said he told the attendees that because of BPA's worsening financial condition TM monies were not available to move forward in FY 2002 with any expansion of KM.Server licenses, that there had been no formal matrix team action underway to purchase these licenses with capital funds, and that the purchase would be subject to pressures on TM's expense budget and budgets of other organizations. Mr. Reynolds recalls telling the attendees he would see if other BPA organizations might want the licenses, but couldn't guarantee BPA-TM would purchase them. Mr. Reynolds said that he told the attendees that BPA-TM had no application need for additional licenses, and did not have the servers on which the licenses could be installed.

Mr. Reynolds also recalls telling the attendees that pre-purchasing 6,000 service hours would be inconsistent with BPA procurement policy. In response, Mr. Reynolds recalls Mr. Stovel

suggesting that Knowmatic could sell BPA 6,000 hours of service and give the licenses for free if such an arrangement would support capitalizing the transaction. Mr. Reynolds told the attendees that there were other conditions for capitalizing pre-purchased labor, including: the cost had to be over $100,000, and the useful life had to be at least three years. After signing Modification 13, Mr. Reynolds said he asked the attendees to hand deliver both Modification 12 and Modification 13 to Mr. Gable for review and distribution. Mr. Reynolds said because past transactions and experience working with Knowmatic had never been a problem, he never verified whether Mr. Gable had received Modification 13. Mr. Reynolds said that at the time of the August 29 meeting, BPA-TM had no intended applications need for additional licenses nor did TM have servers for the licenses to be added on.

During the meeting of August 29, 2002, Mr. Buser and Mr. Selby recall that Knowmatic presented the cost proposal (Modification 13) to Mr. Reynolds. Mr. Buser recalls that Mr. Reynolds did not review the document in detail. Mr. Selby could not recall the extent of Mr. Reynolds' review of Modification 13. Both Mr. Buser and Mr. Selby recall that Mr. Reynolds asked how the 6,000 hours of consulting services would be used and who would perform the services for Knowmatic. Both Mr. Buser and Mr. Selby recall telling Mr. Reynolds that Mr. Greg Cermak, and Mr. Simon Kendal of Knowmatic, and others as necessary, would provide the 6,000 hours of consulting, and that the services would involve pushing data into a BPA-TBL portal page, which would be used by BPA's customers and the various account executives.

Both Mr. Buser and Mr. Selby said they never heard Mr. Reynolds tell the attendees that BPA would purchase the product 'as needed,' or that he was assuming the proposal was an option to purchase rather than a firm order. Both Mr. Buser and Mr. Selby said it was their impression that Mr. Reynolds (BPA-TM) wanted the licenses. Finally, Mr. Buser and Mr. Selby said they never heard Mr. Reynolds request that Knowmatic run the proposals (modifications 12 and 13) by Mr. Gable.

NOTE: Mr. Stovel and Mr. Selby told us that part of their compensation package with Knowmatic included a percentage of new revenues (sales,) and that the Knowmatic persons involved with the transaction had a monetary interest in modifications 12 and 13, and in the increased contract cost ceiling.

Box delivered to BPA by Knowmatic - Sept. 1 to Sept. 14, 2002

Ms. Wendy Barton-Santos, National Systems Research, Inc. (NSRI) contractor and assistant to Mark Reynolds, told us she received a box from Mr. Cermak (estimated time September 1 - 14, 2002). Ms. Barton-Santos said that Mr. Cermak asked her to give the box to Ms. Tony Sewell (NSRI contractor), assistant to Mr. Reynolds. At the time the box was delivered, Ms. Barton-Santos does not recall ever signing a receipt of acceptance for its delivery, or being asked too sign one. Subsequently, Ms. Tony Sewell recalls receiving the box from Ms. Barton-Santos and locking it in a common area file cabinet, until Mr. Reynolds asked her to bring it to a meeting room on November 27, 2002.

Both Mr. Buser and Mr. Selby said that delivering hard copy CDs to Mr. Reynolds' assistant without obtaining a receipt of acceptance was/is normal protocol. Mr.Buser said he would have followed up with an e-mail to Mr. Reynolds informing him that the product had been delivered.

NOTE: The BPA CO, COTR, project managers involved with the Knowmatic contract, and BPA employees that regularly use Knowmatic software told us that they were not aware of any BPA employee installing Knowmatic software on BPA or customer equipment, that Knowmatic and its subcontractor, Avanade, Inc., is responsible for installing Knowmatic software, and that the installation and maintenance of Knowmatic software is a service BPA-TM has purchased from Knowmatic.

Invoice clarification - Sept. 1 through Sept. 14, 2002

During the above estimated time frame (September 1 through 14, 2002) both Mr. Gable and Mr. Buser recall reviewing all prior Knowmatic task orders in order to determine the proper contract value and available funds. Mr. Buser said he made pen/ink changes to contract modifications 12 and 13 (i.e., contract Modification 12 to 14 and Modification 13 to 15) with the belief those changes were necessary to make modification numbers consistent with BPA's internal work order/task order accounting. Both Mr. Gable and Mr. Buser agree that prior task order accounting was confusing.

BPA receives invoice for $2 million on Modification 13 - Sept. 18 to Sept. 21, 2002

Between September 18 and 21, 2002, Mr. Scott Selby placed three Knowmatic invoices on Ms. Tara Exe's desk (work station) for modifications 12 and 13 ($750,000 and $2,000,000 respectively), and for an increase in the contract ceiling ($550,000). Mr. Selby said the invoices did not have the contract modifications attached.

During the first week of October 2002, Mr. Selby called Ms. Exe several times to determine the status of payment. After reviewing the invoices, Ms. Exe showed the documents to Mr. Reynolds and suggested that BPA shouldn't pay the $2 million invoice. Mr. Reynolds agreed.

Because the contract modifications were not attached to the invoices, Mr. Reynolds' assistants, Ms. Sewell and Ms. Barton-Santos, did not understand why BPA-TM was being invoiced. To support the invoices, Mr. Selby delivered copies of modification 12 and 13 (modified to 14 and 15) to Ms. Sewell and Ms. Barton-Santos during the week of October 7, 2002. After reviewing the modifications, Ms. Sewell and Ms. Barton-Santos said they asked Ms. Exe for instructions and were told not to process Modification 13, and to have Mr. Reynolds review the documents. Ms. Barton-Santos, Ms. Sewell and Ms. Exe said they didn't understand or recognize the pen/ink changed modification numbers or the initials on the documents.

On October 23, 2002, Ms. Exe responded by e-mail to Mr. Selby's earlier phone calls explaining that the date stamp on the Knowmatic invoices showed that BPA-TM received them on October 1, 2002, and that BPA had until the end of October to make payment. Around late October 2002, Mr. Selby said he met with Mr. Gable to inquire about the status of payment.

On October 24, 2002, a meeting was held to advise Mr. Gable of on-going issues on the Knowmatic contract. Ms. Sewell, Ms. Barton-Santos, Ms. Exe, Mr. Reynolds, Mr. Gable, and Ms. Amy Clark (AZAD Contractor - Assistant on the ASCI Project) attended the meeting. During the meeting Mr. Reynolds was shown the physical Knowmatic invoice for the 20 KM.Server and 20 KM.Studio licenses and 6,000 hours of consulting services. Mr. Reynolds said that this was the first time he recalls examining the invoice. Ms. Exe gave Mr. Gable the $2 million invoice and other outstanding Knowmatic invoices.

KM.Server and KM.Studio 4.2 licenses discovered at BPA – Nov. 27 and Dec. 3, 2002

On November 27, 2002, Ms. Rose Ann Lafferty (BPA Public Utility Specialist – TMC) recalls that during a meeting with Mr. Gable and Mr. Reynolds, Mr. Reynolds called Ms. Barton-Santos and asked her to bring the box of Knowmatic CDs to the meeting room. Ms. Lafferty recalls that, although the box was open, the 'bubble-wrap' seal had not been broken.

During a meeting on December 3, 2002, with Mr. Reynolds, Ms. Lafferty, and Mr. Gable of BPA, and Mr. Jim Stovel, Ms. Jona Khandekar and Mr. Andre Simone of Knowmatic, the matter of whether BPA had actually received the 20 licensed CDs was discussed. After that meeting, Mr. Stovel inquired with Mr. Cermak regarding the delivery of the 20 licensed CDs. Mr. Cermak told Mr. Stovel that the licenses had been delivered to Ms. Barton-Santos. Ms. Lafferty said that, at that moment, she realized that the box she had received from Ms. Barton-Santos in October, probably contained the 20 CDs. Ms. Lafferty said she and Mr. Stovel, Ms. Khandekar, and Mr. Simone went to her work station and opened the 'bubble-wrap' CDs noting that there were 20 KM.Studio and 20 KM.Server software licenses (CDs). Ms. Lafferty locked the box and its contents in a lektriver file cabinet on the second floor of the Dittmer Control Center.

BPA advises Knowmatic of possible termination for convenience - Nov. 19, 2002

During the first week of November 1, 2002, Mr. Reynolds met with his staff including Ms. Exe, Ms. Lafferty, and others to determine whether BPA needed additional KM.Server licenses. During that meeting it was concluded that BPA-TM didn't need additional licenses, but before any decision regarding licenses could be made BPA-TM needed an accurate accounting that showed where existing KM.Server and KM.Studio software licenses had been installed.

On November 19, 2002, Mr. Reynolds, Mr. Gable, Ms. Sewell, of BPA, and Mr. Stovel, Mr. Simone, Ms. Khandekar, and Mr. Selby, of Knowmatic met to discuss various matters. During that meeting Mr. Reynolds said he told Knowmatic that BPA-TM didn't want or need the 20 KM.Server and 20 KM.Studio software licenses, and that, if necessary, BPA-TM had the option to partially terminate contract Modification 13 for convenience of the government. Mr. Reynolds also said he told Knowmatic that BPA needed and wanted an accurate accounting of where Knowmatic licenses had been installed at BPA.

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(08-93)

United States Government

Department of Energy
Office of Inspector General

Memorandum

DATE: February 4, 2004

REPLY TO
ATTN OF: IG-30 (A03DN036)

SUBJECT: Audit Report on "Electricity Transmission Scheduling at the Bonneville Power Administration"

TO: Stephen J. Wright, Administrator, Bonneville Power Administration

Attached is the subject report. The objective of the audit was to determine whether the Bonneville Power Administration has a scheduling system in place to meet current and future transmission needs in an automated, deregulated environment.

The Electricity Transmission Management System (ETMS) cannot yet meet Bonneville's need for rapid, reliable, and accurate transmission scheduling. Bonneville originally expected to have such a system fully operational by June 2000, but has yet to accomplish this. This is due to the lack of a comprehensive project plan, system development and implementation procedures, and standardized transmission contracts. Correcting these deficiencies will allow Bonneville to enhance the operation of its transmission grid by allowing it to react more quickly to disruptive events.

Your comments indicated that you concurred with the specific recommendations, but the corrective actions identified for Recommendation 1(a) are not fully responsive to the intent of the recommendations. They indicated that Bonneville had already examined alternatives based on a prior consultant review. However, the purpose of that review was to perform a risk assessment of the ETMS, not to evaluate available options. Therefore, in order to be responsive to the recommendation, Bonneville needs to submit a Management Decision related to recommendation 1(a) in accordance with DOE Order 221.3. Paragraphs 4.h. through 4.j. of the directive describe the procedures for preparing and processing the Management Decision. The reply is due to the Chief Financial Officer 70 days from the date of this report.

We appreciated the cooperation of your staff during the review.

William S. Maharay
Deputy Inspector General
for Audit Services
Office of Inspector General

Attachments

cc: Team Leader, Audit Liaison, ME-1.1
Audit Liaison, Bonneville Power Administration

OE F 1325.8
08-93)

United States Government

Department of Energy
Office of Inspector General

Memorandum

DATE: February 4, 2004

REPLY TO
ATTN OF: IG-30 (A03DN036)

SUBJECT: Audit Report on "Electricity Transmission Scheduling at the Bonneville Power Administration"

TO: Team Leader, Audit Liaison Team (ME-1.1)

Attached is the subject report with management's comments. Management concurred with all four recommendations, but its proposed corrective actions for Recommendation 1(a) were not fully responsive to the intent of the recommendations. Bonneville's comments indicated that it had already examined alternatives based on a prior consultant review of its Electricity Transmission Management System (ETMS). However, the purpose of that review was to perform a risk assessment of the ETMS, not to evaluate available options. Therefore, a Management Decision is required including a corrective action plan for recommendation 1(a).

The proposed corrective actions for Recommendations 1(b), 1(c), and 2 were fully responsive. Additionally, the recommendations are open and should be tracked in the Department's Audit Report Tracking System.

We appreciate your cooperation.

Frederick D. Doggett
Assistant Inspector General
for Audit Services
Office of Inspector General

Attachments

cc: Administrator, Bonneville Power Administration
Audit Liaison, Bonneville Power Administration

U.S. Department of Energy
Office of Inspector General
Office of Audit Services

Audit Report

Electricity Transmission Scheduling at the Bonneville Power Administration

DOE/IG-0637

February 2004

Department of Energy

Washington, DC 20585

February 4, 2004

MEMORANDUM FOR THE SECRETARY

FROM: Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: Audit Report on "Electricity Transmission Scheduling at the Bonneville Power Administration"

BACKGROUND

The Department of Energy's four power marketing administrations are responsible for marketing, selling, and transmitting power produced largely at various Federal dams. Bonneville Power Administration (Bonneville), the largest of the power marketing administrations, is responsible for a territory of 300,000 square miles including Oregon, Washington, Idaho, western Montana, and small portions of several adjoining states. Bonneville's transmission system–which includes over 15,000 miles of transmission lines–accounts for about three-quarters of the high-voltage grid in the Pacific Northwest. Bonneville's system also includes major links with other regions, and other utility customers transmit power across Bonneville's transmission lines.

In April 1999, the North American Electric Reliability Council published functional specifications for electronic tags, in order to standardize the processing of transmission transactions. Currently, Bonneville relies primarily on its real-time operations dispatch and scheduling system (RODS), which was developed in the 1970s, to schedule transmission transactions across its grid. To meet new requirements, Bonneville initiated development of the Electricity Transaction Management System (ETMS) project in July 1999.

The objective of this audit was to determine whether Bonneville has a scheduling system in place to meet current and future transmission needs in an automated, deregulated environment.

RESULTS OF AUDIT

Bonneville is currently operating a hybrid system of both RODS and ETMS in order to schedule transmission transactions. This ad hoc arrangement does not fully meet its needs in the current operating environment. Bonneville originally expected to have ETMS fully operational by June 2000, but has yet to accomplish this. Specifically, ETMS cannot yet meet the need for rapid, reliable, and accurate electronic tagging and scheduling of a large volume of complex transmission transactions. Bonneville's management of the ETMS, a $25 million effort, lacked a comprehensive project plan, and system development and implementation procedures. Additionally, the effectiveness of the project management effort was hampered by the lack of standardized transmission contacts, which made it difficult to develop software codes to handle the nuances of each unique contact.

Printed with soy ink on recycled paper

Correcting these deficiencies will benefit Bonneville and its transmission partners by minimizing future risk and expenditures. For example, automated scheduling would enhance Bonneville's electrical transmission grid by allowing Bonneville to react more quickly to disruptive events, such as a May 2003 incident in which Bonneville exceeded the operating capacity of one of its transmission lines. Moreover, Bonneville will have to spend substantial funds beyond its investment to date to complete ETMS if it is to provide a fully functioning automated scheduling capability, as originally intended.

Other electric industry participants have had success in implementing automated scheduling systems, partly because they properly considered alternatives. For example, after a 3-month pilot project to develop an automated scheduling system, Western Area Power Administration (Western) identified cost and performance concerns for one of its regions. Based on its evaluation of the pilot and its examination of a number of alternatives, Western chose a different development strategy using a combination of contractors and in-house developers. This region now has a fully functional automated scheduling system. While we recognize that Bonneville's and Western's system requirements and operations are significantly different, Bonneville could benefit from a thorough analysis of all options to acquire an automated scheduling system.

MANAGEMENT REACTION

Bonneville management, in responding to a draft of this report, concurred with the recommendations and agreed to take corrective actions. Management expressed the view that the draft report contained some incorrect observations. We addressed these concerns in the final report. Management also stated that, since the beginning of the project, it had faced a fluid environment from changing industry technology, business practices, and regulation and customer concerns and needs, and that these challenges made managing the ETMS difficult. We recognize management's point, but believe that in such an environment it would have been especially important to establish a definitive baseline and change control process to facilitate achieving the project goals. Management's verbatim comments are included as Appendix 3.

Attachment

cc: Deputy Secretary
Under Secretary for Energy, Science and Environment
Administrator, Bonneville Power Administration

ELECTRICITY TRANSMISSION SCHEDULING AT THE BONNEVILLE POWER ADMINISTRATION

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TRANSMISSION SCHEDULING SYSTEM

Background

Changes in the electric industry's regulatory environment have created the need to standardize and automate the processing of transmission transactions. In 1996, the Federal Energy Regulatory Commission (FERC) issued Order 888 requiring utilities to provide open access to their transmission systems. The intent of this order was to remove impediments to competition and move toward deregulation in the electric power industry. Over the past few years, the movement towards deregulation has resulted in an exponential increase in both the complexity and volume of transmission data. Therefore, transactions must be handled more efficiently than in the past. To meet this need, the North American Electric Reliability Council (NERC) has standardized transmission processing requirements across the United States and Canada.

NERC intended standardization to occur through the use of electronic tags (e-tags) for each transaction. E-tags are submitted by customers, and describe a transmission transaction from its point of origin to its final destination. They also contain information on the physical path of the transaction and the amount of power to be transmitted. NERC first published functional specifications for e-tags in April 1999. About this time, the Bonneville Power Administration (Bonneville) recognized the need to automate its transmission scheduling to operate in the modernized business environment and to address FERC and NERC directives.

Scheduling System

Bonneville does not have a scheduling system in place that meets its needs in an automated, deregulated environment. Bonneville's Transmission Business Line has been using the real-time operations dispatch and scheduling system (RODS) for over 30 years to schedule transmission across its lines. However, RODS is an antiquated system that cannot perform as required in an automated, deregulated environment. It requires users to manually process transmission requests. Therefore, Bonneville contracted with a company in July 1999 to develop the Electricity Transaction Management System (ETMS), which would automate the transmission scheduling process. Bonneville originally expected ETMS to be fully implemented by June 2000. As of December 2003, ETMS is not fully implemented and Bonneville is uncertain when that will occur. As such, schedulers–the users of ETMS– must operate a hybrid system of both RODS and ETMS in order to schedule and track transmission transactions.

Although ETMS has undergone development and implementation for over 4 years, it has not demonstrated satisfactory performance. For instance, according to the contract, ETMS should be capable of processing at least one e-tag every 3 seconds. However, ETMS is often slow, and it can take minutes rather than seconds to process an e-tag. Also, ETMS "crashes" frequently without notification to the schedulers that it is down. The schedulers do not receive any e-tags when ETMS is down and only become aware of the problem when they receive phone calls from frustrated customers requesting action on e-tags. Furthermore, the system does not always provide accurate information. For example, ETMS recently displayed an e-tag with an incorrect value of one billion megawatts. When the schedulers examined the e-tag further, they found that the supporting data package for the e-tag showed only 21 megawatts, which was the correct value. As these problems have persisted throughout the years, schedulers have become skeptical about ETMS's ability to perform adequately.

In response to our draft report, Bonneville stated that a significant number of ETMS functions are now operational. While we recognize that some capabilities are functional, the system is still incapable of replacing RODS and meeting the demands of the automated, deregulated business environment.

During the audit, Bonneville began performing a "gap analysis" to determine the functionality of ETMS and to identify what components are necessary to achieve full implementation. The analysis will assist Bonneville in determining the remaining scope of the project, as well as future cost and schedule requirements. While we see the analysis as positive, it would have been helpful to conduct it much earlier in the project. In addition, the completed analysis should be used as a tool to thoroughly examine all alternatives available. These alternatives include completing ETMS with the current contractor, using other contractors, in-house development, or some combination if needed.

Other electric industry participants have found such an examination to be useful. For example, in 1999, the Department of Energy's (Department) Western Area Power Administration (Western) initiated a 3-month pilot project to develop an automated scheduling system for one of its regions. However, at the end of the pilot, Western examined other alternatives, since it had encountered significant cost and performance concerns. Western then chose a different development strategy using a combination of contractors and in-house developers. This region currently has a fully functional automated scheduling system in place.

In responding to the draft report, Bonneville stated that the reference to Western's approach was inappropriate considering the differences in magnitude and complexity between the two systems. However, inclusion of the example in the report was not provided to advocate a particular solution. Rather, it was provided to underscore the need to assess alternatives throughout the whole system development process.

Project Execution

When Bonneville initiated the effort to convert transmission scheduling to an automated system, key project management controls were overlooked. Specifically, Bonneville did not develop a comprehensive project plan prior to initiating system development activities or adequately involve users in the project. Also, we found that Bonneville lacked adequate internal policies or procedures to govern system development and implementation. Finally, a lack of standardization on Bonneville's transmission contracts made it inherently difficult to develop software codes to handle the nuances of each unique contract.

Project Plan

According to the Department's "Information Systems Engineering Guidance," effective project management includes developing an overall project plan with a clearly identified work scope, and measurable cost and schedule milestones. However, Bonneville did not develop a detailed, comprehensive project plan for ETMS, even though it is a large, complex project. Without such a project plan, the scope and requirements of ETMS were not clearly defined. Therefore, frequent changes were made throughout the development of ETMS. Although some changes were driven by external regulatory requirements, a substantial amount were a result of internal requests from Bonneville.

User Input

Also, Bonneville did not consistently involve the schedulers in the development of ETMS. For example, they were not consulted about changes that impacted the functional capability of ETMS. It is important that the schedulers be involved in all aspects of system selection and development to ensure that their needs are adequately met. In turn, this would increase the likelihood that the schedulers will feel a commitment to the success of automated scheduling. In addition, many "work-around" systems were developed to help bridge the gap between RODS and ETMS. Unfortunately, these work-around systems often created more work for the schedulers. Management recently recognized these systems were detracting from the focus on full implementation of ETMS and, therefore, terminated some of them.

System Development Procedures

Bonneville lacks formal, consistent policies and procedures to govern system development and implementation projects such as ETMS. Though the Department has established software development guidance, no one we spoke with at Bonneville indicated that this or other system development or project management guidance was used in the development of ETMS.

Lack of guidance for information technology projects contributed to many of ETMS's past development problems. The Department's guidance outlines the need for knowledgeable project managers and good stakeholder communication plans. However, project management personnel did not have sufficient information technology knowledge or experience. To its credit, Bonneville had assigned a project manager with such expertise to ETMS. However, this position has recently been vacated, and it is important that Bonneville fill this vacancy with a project manager possessing similar information technology knowledge and experience.

Additionally, Bonneville's Chief Information Officer is in the process of initiating Project Management Offices (PMOs) within each business line. The PMOs are intended to disseminate policies and guidance to the business lines and standardize the project management approach across Bonneville. Given the developmental problems associated with ETMS, we fully support these efforts and encourage their timely implementation.

Transmission Contracts

A business decision by Bonneville not to standardize its transmission contracts–which provide input data to ETMS–made it inherently difficult to develop software codes to handle the nuances of each unique contract. For example, 31 percent of Bonneville's current transmission contracts require special coding and programming in order to make automation work. Therefore, most development work has been focused on customizing ETMS to accommodate these non-standardized contracts and their varied product types. Although Bonneville originally purchased ETMS with the intent of deploying a commercial "off-the-shelf" software package, it has been customized to such an extent that it can no longer be considered off-the-shelf.

Minimizing Risk and Expenditures

Fully automated scheduling tools would enhance the electrical transmission grid by allowing Bonneville to respond to and minimize potentially disruptive events. For example, on May 28, 2003, Bonneville exceeded the operating capacity on one of its transmission lines. In order to function within that capacity, the dispatchers requested the schedulers to make changes to the transmission schedules. The schedulers were not able to make the changes quickly enough, partly because the existing scheduling tools are inadequate. As a result, Bonneville exceeded the operating capacity for over 30 minutes, and received a letter of reprimand from one of NERC's regions.

We recognize that dispatchers have the authority to take any action to maintain the reliability of the transmission grid. However, having the necessary automated scheduling tools would allow Bonneville schedulers access to precise information, enabling them to react more quickly to changes and reducing the pressure on dispatchers to act. Furthermore, adequate scheduling tools would better enable Bonneville to make changes to transmission schedules in accordance with Bonneville's transmission tariff and contractual obligations, reducing the financial risk associated with those changes.

Moreover, Bonneville has spent considerable funds to develop an automated scheduling capability. The original contract amount was for approximately $2 million, but numerous contract modifications arising from changes in scope and requirements have increased the cost of ETMS. An internal management review conducted by Bonneville indicated that estimated costs for implementation of ETMS through Fiscal Year 2003 are at least $25 million. Additionally, Bonneville will have to incur further costs to fully automate its transmission scheduling function.

In responding to our draft report, Bonneville stated that the $2 million was for the purchase of 12 licensing agreements, maintenance of those agreements, and initial customization products that did not represent the fully functional system Bonneville believed it would ultimately need. Further, it was known that the scheduling system would need to accommodate changes in requirements. We have concluded that regardless of the point at which a full system was envisioned, Bonneville needs a detailed project plan to better estimate the total costs of a complete scheduling system.

Because the system was still not functional, Bonneville developed other interim systems to bridge the gap. For example, Bonneville spent at least $3.7 million on a system designed to provide transition support from RODS to ETMS for Bonneville's customers. This system no longer supports ETMS; however, Bonneville officials told us that it is being used elsewhere in Bonneville. In the future, implementing sound project management principles should help Bonneville minimize such expenditures.

RECOMMENDATIONS

We recommend that the Bonneville Administrator:

1. Direct Transmission Business Line management to:

   a. Thoroughly identify and analyze all options to acquire an automated scheduling system and solicit scheduler input to select the most efficient and cost-effective option;

   b. Develop and implement a comprehensive, detailed project plan with realistic milestones and deliverables for the chosen option; and,

   c. Consider standardizing future transmission contract provisions and product types to facilitate automation of the scheduling system to the greatest extent possible.

2. Accelerate efforts to implement Project Management Offices across Bonneville and utilize existing Federal system development guidance.

MANAGEMENT AND AUDITOR COMMENTS

Bonneville management concurred with the recommendations and agreed to take corrective actions. However, Bonneville was concerned that the report contained some incorrect observations. We have addressed most of these concerns throughout the report and included management's verbatim response as Appendix 3. Three additional matters relating to management comments are addressed below.

Bonneville alleged that the auditors did not interview the original contracting officer for ETMS. However, the audit team met with numerous employees and functional experts from the Transmission Business Line. In particular, the team interviewed the contracting officer referenced in Bonneville's comments.

In addition, management stated that the scheduling and reliability functions are largely independent of each other. Based on discussions with management officials, we have revised the report to more precisely characterize the relationship between the two functions. While we recognize that the dispatchers can intervene to help prevent capacity violations, an up-to-date scheduling function would minimize the need to exercise such a measure and protect Bonneville's financial interests as well.

Finally, while management concurred with the recommendations, its corrective action for recommendation 1(a) is not fully responsive. Specifically, in concurring with recommendation 1(a), Bonneville stated that an analysis of options took place in early Fiscal Year 2003 as part of a consultant review. However, based on our review, we concluded that the purpose of the report was to perform a risk assessment of the ETMS project and not to evaluate available options. The report provided many recommendations on how to improve the ETMS development effort, but did not consider other options outside of the existing contractor. As such, we believe that additional steps are necessary to address the intent of recommendation 1(a).

PRIOR AUDIT REPORTS

- *Commercial Off-The-Shelf Software Acquisition Framework* (DOE/IG-0463, March 2000). This report concluded that the Department of Energy had not developed and implemented software standards, a key component of a commercial off-the-shelf acquisition framework. The Department's inability to establish a framework was due to its decentralized information technology strategy and a lack of organizational support. Also, Department-wide software standards, necessary to support an acquisition framework, had not been established.

- *Implementation of Integrated Business Information Systems Within the Department of Energy* (DOE/IG-0466, April 2000). This audit report found that of eight contractors selected, two contractors had not implemented integrated business information systems. One contractor terminated its project to implement an integrated information system after investing 9 months and $11.5 million, and the other contractor terminated its project after spending over 2 years in development and $3.6 million in related costs. The contractors did not follow Federal and Departmental guidelines for software projects. For example, project plans were not prepared, and the project scope was not adequately defined. As a result, the Department received no appreciable benefit from the $15.1 million invested in the new systems at these sites.

- *Information System Development Practices at the Bonneville and Western Area Power Administrations* (DOE/IG-0586, February 2003). The report concluded that Bonneville and Western information system development activities were not always consistent with Federal requirements or guidance. Significant problems were found with 9 out of the 11 major projects reviewed. For example, the absence of key system development activities such as conducting an initial cost-benefit analysis and close monitoring for a Bonneville project contributed to schedule slippages of over two years and the write-off of about $9 million for the abandoned portion of the system development. Also, development delays of more than two years, and modifications costing more than $600,000 to a commercial off-the-shelf application, occurred because Bonneville did not perform a detailed analysis to identify shortfalls or examine opportunities to improve existing business processes prior to implementation.

Appendix 2

OBJECTIVE

The objective of the audit was to determine whether the Bonneville Power Administration (Bonneville) has a scheduling system in place to meet current and future transmission needs in an automated, deregulated environment.

SCOPE

The audit was performed at Bonneville in Portland, Oregon, and Vancouver, Washington, between May and December 2003. The audit covered Bonneville's efforts to develop and implement the Electricity Transaction Management System (ETMS) between July 1999 and December 2003.

METHODOLOGY

To accomplish our objective, we:

- Held discussions with program officials and personnel from Bonneville's Transmission Business Line, as well as Bonneville contract employees;
- Reviewed the ETMS contract and documentation related to system development and ETMS implementation;
- Observed transmission scheduling operations within Bonneville; and,
- Reviewed the *Government Performance and Results Act of 1993* and determined if performance plans and measures had been established.

The audit was performed in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to the extent necessary to satisfy the audit objective. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We generally did not rely on computer-processed data to accomplish our audit objective.

We discussed the audit results with Bonneville management on January 15, 2004.

United States Government

Department of Energy
Bonneville Power Administration

DATE: November 17, 2003

REPLY TO ATTN OF: TM/Ditt2

SUBJECT: Response to Draft Audit

Office of the Inspector General (OIG)

This responds to your draft audit that examined a BPA information technology development project, known as the Electricity Transaction Management System (ETMS). ETMS supports transmission scheduling and is replacing BPA's Real-Time Operations Dispatch and Scheduling System (RODS). BPA concurs in your recommendations, specifically:

1a. We have extended our efforts to identify and analyze options. In October 2002 we hired the Tellefson Consulting Group to analyze our efforts and evaluate options available to us. We accepted their recommendation to "stay the course" by having SoftSmith continue to adapt its application software to meet BPA's unique needs. We agreed with Tellefson's finding that this is the most efficient and cost-effective option available for achieving the full functionality that we need. We have instituted new, formal communication processes to improve involvement of scheduling staff, end users and customers in the further development of the ETMS project plan and rollout.

1b. We are in the process of developing and implementing an updated project plan that is more comprehensive and detailed. It will include realistic milestones for the deliverables. We have reassigned organizational responsibility for ETMS and brought in a new management team, with greater IT experience, to oversee the project. We are aggressively tracking and managing expenditures.

1c. We are reviewing current transmission product offerings for potential reductions in complexity and increased ease in implementation of scheduling automation. About 7,500 megawatts of BPA's 30,000 megawatts of long-term transmission demand is under long-term contracts that pre-date our 1996 Open Access Transmission Tariff (OATT) and guarantee a complex array of product features. The cost to renegotiate these legacy contacts could be prohibitive. We note, too, that Federal Energy Regulatory Commission (FERC) changed the product features they required under OATT during our development of the ETMS project, and recent FERC decisions have greatly expanded requirements of utilities to offer partial interim service and modifications of service on a firm basis.

2. We will accelerate our Project Management Officer initiatives across BPA. These are in alignment with Department of Energy guidelines. A PMO has been set up for the ETMS project.

While we believe that your recommendations are sound, we are disturbed that the draft report contained many factually incorrect observations. We note that the OIG audit team did not interview the contracting officer who handled the contract from the beginning of the project through 2002. Due to the limitations that you place on the length of this response, we will address only the most seriously misleading of your findings:

First, your draft report painted a bleak picture of unreliability on the BPA transmission system should ETMS not be implemented fully and quickly. After further work, the OIG audit team found that this was incorrect, assured us that this characterization would not appear in your final report, and provided revised language regarding how ETMS would "enhance" reliability. This revision does not adequately convey the fact that the scheduling and reliability functions are largely independent of each other. Schedulers focus on the marketing function. BPA's dispatchers have ultimate responsibility for assuring that the transmission system stays operational in the face of unplanned, unintended or unpredictable events. Dispatchers will do whatever is necessary, including override schedules and re-dispatch generation, to ensure physical reliability of the system. Dispatchers possess a number of tools to manage system reliability, including instability detection systems, automated switching, remedial action schemes and standing orders for manual intervention. ETMS may reduce "economic damage" but it will not substitute for the reliability assurance of dispatch.

Second, your draft report would have the reader believe that costs for a scheduling system to replace RODS had ballooned from $2 million to $25 million. The $2-million figure actually refers to a $1.78 million purchase of 12 licensing agreements with SoftSmith, maintenance of those agreements and some initial customization products that did not comprise, in our view at the time, the full functionality we believed we would need. The ETMS statement of work at the time also made clear our expectation that the scheduling system development effort would need to accommodate changes in requirements that could be many and complex – a continuing challenge to the contractor.

Invoices for project work through the end of fiscal year 2003 now total about $25 million, but our estimate for the remaining work to bring us into full compliance with FERC, NERC and WECC standards and to set the stage for ongoing support of the still-evolving scheduling function is about $9 million. The total is in alignment with the costs other schedulers are incurring to upgrade the more complex systems, which we have found to range up to $40 million. BPA's scheduling operation is the second largest in North America. Consequently, your audit's reference point to work done on the Western Area Power Administration's very small system does not reflect a true comparison to BPA's scope, number of transactions or system complexity.

Finally, your draft report suggests that moving our system from RODS to ETMS is largely unfinished, with no timetable for completion. In fact, a significant number of functions are now operational on ETMS, including:

The database to track operating transfer capability; automated search functions to track electronic tags for customers; electronic web interfaces to allow customers to view their scheduling requests in real time; automated functions to calculate available transmission capacity (ATC); automated check-out functions to allow BPA to compare and confirm schedules with utilities in adjacent control areas; automatic upload of power schedules from BPA's Power Business Line; automatic information access to verify reservation requests from the transmission contracts database; automated screen view of 24-hour checkout process; upgraded OASIS interface to verify reservations and ATC; upgraded screens to assist in troubleshooting scheduling discrepancies; screens to track reservations, contract data and capacity; automated access for customer inputs of schedules; search mechanism to access all ETMS data; automated tagging system to process electronic tags; and the association of schedules with tags.

Work remains to be completed on the following:

Several product/service categories; automated tag verification procedures; completing automated checkout tools; ATC functionality for several transmission paths; completing curtailment functionality; completing interface to automatic generation control; completing interfaces with Dispatch and Operations; developing transmission loss calculation functionality; improved and enhanced performance; and implementing ancillary services functionality.

Since the beginning of the project, we have faced a fluid environment from changing industry technology, business practices, regulation and customer concerns and needs. Since 2002, we have engaged more aggressive project direction and new management oversight. Our objective is to complete all portions of the project that are necessary to meet WECC requirements by 2005.

If you have any questions, please contact Charles E. Meyer, Vice President for Transmission Marketing and Sales at (360) 418-8244.

Sincerely,

Jeffrey K. Stier, Vice President
National Relations

IG Report No.: DOE/IG-0637

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U.S. Department of Energy
Office of Inspector General
Office of Audit Services

Audit Report

Information System Development Practices at the Bonneville and Western Area Power Administrations

DOE/IG-0586

February 2003

Department of Energy

Washington, DC 20585

February 21, 2003

MEMORANDUM FOR THE SECRETARY

FROM: Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: Audit Report on "Information System Development Practices at the Bonneville and Western Area Power Administrations"

BACKGROUND

The Department of Energy's Power Marketing Administrations are responsible for marketing, selling and transmitting electric power produced largely at various Federal dams to wholesale customers throughout the United States. The Bonneville and Western Area Power Administrations (Bonneville and Western) comprise the vast majority of this activity in the Department. To accomplish their missions, these organizations operate high-voltage energy transmission lines that may cross numerous states and are supported by a complex and critical information technology infrastructure. This infrastructure includes information systems to manage key business operations such as power generation, power and transmission billing, and power grid maintenance activities.

The Office of Inspector General has undertaken a number of reviews designed to evaluate the performance of the Department's information technology program. Based on this work, we concluded, in our *Special Report on Management Challenges at the Department of Energy* (DOE/IG-0580, December 2002), that information technology is one of the most significant management challenges facing the Department. Because of the importance of this issue, we initiated an audit to assess the Bonneville and Western information system development activities.

RESULTS OF AUDIT

Bonneville and Western information system development activities were not always consistent with Federal requirements or guidance. Specifically, we found significant problems with 9 of the 11 major projects included in our review. For example:

- The absence of key system development activities, such as conducting an initial cost-benefit analysis and close monitoring for a major Bonneville project, contributed to schedule slippages of over two years and the write-off of approximately $9 million for the abandoned portion of the system development;

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- Development delays of more than two years and modifications, costing more than $600,000, to a commercial off-the-shelf application occurred because Bonneville did not perform a detailed analysis to identify shortfalls or examine opportunities to improve existing business processes prior to implementation; and,

- Western permitted three of its regional offices to develop and maintain separate billing information systems, despite having the same core purpose. We concluded that the Department and Western could have enjoyed significant cost savings had the development and maintenance of these separate systems been avoided.

In addition, neither Bonneville nor Western was able to assess the benefits versus resource expenditures for development efforts because project managers did not consistently account for all relevant project costs.

We identified a number of areas in which system development activities could be improved. For instance, program elements had not coordinated all development activities and a number of program-level activities had not been subject to the Chief Information Officer's (CIOs) review. Consequently, management often lacked information necessary to properly evaluate investment decisions and did not take sufficient action to prevent or ameliorate significant implementation delays and project cost overruns totaling over $11 million.

To their credit, Bonneville and Western have recently formed an Information Technology Alliance comprised of CIOs and other information technology officials that periodically meets to discuss topics of mutual interest, such as opportunities to share innovative technology solutions. Western also implemented a process to facilitate the coordination of enterprise-wide applications and knowledge sharing among its regions. In addition, Bonneville and Western have formed individual information technology executive councils that are briefed on projects specific to each location. We noted, however, that while the respective CIOs are members, the councils do not actively monitor and oversee all projects on an ongoing basis.

We recommended that Bonneville and Western strengthen controls over development activities and require that all projects be coordinated and monitored by the respective CIOs.

MANAGEMENT REACTION

Western and Bonneville management concurred with our recommendations and indicated that they had taken or initiated corrective action.

Attachment

cc: Deputy Secretary
Administrator, Bonneville Power Administration
Administrator, Western Area Power Administration
Director, Office of Management, Budget and Evaluation/Chief Financial Officer
Chief Information Officer

INFORMATION SYSTEM DEVELOPMENT PRACTICES AT THE BONNEVILLE AND WESTERN AREA POWER ADMINISTRATIONS

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SYSTEM DEVELOPMENT

Development Activities

Our review of 11 major projects (see Appendix 1) disclosed that information systems development activities were not always consistent with Federal requirements or guidance. We found development problems with nine of the projects. For example:

- Key planning activities such as cost-benefit analyses had not been performed for eight of the projects we reviewed;
- Evaluations of suitability of potential software solutions were often inadequate or had not been performed;
- Many projects were not adequately monitored and controlled throughout their lifecycle, and project baselines and plans were not revisited in light of scope changes or delays; and,
- For 6 of the 11 projects reviewed, reengineering studies designed to improve business processes before beginning development had not been conducted.

In addition, Bonneville and Western did not consistently include all relevant project costs in accounting for its development efforts.

Project Planning, Monitoring, and Control Examples

In October 1999, Bonneville determined that a new billing system was critically needed due to major changes in the energy industry. The system was intended to replace a legacy system, generate electronic statements, and interface with the corporate accounting system. The new system was to be used by both of Bonneville's major operating units, the Power and the Transmission Business Lines. While initial project costs and timeframe baselines were estimated and a project plan was developed, an initial cost-benefit analysis was not performed. Additionally, planning and baseline documents were not revised to reflect numerous contract modifications and an estimated schedule slippage of over two years. These factors contributed to the termination of the transmission billing portion of the development contract and an increase in the projected cost to produce usable systems to support both business lines.

In another example, the Bonneville Power Business Line initiated a development project designed to replace a largely manual process for tracking power market trading floor transactions. Because the planned system was based on a model already in use at various utilities, management believed it could be easily implemented. Although

Bonneville performed some limited testing of the proposed system, it began development without performing a detailed analysis of its suitability. In addition, even though Bonneville was automating a largely manual process, it did not examine opportunities to reengineer and improve the existing business processes. Further, management was unable to determine if overall project costs were reasonable because a cost-benefit analysis was not performed. Subsequently, this development project experienced unanticipated modifications that cost over $600,000.

Additionally, three of Western's four regional offices independently developed and maintained separate billing information systems despite having the same core purpose. Specifically, Western permitted its Desert Southwest, Sierra Nevada, and Upper Great Plains Regions to develop separate power billing systems even though they had the same core functions. While Western considered consolidating its various billing systems, it did not perform a detailed analysis to evaluate commonalities or the extent of duplication occasioned by using separate, stand-alone systems. To its credit, after considering a number of options, the Rocky Mountain Region ultimately adopted the system in use by Sierra Nevada rather than initiating a fourth development effort.

Cost Accounting

Contrary to Office of Management and Budget policy requiring accurate and complete lifecycle cost analysis, Bonneville and Western did not consistently collect or report all relevant information technology related project costs. For instance, project managers did not always accumulate all development costs such as Federal/contractor labor and overhead costs associated with the project. Bonneville and Western management told us they were unable to consistently provide accurate project costs because costs were not centrally managed and there were no local requirements to track all costs over the project's lifecycle. Due to deficiencies in the process for accumulating costs, we were unable to either confirm actual project costs or accurately compare costs against initial estimates.

Guidance and Oversight

Bonneville and Western development activities experienced difficulties because management had not instituted an adequate system development methodology. For the 11 projects we reviewed, system development methodologies varied widely. In addition, a lack of thorough and consistent monitoring and oversight of projects by the

Chief Information Officers (CIOs) contributed to the identified problems with systems development. Specifically, program elements did not coordinate all system development activities with the CIOs.

Both Bonneville's business lines and Western's regional offices planned, developed and implemented information systems independent of the respective CIO's involvement. The Bonneville CIO only oversaw about three percent of the estimated $100 million information technology budget and only had oversight authority over corporate systems. He did not oversee many significant business-line specific projects, such as the Power Billing System development. At Western, the regional offices controlled individual information technology budgets, and only enterprise-wide projects fell within the purview of the CIO. Thus, the CIO did not review all region-specific system development and upgrade initiatives.

Schedule and Cost

These observed development issues contributed to cost increases, delays, and end products that did not always meet users' needs. In addition, top-level management at Bonneville and Western often lacked sufficient information to properly evaluate investment decisions. They did not act quickly to prevent or ameliorate project cost overruns totaling over $11 million as well as extensive project delays. We noted delays of two years or more for 4 of the 11 system implementations reviewed. In addition, some projects were cancelled or significantly revised because the end-products did not meet users' needs. As an example, inadequate monitoring and control of Bonneville's development of a power and transmission billing system contributed to the termination of the transmission billing portion of the development contract, the write-off of approximately $9 million in development costs, and a $5 million increase in the projected cost to produce usable billing systems. For Bonneville's power market trading floor tracking system, inadequate planning and preparation contributed to unanticipated modifications and a rise in estimated project costs from about $1.2 million to over $1.8 million. Furthermore, costs for many of the 11 projects were likely understated due to inadequate accounting for project costs. Without complete cost information, management lacked sufficient information to fully evaluate the cost of information technology project costs versus the benefit to be derived.

RECOMMENDATIONS

To improve the management of information system development activities, we recommend that the Administrators for Bonneville and Western require the:

1. Development and consistent implementation of a comprehensive information system development methodology, to include accounting for all relevant project costs.

2. Coordination of all information system development activities with the CIO to ensure that all projects receive adequate monitoring, oversight, and evaluation throughout their lifecycle.

MANAGEMENT REACTION

Western and Bonneville management concurred with our recommendations and indicated that they had taken or initiated corrective action.

Western, however, noted that its three regional power billing systems were developed specifically to support the region that they served. Western management indicated that the functionality of existing power billing systems was examined before initiating new development, and that a path was chosen after evaluating the cost and breadth of the customization required for existing systems. Management also noted that the three power billing systems were developed in 1994, 1997, and 1999, prior to the establishment of the position of Chief Information Officer in Western in 2000.

Bonneville management indicated that acquisition decisions for major information system developments are supported by in-depth cost benefit analyses and due diligence examinations of vendors and their products. Nevertheless, Bonneville stated that the most diligent planning and monitoring could not prevent the damage associated with vendor bankruptcy, a significant factor in the ultimate abandonment of a portion of its billing system at a loss of $9 million.

AUDITOR COMMENTS

We recognize that the development of Western's power billing systems was completed prior to establishing the position of Chief Information Officer and that officials conducted some analysis of the cost of modifying existing systems. However, Western did not take into consideration the continuing costs of operating, maintaining, and upgrading three separate billing systems. Federal policy requires that management fully consider the costs and benefits of alternative approaches before initiating a development effort.

With regard to Bonneville's development of its Transmission Business Line billing systems, we acknowledge that the project management weaknesses identified in our report were not the sole cause of the $9 million loss. During our audit we learned that the vendor was experiencing business difficulties, and had been for a long period, but had not declared bankruptcy. As noted in Federal systems development guidance, the application of sound project management practices may have helped management identify vendor difficulties and could have permitted an orderly transfer of the development effort to another firm.

SYSTEM DEVELOPMENT PROJECTS REVIEWED

Bonneville Power Administration	
Power Business Line – Information Factory Project	$20,940,000
Power Business Line – Power Billing System	14,054,000
Transmission Business Line – Transmission Billing System	11,299,630
Power Business Line – Transaction Scheduling System (TSS)	9,300,000
Power Business Line – Generation Management System	7,500,000
Transmission Business Line – RODS Transition to ETMS/ BCS Project	2,175,000
Power Business Line – KW3000 System	1,810,800
Transmission Business Line – COMPASS Phase II Project	200,000

Western Area Power Administration	
BIDSS/MAXIMO Upgrade Project	$11,400,000
Rocky Mountain Region TIGER Project	1,562,955
Rocky Mountain Region Power Billing System	124,500

Appendix 2

OBJECTIVE AND SCOPE

The objective of our audit was to determine whether the Bonneville and Western Area Power Administrations' information systems development activities are consistent with Federal requirements and guidance.

The audit was performed between May and November 2002 at the Bonneville Power Administration in Portland, OR, and at the Western Area Power Administration in Lakewood, CO. We did not include the Southeastern and Southwestern Power Administrations within the scope of this audit due to their limited system development activities.

METHODOLOGY

To accomplish our objectives, we:

- Reviewed applicable laws and regulations pertaining to the use and acquisition of information technology. We also reviewed reports issued by the Office of Inspector General and the General Accounting Office;
- Reviewed best practices contained in guidance issued by the Office of Management and Budget, the National Institute of Standards and Technology, the General Accounting Office, and other noted organizations;
- Reviewed the *Government Performance and Results Act of 1993* and determined if performance plans and measures had been established;
- Reviewed numerous documents related to systems development at the Bonneville and Western Area Power Administrations, including system development policy and guidance and documentation for 11 major projects; and,
- Held discussions with program officials and personnel from the Bonneville and Western Area Power Administrations' Headquarters, regional offices, and business lines.

The audit was conducted in accordance with generally accepted Government auditing standards for performance audits and included tests of internal controls and compliance with laws and regulations to

the extent necessary to satisfy the audit objectives. Accordingly, we assessed internal controls regarding the development and implementation of information systems. Because our review was limited, it would not necessarily have disclosed all internal control deficiencies that may have existed at the time of our audit. We did not rely on computer-processed data to accomplish our audit objectives. We held exit conferences with management officials on December 9 and 10, 2002.

Appendix 3

PRIOR REPORTS

OFFICE OF INSPECTOR GENERAL REPORTS

- *Special Report on Management Challenges at the Department of Energy* (DOE/IG-0580, December 2002). Information technology management remains one of the most serious challenges facing the Department. Although progress has been made in establishing management processes to control information technology planning and investment, and cyber security, the Department must still effectively implement these processes to, among other things, avoid system duplication and minimize vulnerabilities.

- *Power Marketing Administrations' Installation of Fiber Optics* (WR-B-02-01, October 2001). Bonneville and Western were installing fiber optic communication cables that exceeded their operational needs and exceeded the operational needs of utilities with similar requirements. By revising the installation to current and planned operational needs, the PMAs could save approximately $13 to $16 million in unnecessary costs.

- *The Department of Energy's Implementation of the Clinger-Cohen Act of 1996* (DOE/IG-0507, June 2001). The Department had not been completely successful in implementing the requirements of the Clinger-Cohen Act of 1996. Specifically, the Department had not closely monitored policy implementation efforts that resulted in inconsistent adherence to policies. The Department's decentralized approach to information technology management and the organizational placement of the CIO caused these weaknesses. Also, the CIO lacked the authority necessary to ensure that policy implementation is consistent across the complex.

- *The U.S. Department of Energy's Corporate Human Resource Information System* (DOE/IG-0494, February 2001). The Department did not adhere to project planning requirements for the Corporate Human Resource Information System (CHRIS) project. As a consequence, full implementation of CHRIS was not anticipated until Fiscal Year 2005, six years after the original forecast. In addition, the final cost will be about $20.4 million or 155 percent greater than the original estimate. Because of implementation delays and projected cost overruns, it is unlikely that the Department will achieve the project's original estimate of approximately $9.6 million in savings.

- *Audit of Bonneville Power Administration's Management of Information Resources* (WR-B-96-06, April 1996). Bonneville's management of computer-related equipment was found to be adequate. However, improvements could be made in implementing credit card and property procedures. Specifically, these procedures included control over credit card purchases, ensuring that equipment was tagged and included in property records, maintaining accountability over spare parts, and identifying unused equipment.

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(8-89)
EFG (07-90)

United States Government — Department of Energy

Bonneville Power Administration

Memorandum

DATE: January 28, 2003

REPLY TO ATTN OF: A-7

SUBJECT: Response to Draft Report on "Information System Development Practices at the Bonneville and Western Area Power Administrations"

TO: Frederick D. Doggett, IG-30 (A02AT010)
Deputy Assistant Inspector General for Audit Services
Office of Inspector General

Thank you for the opportunity to comment on your draft report of the subject audit. Our comments are limited to portions of the report concerning the Bonneville Power Administration (BPA). This response reflects BPA's current efforts to improve the management of our IT infrastructure, efforts that will receive the same rigor and vigor as we are applying to the IT Alliance of the Federal Power Marketing Administrations.

Comments:

Contained in the "Results of Audit" section are observations of several system development activities at BPA for which we offer the following additional information to ensure accuracy of your report.

Major Information System development or acquisition decisions at BPA are supported by in-depth cost benefit analysis and a due diligence examination of vendors and their products provided by nationally recognized energy utility information system intelligence resources. Nevertheless, the most diligent planning and monitoring process for information systems investments cannot prevent the damage resulting from vendor bankruptcy. The collapse of the Transmission Business Line billing system vendor was a significant factor in the difficulties we experienced developing the new billing systems and the ultimate abandonment of a portion of one system at a loss of $9 million.

Management Reaction:

We agree with your Recommendation 1; "Development and consistent implementation of a comprehensive information systems development methodology, to include accounting for all relevant project costs."

Early in calendar year 2001, BPA's Office of the Chief Information Officer (OCIO) initiated an Enterprise Architecture (EA) strategy for lifecycle management of Information System development, investment monitoring and asset management. This EA strategy is based on the Zachman Architecture model, which is endorsed by the National Federal Chief Information Officer's Council. A component of this comprehensive EA approach is an enterprise Information Technology (IT) Investment Management control process.

In mid-2002, BPA engaged in an executive sponsored IT process re-engineering effort to improve the Agency-wide management of IT that we are implementing. New project management methods that we are implementing will provide project status reporting in a consistent timely, and accurate fashion. The systems referenced in the "Results of Audit" section of your report commenced in 1999 and have not had the benefit of these improvements.

We also agree with your Recommendation 2; "Coordination of all information system development activities with the CIO to ensure that all projects receive adequate monitoring, oversight, and evaluation throughout their lifecycle."

BPA's OCIO is the Agency focal point for IT policy, planning and governance. During the past six months, BPA has implemented improved processes for IT investment management to bring it in line with the Office of Management and Budget Circular A-11 approach.

An additional outcome of the IT process re-engineering effort was the formation of the Business Automation Council (BAC), which consists of both Business and IT managers. It is chartered to actively monitor and oversee all IT investments and initiatives and to optimize for the agency. The BAC is chaired by the CIO.

The BAC, through the CIO, is accountable to the Agency's Business Operations Board, which is comprised of senior executives of the Agency. The board directs and assures the integrated development and operation of all support systems and processes that serve BPA's business lines and program offices.

If you have any questions please contact Brian Furumasu, Acting Chief Information Officer at 503-230-3690.

Jeffrey K. Stier
Vice President for National Relations

Department of Energy
Western Area Power Administration
P.O. Box 281213
Lakewood, CO 80228-8213

JAN 15 2003

MEMORANDUM FOR FREDERICK D. DOGGETT, IG-30 (A02AT010)
DEPUTY ASSISTANT INSPECTOR GENERAL FOR AUDIT SERVICES

FROM: MICHAEL S. HACSKAYLO
ADMINISTRATOR

SUBJECT: Response to Draft Report on "Information System Development Practices at the Bonneville and Western Area Power Administrations"

Thank you for the opportunity to comment on your draft report of the subject audit.

Comment. At the top of page 2 of the report, the third bullet beneath the heading "RESULTS OF AUDIT" reads "Western permitted three of its regional offices to develop and maintain separate billing information systems, despite having the same core purpose." While three power billing systems do exist within Western Area Power Administration (Western), each billing system was developed specifically to support the operation and customer structure for the region they serve. Each meets the unique regulatory requirements existing in that region for interface with scheduling and reservation of transmission capacity and e-tagging systems. Very little functionality is redundant between systems. The development or re-engineering of a single power billing system with enough functionality to meet all four sets of regional customer and regulatory requirements would have cost substantially more than did the tailoring of the three smaller systems. In each case, the functionality of existing power billing systems was examined prior to initiating new development, and the new development was chosen as the path of least cost after evaluating the cost and breadth of the customization needed to make the existing systems support the additional requirements.

Management Reaction. The draft report recommends that I require "the development and consistent implementation of a comprehensive software development methodology, to include accounting for all relevant project costs." I concur. To address consistency in development, Western will adapt the DOE guidelines for methodologies commensurate with complexity and size of the Western project. The Western Chief Information Officer Council (WCIOC) already has adopted standard Investment Proposal templates and procedures used to document associated project costs, benefits, and new development decisions. To address project cost accounting and business case development,

Western hired an information technology (IT) capital planning specialist in December 2002. The specialist will track system life-cycle costs in conjunction with OMB Exhibits 53 and 300B planning and execution.

The draft report also recommends that I require the coordination of all information system development activities within Western's Chief Information Officer (CIO) to ensure that all projects receive adequate monitoring, oversight, and evaluation throughout their lifecycle. I concur. I note that the three power billing systems mentioned in this report were implemented respectively in 1994, 1997, and 1999, while I established the Western CIO position in April 2000 in accordance with the Clinger-Cohen Act. Since the CIO position was established, Western has implemented a process for coordination of Western-wide applications and knowledge sharing among its regions. The WCIOC ensures coordination of IT planning and development projects. Additionally, Western formally embraced project management in 1998 and since October 2002 we further strengthened our approach to project management. Project planning now includes cost accounting and life-cycle management as major milestones. A project management advisory group has been established to provide project management oversight. The discipline is being applied using OMB Exhibits 53 and 300B thresholds.

If you have any questions, please contact J. Eun Moredock, Chief Information Officer, at 720-962-7241.

cc:
George Collard, IG-34, Building GTN, Germantown, MD
Daniel Weeber, IG-345, Pittsburgh, PA
Robert Porter, Power Marketing Liaison Office, Washington, DC

United States Government | Department of Energy
Bonneville Power Administration

memorandum

DATE: April 14, 2003

REPLY TO ATTN OF: KN-7

SUBJECT: TM IT Project Procedures Flowchart

TO: Jane Selby – TM-DITT2

During November 2002, you were informed that persons within TBL Marketing & Sales (TM), had obligated TM for contract work that had not been negotiated or authorized by the Contracting Officer. You also discovered that many IT vendor invoices for TM, were not being properly reviewed, certified and processed; that the administrative staff responsible for handling those invoices had not received appropriate training; and that TM had no written procedures for the administration of IT projects. To establish baseline documentation for administering IT projects, you asked us to assist TM in developing flowchart documentation describing those process and procedures.

Using Project Management Institute methodology, and working with knowledgeable persons on your staff, we developed a comprehensive flowchart for administering expense and capital IT projects. As illustrated in the flowchart index, there are 29 flowchart operations involving four project phases: Initiation, Planning, Monitoring and Closing. Most of those operations cover processes and procedures that are generic to both internal and contractor resources, and capital and expense projects. Operation 10 and 15 apply to internal (BPA) resource project administration, and Operations 11 through 14, and 16 through 21 apply to contract administration issues.

While the flowchart does provide general guidance on how TM should administer IT projects, it is not a substitute for training involving contract administration and the Bonneville Purchasing Instructions (BPI).

Enclosed are five copies of that flowchart and narrative for your review. Additional copies are available upon request. If we can be of further assistance, please feel free to contact Fred Lehr, at (503) 230-3537.

Mike Sparks, Manager
Internal Audit

Enclosures

cc:
F. Lehr - KN7
R. Gable - TLC-MODW
A. Scholl - TL-WHSE-EAST
C. Meyer - TM-DITT2
R. Swann - TLC-MODW
D. Stevens - TM-CSB-2
Official File – KN (MN-17-11/36149-10)

Bonneville Power Administration (BPA), Transmission Business Line (TBL), Marketing & Sales (TM), Information Technology (IT) Project Administration Procedures Flowchart

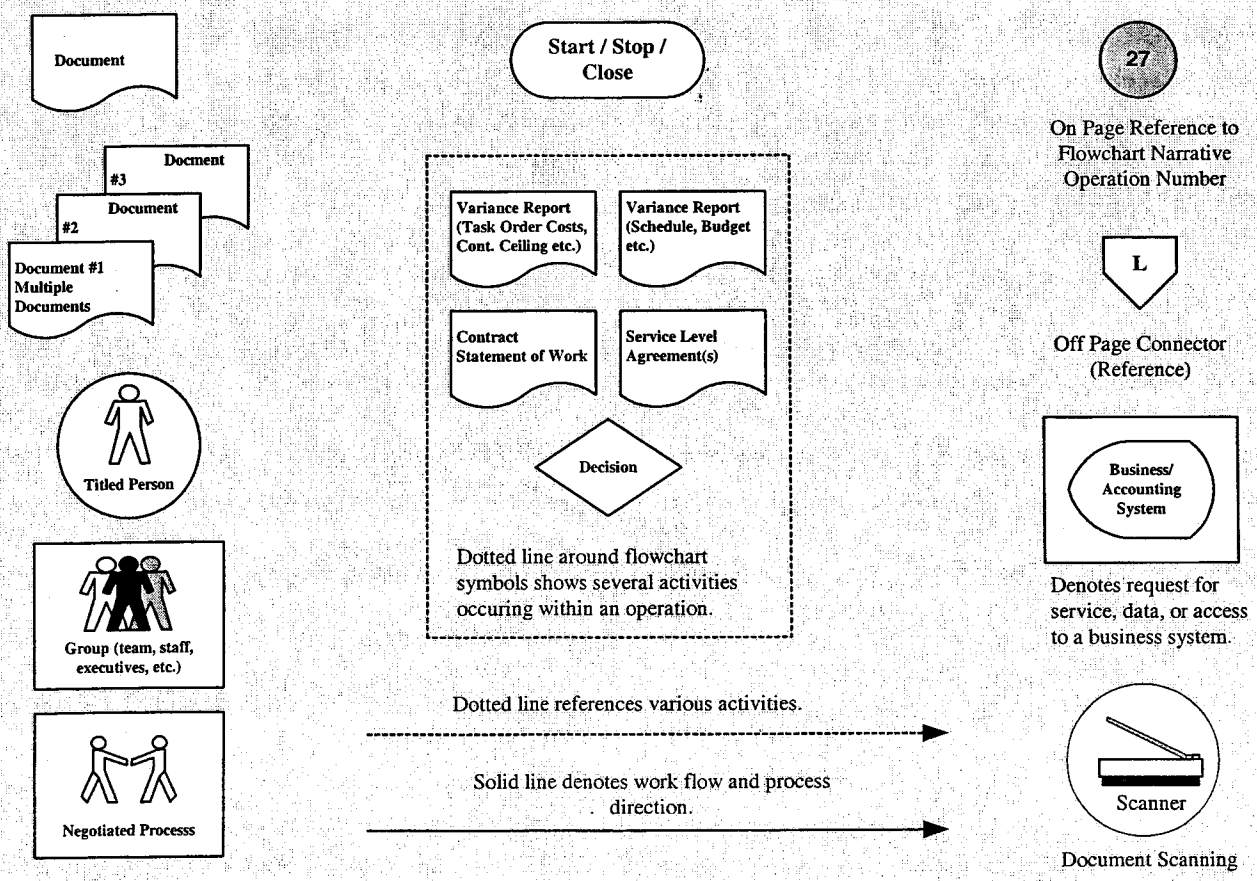
PURPOSE

The flowchart documents the processes and procedures to be used by BPA TBL's Marketing & Sales organization (TM) for managing and administering information technology (IT) capital and expense projects. To ensure that TBL IT related projects that use contractor resources are managed in accordance with the Bonneville Purchasing Instructions (BPI), the processes and procedures described in the flowchart require that project managers, Contracting Officer Technical Representatives (COTR), Contracting Officers (CO), and other staff that processes vendor invoices understand their duties and responsibilities.

INDEX

	OPERATION NUMBER		
	Both I/C	Internal (I)	Contract (C)
Project Initiation Process (January 1 through June 30)	1		
Expense Projects	2 - 3		
Capital Projects	4 - 7		
Project Planning Process (July 1 through September 30)	8 - 9	10	11 - 14
Project Monitoring & Control (October 1 through September 30)		15	16 - 21
Project Status Review	22 - 23		
Project Changes (Capital & Expense Projects)	24 - 26		
Project Closing (October 1 through December 31)	27 - 29		

FLOWCHART LEGEND



BPA - TBL - TM - IT Project Administration Procedures Flowchart

PROJECT INITIATION PROCESS - (January 1 through June 30)

1 Between 1/1 and 3/1, TM Internal Operations Manager begin a series of discussions with the TM IT Oversight Team. The Oversight Team consists of the IT Contract Manager (COTR), Transmission Marketing Managers, and various TM IT Project Managers. The purpose is to identify, rank and develop preliminary capital and expense project estimates.

(a) The TM IT Oversight Team shall evaluate prior years' IT projects, to identify mistakes, errors, failures and success. The team should determine if the projects were within acceptable budget parameters, on schedule, how well the contractors performed, and if they achieved the desired benefits. (See Operation 28 and 29).
(b) The TM IT Oversight Team will review TBL's up-coming year's strategic objectives and capital investment strategies, to understand TBL's direction for new IT expense and capital projects, so they can determine which projects to initiate, retain or cancel.
(c) Based on (a) and (b) above, the TM IT Oversight team, will: identify new expense and capital projects, and prepare written justifications for their importance to TBL.
(d) The TM IT Oversight Team will assign preliminary Project Managers to develop preliminary project cost estimates, and and start and completion dates for the newly proposed expense and capital projects.
(e) Based on the parameters discussed in (c) and (d) above, the TM IT Oversight Team, will group the proposed projects into capital and expense (current year) categories.

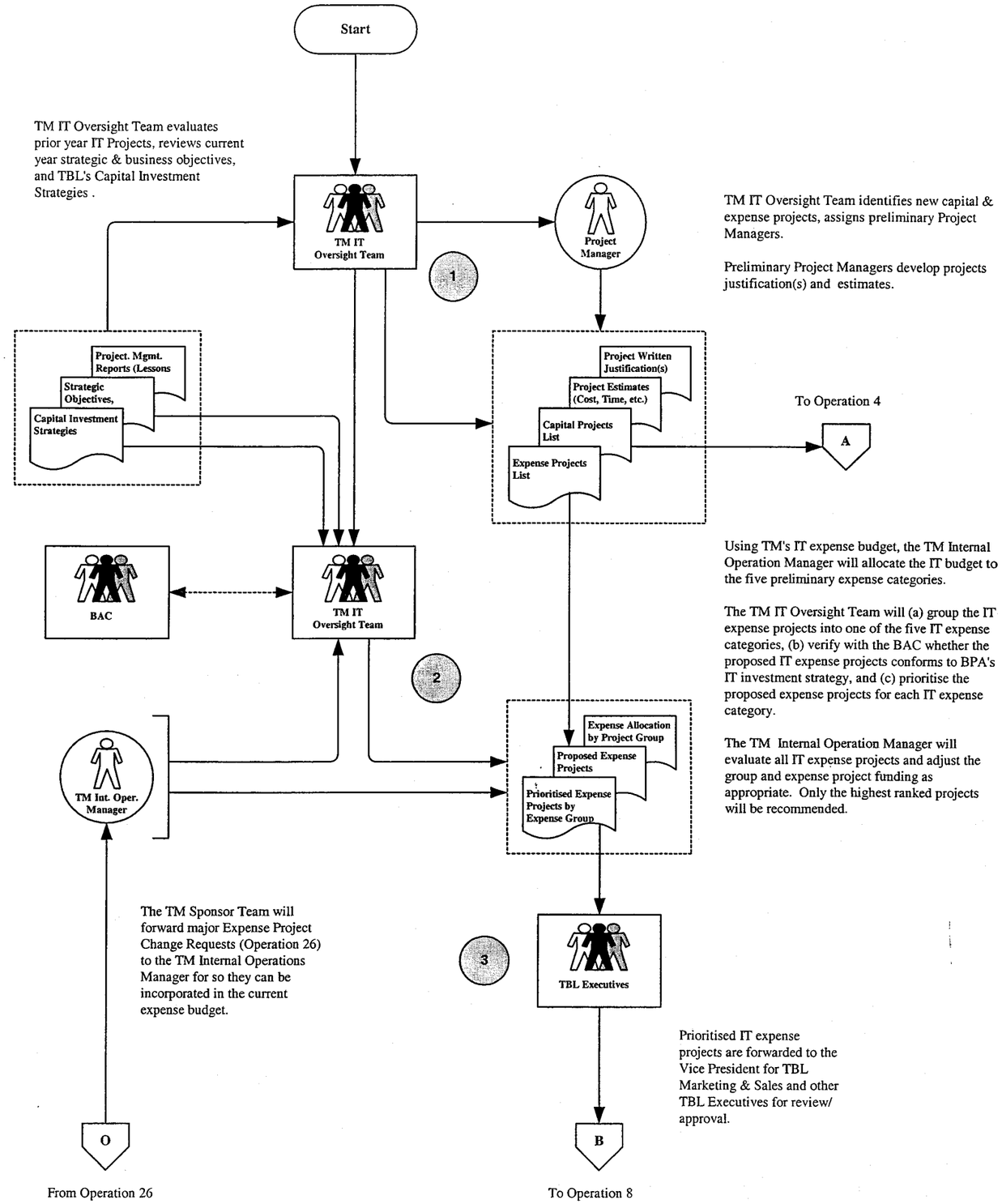
Project Initiation - Expense Projects

2 Between 3 / 1 and 6 / 1, TM will prioritize the projects identified in operation one, that qualify as a current year expense and will allocate current year TM IT budgetary funds to them.

(a) After the preliminary IT expense budget is allocated, the TM Internal Operations Manager will establish preliminary expense targets for the five IT expense project categories. (See NOTE below)
(b) The TM IT Oversight Team will group the expense projects into their respective expense categories.
(c) The TM IT Oversight Team will consult with TBL's Business Automation Counsel (BAC) to determine whether the proposed expense IT project conforms to BPA's IT investment strategy.
(d) Using the strategic investment criteria as a guide, the TM IT Oversight Team, will prioritize (rank) the proposed expense projects for each IT expense category.
(e) The TM Internal Operations Manager will evaluate all IT expense projects for all categories, and adjust the group funding as necessary/appropriate.
(f) The TM Internal Operations Manager will issue a final expense budget allocation for each IT expense project. Only the highest ranked projects within the expense group that fall within the allocated TM expense budgetary targets will be will be implementated.

NOTE: The five IT Expense project categories include: on going maintenance (sustaining operations), IT project support, small projects that don't meet the capitalization criteria, management oversight, and non specific activities.

3 Between 6 / 1 and 6 / 30, the TM IT recommended expense projects (by budgetary group) are forwarded to the TBL executives for review and approval.



PROJECT INITIATION PROCESS (Continued)

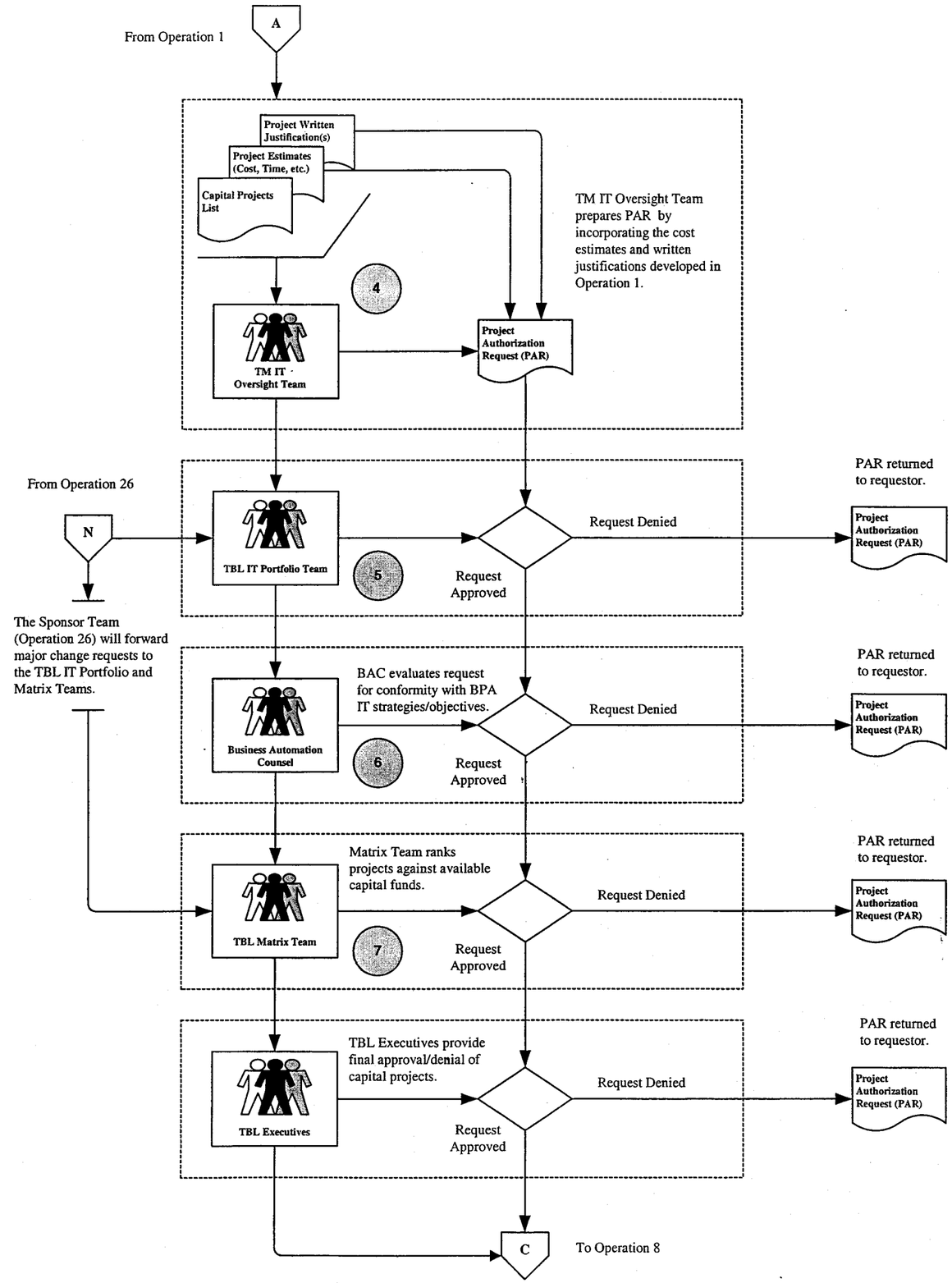
Project Initiation - Capital Projects

4 Between 3 / 1 and 5 / 1, (for capital TM-IT projects identified in operation 1 above), the TM IT Project Oversight team will (a) Prepare the capital projects, Project Authorization Requests (PAR) (includes written justification(s), preliminary cost estimates etc. prepared in 1 above), and (b) forward the PARs to TBL IT Portfolio Team.

5 The TBL IT Portfolio Team will conduct a technical review, evaluation and ranking of the IT PAR. If the TBL IT Portfolio Team approves the PAR, it is forwarded to TBL's Business Automation Counsel (BAC). If TBL IT Portfolio Team denies the request, the requestor is advised that the PAR has been denied

6 The BAC will evaluate the various PAR's to determine whether the requests meets the agency wide IT business strategy, and is compatable/consistent with existing BPA wide technology. If the BAC approves the request, it will be forwarded to the TBL Matrix Team (i.e., included in the IT Portfolio Teams approved projects list presented to TBL Matrix Team). If the BAC denies the request, the requestor is advised that the PAR has been denied.

7 Between 5 / 1 and 6 / 30, the TBL Matrix Team evaluates and ranks the IT capital project list, with other proposed TBL capital projects (IT and non IT projects for TBL), against TBL's available capital budgetary target. Approved requests (PAR's) are forwarded to the TBL executives for review and approval. If the Matrix Team denies the request, the requestor is advised to either re-submit the request next fiscal year and/or provide additional justification.



PROJECT PLANNING (July 1 through September 30)

Project Planning involves establishing the quality control standards that will be used to evaluate and monitor each project, establishing the time-frames for starting and completing the various projects, determining the staffing requirements necessary to perform the work, identifying how the work will be performed (contract or internal FTE), formalizing the communication processes that will be used through out the project life, identifying and establishing firm cost estimates,

8 Between 7 / 1 and 8 / 1 (for approved TM IT expense/capital projects) TM IT Oversight Team will assign the various project managers. The Project Managers will segment the project into tasks, sequence the tasks and determine the task interdependencies. The Project Managers will then estimate the duration of the various tasks and the resource (FTE) requirements to perform the tasks. Using the resource requirements the Project Manager will then determine how the work (various tasks) will be performed (contracted out or performed internally). The Project Manager will then prepare a statement of work associated with the project and tasks.

NOTE: Statement of Work (SOW) includes a description of the work that is to be performed, the type of resource required, the duration of the use of the resource, the level/extent of the resource(s) (FTE), the anticipated project deliverables, and the quality control measures that will be used to evaluate the work.

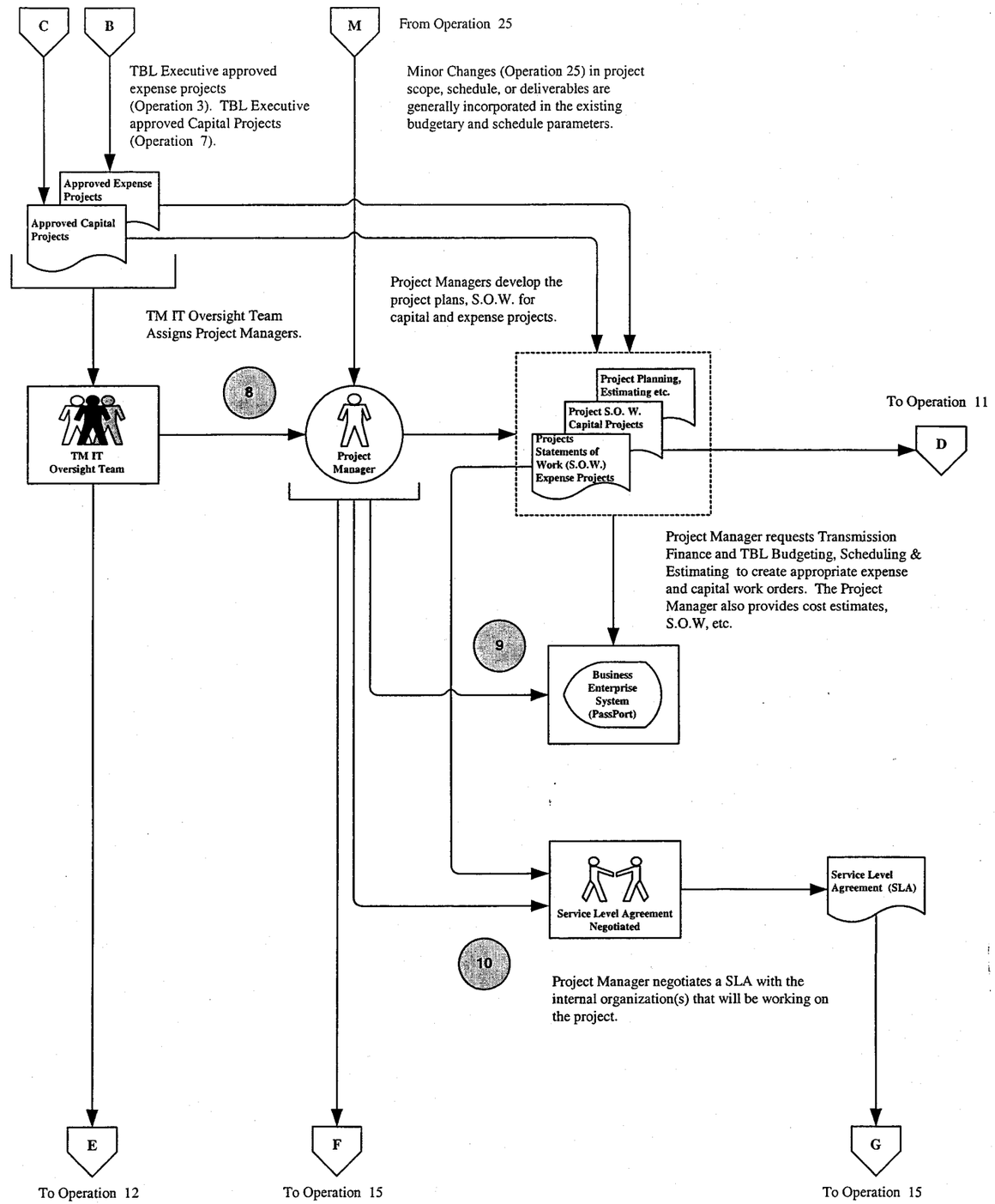
9 Between 8 / 1 and 9 / 1, the Project Manager(s) will then contact Transmission Finance (expense projects) and Budgeting Scheduling and Estimating (capital projects) to request the creation of new work orders for new IT expense and capital projects respectively. This process also involves providing TMF/TOE with a description of the work to be performed, a cost estimate, and a list of definable tasks, and the estimated completion date. TMF/TOE will then use the information to create a new IT project work order in PassPort. (Between 9 / 1 and 9 / 30 the various project work orders are created.)

NOTE: Costs will not be accumulated in the new IT project work order until the start of the new fiscal year.

Project Planning - Internal Resources

10 For IT work (tasks) that are to be performed using internal resources, the Project Manager(s) will negotiate a general understanding/agreement with the performance manager of the internal organization that would do the work, and subsequently follow-up with a written Service Level Agreement (SLA) that specifies the work requirements.

NOTE: SLA includes a copy of the statement of work prepared in 8 above.



PROJECT PLANNING (Continued)

Project Planning - External Resources (Contractors)

11 For IT work (tasks) that are to be performed using external resources (Contractors), the following steps are performed (8 / 1 through 9/ 30): (a) the TM IT Contract Manager (COTR) advises/informs the TM Internal Operations Manager of the need to use external resources, (b) the TM IT Contract Manager will prepare the Contract Requisition in the BES for new contract or releases under existing blanket contracts, (c) obtain the appropriate approval from TM Internal Operations Manager (signature), and (d) submit the Contract Requisition (BES automatically submits) to the TBL contracting office where it will be assigned to a Contracting Officer (CO).

NOTE: Contract Requisition information includes: Work Order, Task Number, Scope of Work (Statement of Work), Period of Performance, Suggested Vendors (assuming a competitive acquisition), suggested vendor (assuming sole source), justification for the sole source, estimated cost of the project, and recommendation for person to serve as COTR.

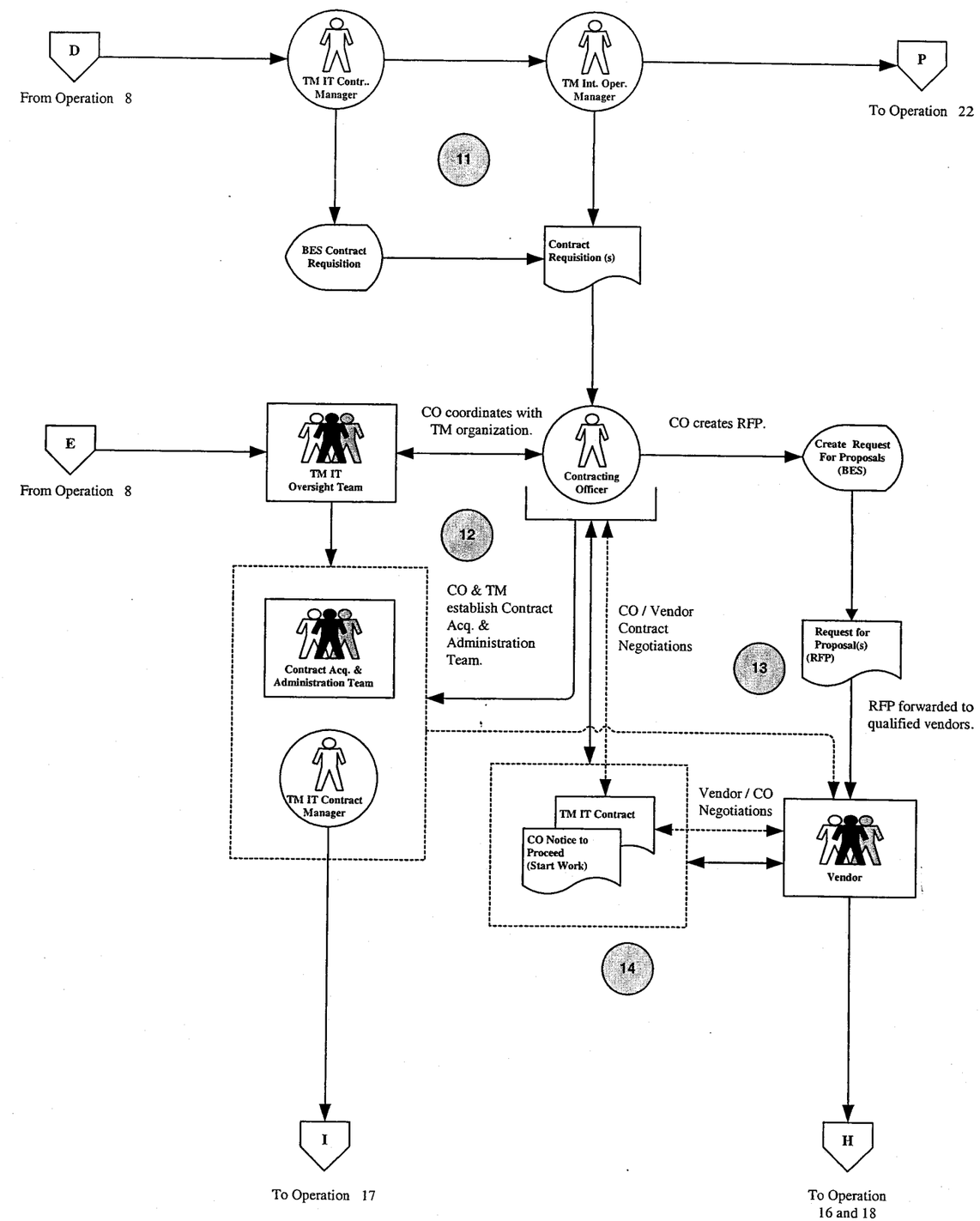
12 Upon receipt of the Contract Requisition by the assigned CO, the CO will coordinate with TM organization to establish a schedule for the acquisition (or for the work) and obtain any additional information or clarification that may be necessary. In addition, the acquisition and contract administration team is identified.

NOTE: The contract acquisition and administration team includes: the CO, TM IT Contract Manager (COTR), Project Manager and other persons necessary to establish the contract, and administer the project through completion..

13 For new competitive contracts, the CO will (a) create a Request for Proposal (RFP) in BES, (b) forward the RFP's to all vendors suggested by TM in 11 above and other qualified firms, (c) establish a Technical Evaluation team to evaluate the vendors and their proposals (generally includes the Project Manager, TM IT Contract Manager (COTR) etc.), and (d) negotiates a contract with the appropriate vendor (highest ranked vendor). For new (sole source contracts) or releases under an existing blanket contract, the CO will conduct negotiations with the designated vendor.

14 After CO/vendor negotiations are successfully completed, the CO will (a) prepare the contract, (for existing blanket contracts the CO will prepare the contract modification or release against contract) in BES, (b) obtain appropriate vendor approvals (signatures) on the contract, contract modification or release, and (c) (after all approvals have been obtained) instruct the contractor to begin work (i.e., issue a notice to proceed to the contractor). Typically, the contract won't be effective until the start of the new fiscal year (October 1).

NOTE: Establishing a contract, or release within BES consists of (a) accessing BES contract profile panel, (b) entering the contract requisition number in the appropriate panel box (this transfers information from the Contract Requisition panel into the Contract Profile panel including the scope of work, work order and task number, and accounting information), (c) selecting the appropriate clauses for the type of contract involved, and (d) establishing the schedule of items (a detailed description of the exact things or services which are being purchased, including the quantities and prices).



PROJECT MONITORING AND CONTROL (October 1 through September 30)

Project monitoring and control begins 10 / 1 of the fiscal year and involves the regular comparison (bi-weekly) of the actual work performed by the contractor with the planned and unplanned work performed for the same period. Monitoring and control involves monitoring the project schedule, the project budget, the segmented task deliverables.

Project Monitoring and Control - Internal Resources

15 Project monitoring and control over internal resources is executed by the Project Manager by reviewing/comparing the SLA, developed in Operation 10, with the actual expenditures (Capital & Expense), project schedules and deliverables associated with internal resources (organizations) that agreed to do the work.

Project Monitoring and Control - External Resources

16 Project monitoring and control over contractors is executed by the Project Manager by reviewing, verifying and certifying the various project receiving report(s) (e.g. contractor employee time-sheets that show hours worked by a contractor, materials delivered etc.) In performing this process the Project Manager will verify/review: (a) the contractor employee(s) worked on the project during the period, (b) the days those employees worked, (c) the hours worked, (d) the nature of the work the contractor employees performed (planned and unplanned work), and (e) the progress achieved toward completing the agreed upon task. After the review/verfication is completed, the Project Manager will (f) certify that the work performed by the contractor and/or materials delivered were appropriate. The Project Manager will then forward the certified receiving report to the TM IT Contract Manager for additional review.

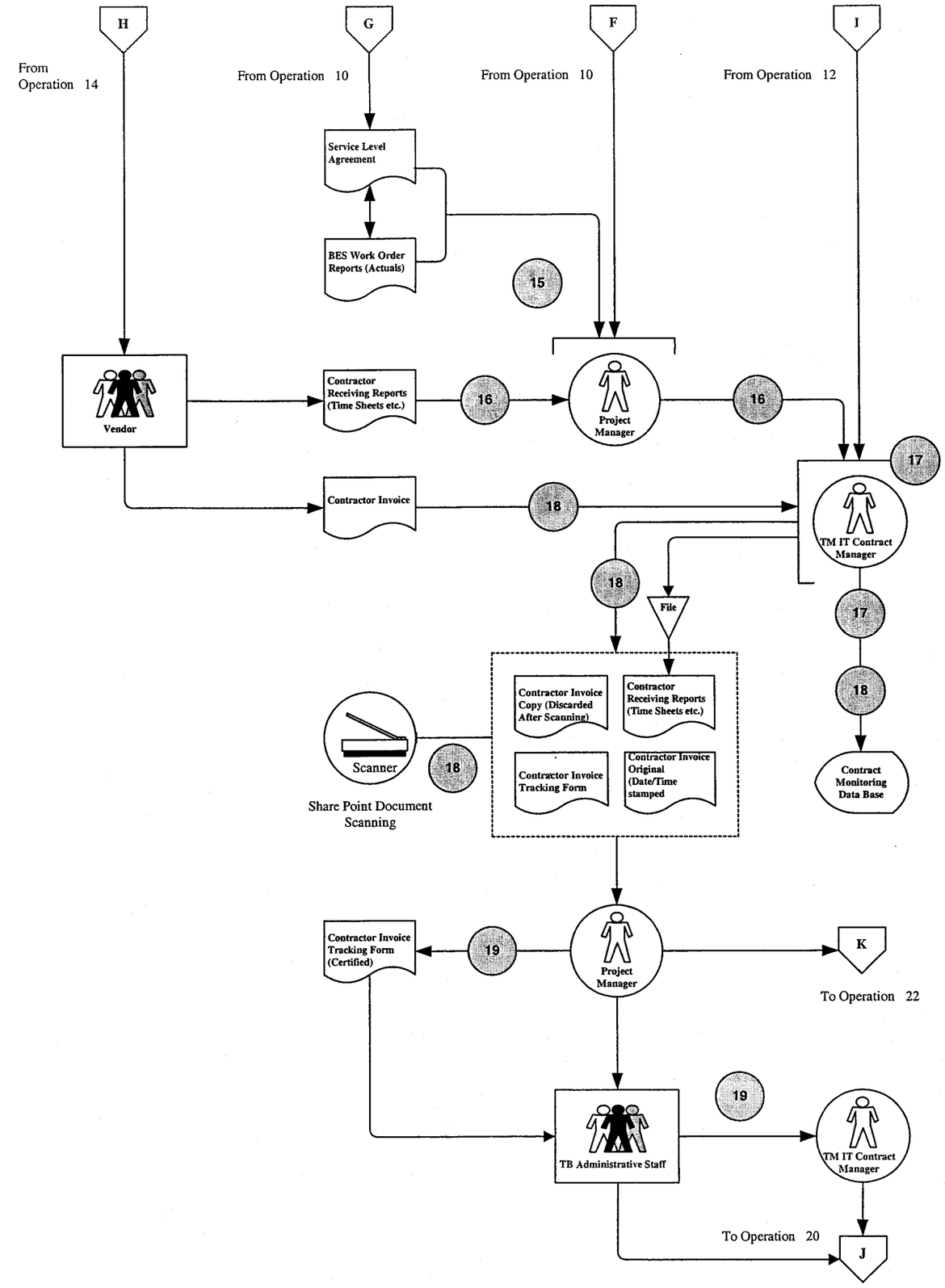
17 Upon receipt of the receiving report, the TM IT Contract Manager will enter the dollar value shown on the report, for work performed or materials purchased during the period, for the contract task order into the Contract Monitoring Data Base. The receiving reports are retained for subsequent attachment to the contractor invoice(s).

18 Each month the contractor will submit an invoice (for work performed during the period) to the TM IT Contract Manager (or designate) who will perform the following:

(a) date and time stamp the invoice,
(b) make copies of the invoice(s) to be used for scanning into Share Point.
(c) scan the invoice copy into the proper format for electronic storage in Share Point and discard the invoice copy (three business days) .
(d) review the original invoice to verify it contains sufficient information for further processing/payment,
(e) if the invoice does not contain sufficient information for payment processing, the TM IT Contract Manager will return the invoice to the vendor for correction.
(f) compare/verify the receiving report(s) in operation 17 above, with the information shown on the original invoice,
(g) attach the various receiving reports to the original invoice,
(f) attach the TM Invoice tracking form to the original invoice (shows the status of the invoice approval process),
(g) enter the accounting and charge information on the tracking form,
(h) enter the invoice number, invoice date, and invoice amount into the Contract Monitoring Data Base,
(g) if the invoice contains the required information the TM IT Contract Manager will forward the invoice package and tracking form to the Project Manager for additional review and certification (48 hours or two business days).

NOTE: The required information that the vendor invoice must have includes: Contractor's name and address, invoice date, contract or release number, contract line item, description of products delivered or services performed, name and telephone number for contact to discuss invoice problems, supporting documentation (i.e., timesheets and receipts in accordance with BPA procurement regulations), the invoice number and date should also appear on all supporting documentation.

19 (a) Upon receipt of the invoice, tracking form and receiving reports, the Project Manager will verify/certify (on the tracking form) that the services/product was provided and forward the document to the TB Administrative Staff (24 hours or one business day).
(b) Upon receipt of the certified invoice, tracking form and receiving reports, the TB Administrative Staff will forward the document to the TM Internal Operations Manager (or designated TM IT Contract Manager) (24 hours or one business day).



PROJECT MONITORING AND CONTROL (Continued)

20 Upon receipt of the invoice, tracking form and receiving reports, TM Internal Operations Manager (or TM IT Contract Manager as designated) will (a) review/approve (or disapprove) the invoice, (b) sign/date the tracking from for approved invoice(s), (c) enter the invoice approval date (shown on the tracking form) into the Contract Monitoring Data Base (three business days), and (d) forward the original invoice and tracking form to TB Administrative Staff (48 hours or two business days).

21 Upon receipt of the original invoice, tracking from and receiving reports, the TB Administrative Staff will:

(a) Enter the invoice data into BES for payment, (five business days),
(b) Remove the cover sheet and forward it to the TM IT Contract Manager,
(c) Forward the original invoice(s) and receiving reports to Accounts Payable (24 hours or one business day),
(d) Create the monthly BES Verification Report (contains Contract Financial Information entered into BES) and the Contract Monitoring Data Base Report (five business days), and compare/verify that information entered into BES is correct (consistent with the Contract Monitoring Data Base).
(e) If the information contained in BES is inconsistent with data in the Contract Monitoring Data Base, the TB Adminsitrative Staff will take corrective action to make the necessary adjustments in BES.

NOTE: The process for entering invoice data into BES includes: (a) access BES PassPort through the BES portal home page, (b) access the PassPort Contract Management Screen, (c) access PassPort Management Screen Payment Authorization Panel, (d) enter the contract number, contract release number, invoice dollar amount, and invoice number, (e) execute the transaction, (f) verify that the contract or contract release has not exceeded its ceiling, (f) access the accounting data panel and if necessary change the accounting information, (g) execute the transaction by entering save & close, (i) access the PassPort Options panel and select the attach/review routing list entering the appropriate COTR, (j) enter save & close, (j) access the options panel selecting submit routing list.

Project Monitoring and Control - Project Status Review

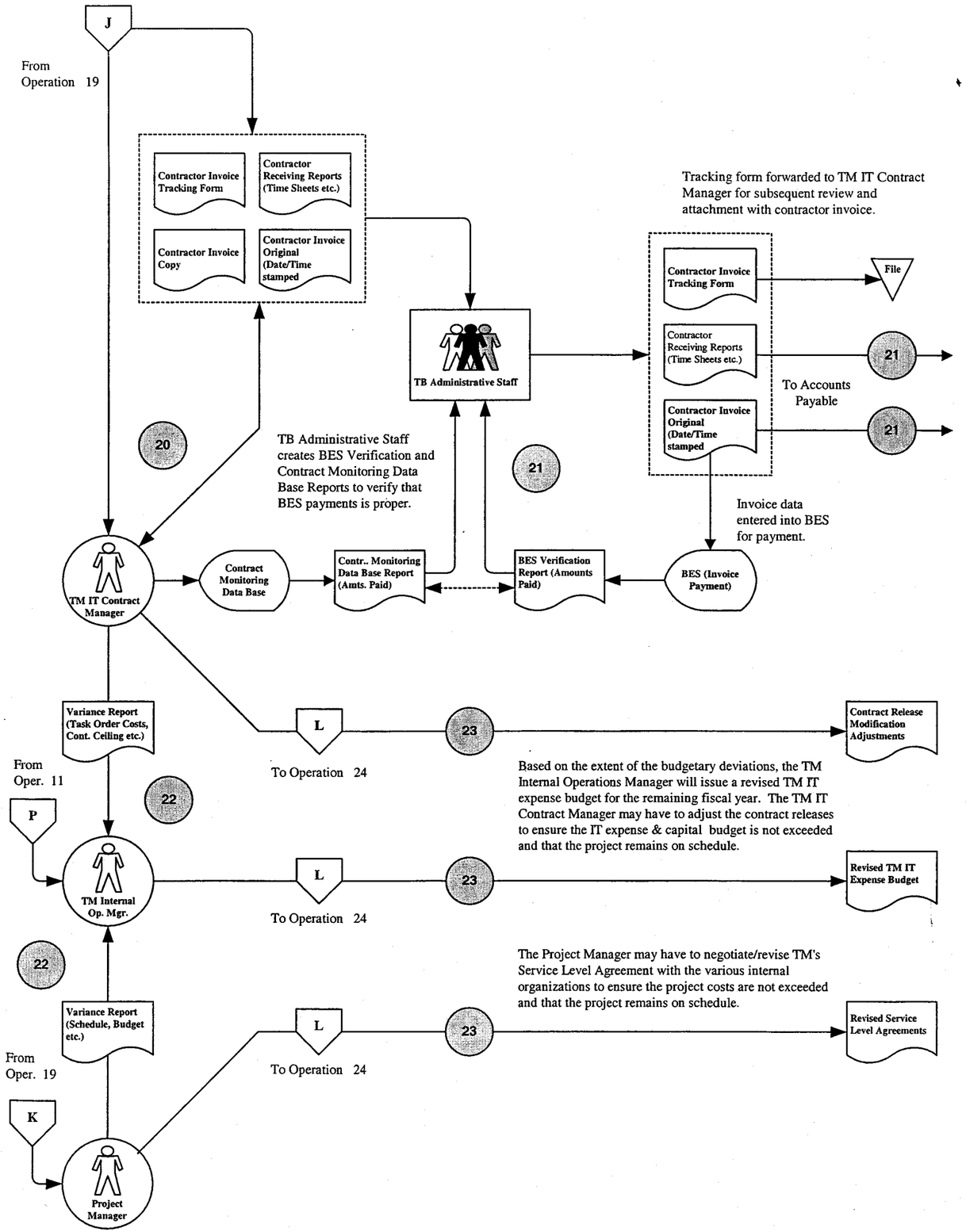
22 On a monthly basis, the TM IT Contract Manager and Project Manager(s) will meet with the TM Internal Operations Manager to review contract and project progress to date.

The TM IT Contract Manager will report the task order status for the various contracts, contract costs and ceilings (eg. (a) work accrued against the task order to date, (b) work invoiced against the task order to date, (c) work remaining to be performed, and (d) anticipated contractor billings against the task order for the rest of the fiscal year.)

The Project Manager will report the status of the projects schedule eg. (a) where is the project in terms of the planned schedule, project actual costs (internal and external accumulated costs on the project) vs. project budget that was prepared in operations 8, 9 and 10 above.

23 To the extent a particular expense project has deviated from the planned time schedule or the planned budget, the Project Manager and TM IT Contract Manager will report the variances, and make scheduling and budgeting recommendations to the TM Internal Operations Manager for consideration/concurance. Based on the extent of the budgetary deviations, the TM Internal Operations Manager will then issue a revised TM IT expense budget for the remaining fiscal year. As a consequence of the revision in the IT expense budget, the TM IT Contract Manager may have to adjust the contract releases (upward or downward) to ensure that the IT expense budget for TM is not exceeded and that projects remain on schedule. In addition, the various Project Managers may have to negotiate and revise the various SLA with the internal organizations that are performing work on the projects.

NOTE: Any recommendations made by the Project Manager and TM IT Contract Manager involving changes to the scope, and timing of a given project are also discussed with the management of the impacted organizations.



PROJECT MONITORING AND CONTROL (Continued)

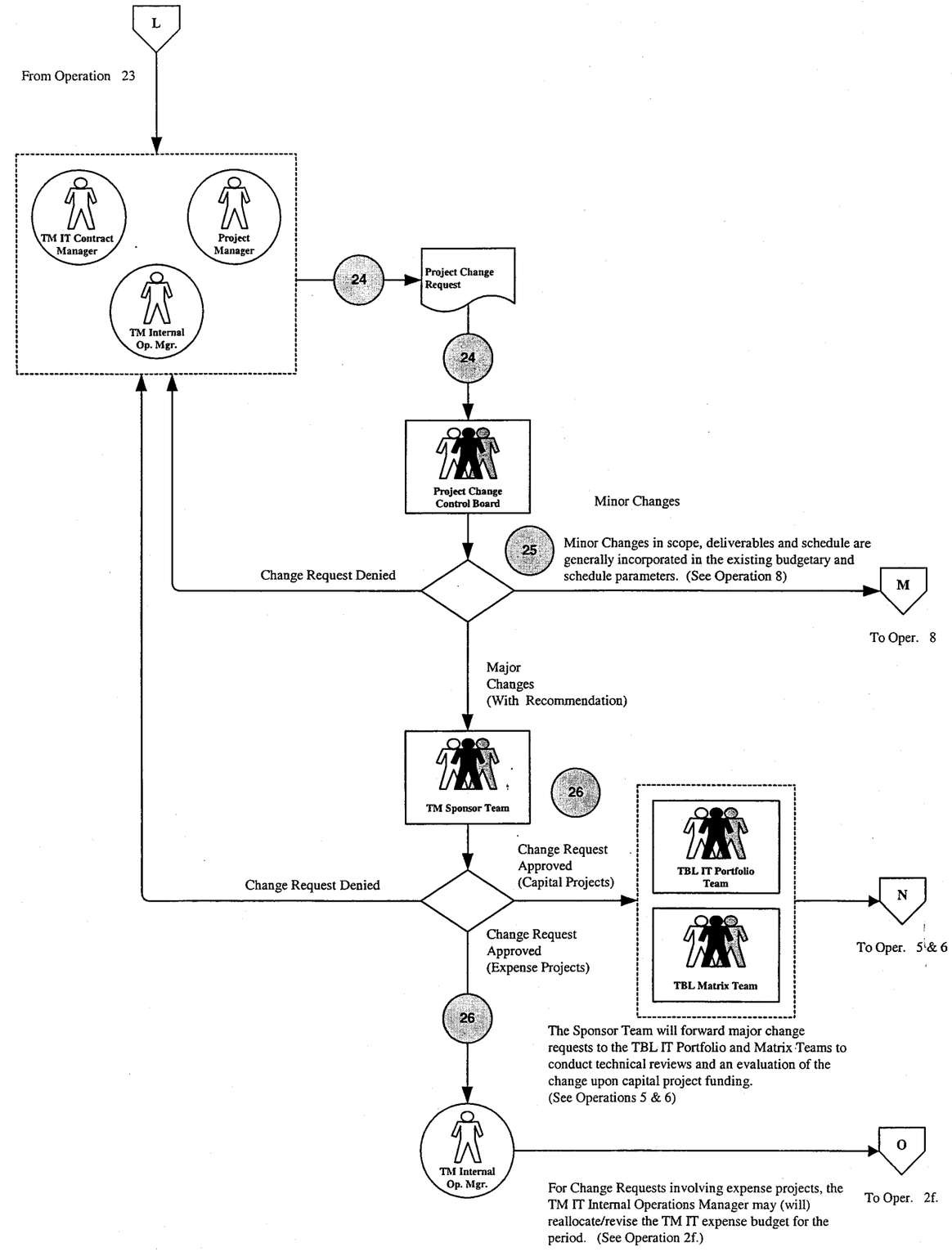
Project Monitoring and Control - Project Changes

24 During the course of the project the impacted organization, the TM Internal Operations Manager or the TM IT Contract Manager may determine that additional/less, or different services/products (deliverables) are required for the project. When this occurs, the person(s) initiating the change will prepare a change request form which is forwarded to the Project Change Control Board for review, acceptance or denial.

25 Upon receipt of the change request form, the Project Change Control Board will review the request and either accept it or deny it. If the change is minor in cost and scope of work, the change is generally incorporated in the existing budgetary and schedule parameters without additional review. If the change is considered material (in cost, in schedule, or in scope of work, or affects other projects) the request is forwarded to the TM Sponsor team with a recommendation to approve or deny.

26 Upon receipt of the change request, the TM Sponsor team will consider the approval/denial recommendation by the Project Control Board and forward the change request to the TBL IT Portfolio Team (Operation 5) to conduct a technical review and evaluation of the change and to the TBL Matrix Team (Operation 6) for capital project funding approval.

For material change requests approved by the TM Sponsor Team that impact an expense project the change request is forwarded to the TM Internal Operations Manager for a reallocation and revised TM IT expense budget for the project (See Operation 2f. above).



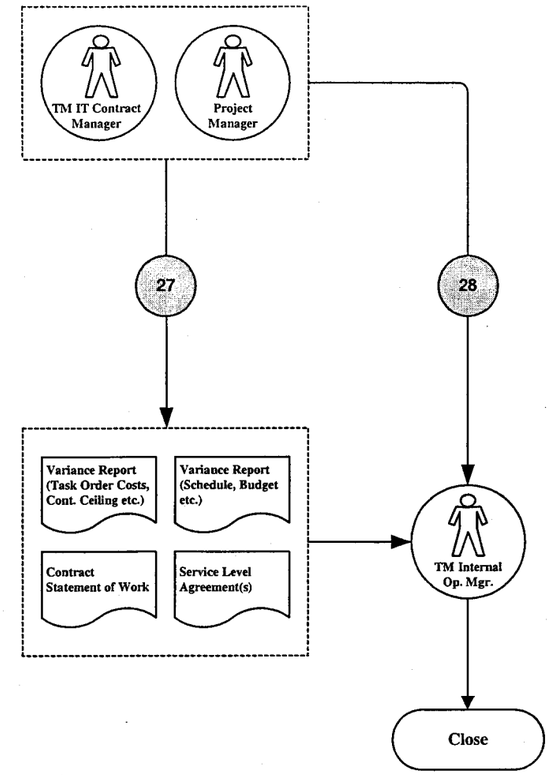
PROJECT CLOSING (October 1 through December 31)

Expense project completion (closing) occurs between 10 / 1 and 12 / 31, for projects completed through 9 / 30 of the prior fiscal year. This process involves reviewing contractor performance, internal resource performance and project performance. Capital project closing may occur anytime during the year and capital projects are often multi-year.

27 Between 10 / 1 and 11 / 15, the various Project Managers and TM IT Contract Manager will prepare performance reports for (a) the various projects, (b) the various contractors that worked on the projects, and (c) the various internal organizations that worked on the projects. Those reports will detail how well the project remained on schedule with the initial plan. How well the contractors performed during the fiscal year both in terms of schedule, costs and quality and finally how well the internal organizations that worked on the project performed in terms of schedule, costs and quality. Those performance reports will be submitted to the TM Internal Operations Manager on 11 / 15 in preparation for the year end closing review meeting.

28 Between 11 / 15 and 11 / 30, the TM Internal Operations Manager and the TM IT Contract Manager and Project Managers will meet to review and discuss the various performance reports and to identify lessons learned .

29 For capital projects, (which can close anytime during the fiscal year) the Project Manager will follow the Capital Project Closing Procedures identified by the TM Project Management Office. NOT FLOWCHARTED



IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

A & E IMAGING INC
AASTRA INTECOM INC
ABADAN REPROGRAPHICS
ABB INC
ACCENT BUSINESS SERVICES INC
ACME BUSINESS CONSULTING LLC
ACS IMAGE SOLUTIONS
ACTUATE CORPORATION
ACUITY INCORPORATED
ADC TELECOMMUNICATIONS SALES INC
ADDCLARITY INC
AD-MAIL INC
ADVANCE FIBER OPTICS INC
ADVANCED ANSWERING
ADVANCED DATA CONCEPTS INC
ADVISICON INC
A-FFIX LLC
AGILYSYS INC
ALCATEL INTERNETWORKING FEDERAL
ALL LASER SERVICE
ALLAIRE CORPORATION
ALLIED
ALLIED ELECTRONICS
ALLIED FIRE & SECURITY
ALLTEL
ALSTOM ESCA CORP
ALTIRIS INC
ALTRA SOFTWARE SERVICES INC
AMBRY INTERNATIONAL
AMERICAN REGISTRY FOR INTERNET
AMERICAN REGISTRY FOR INTERNET NUMBERS
ANIXTER INC
ANNAMS SYSTEMS CORPORATION
ANTEON CORPORATION
ANTHONY TECHNOLOGY INC
APEX SOLUTIONS INC
APPTIS INC
APTECH INC
ARDENT SOFTWARE INC
AREVA T&D INC-EMA UNIT
ARROW ELECTRONICS INC
ASCENTIAL SOFTWARE INC
ASPEN INC
ASRC AIRFIELD & RANGE SERVICES
AT&T
AT&T CORP
AT&T GOVERNMENT MARKETS
AT&T WIRELESS SERVICES INC
AUTOMATED CONTROL SYSTEMS INC

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

AUTOMATION & CONTROL STRATEGIES
AVANADE INC
AVAYA INC
AVIATION SYSTEMS
AVNET ELECTRONICS
AVNET ENTERPRISE SOLUTIONS DIVISION
AVNET INC
AVR ENTERPRISES INC
AVTEC INC
AXIOM INTERNATIONAL
AZAD INC
BALANCE CONSULTING LLC
BARRATT EDWARDS INT'L CORP
BAY STATE COMPUTERS INC
BEC LEGAL SYSTEMS
BENTLEY SYSTEMS INC
BERNARD HODES GROUP INC
BILLINMON.COM LLC
BLACK BOX CORPORATION
BLACKFOOT CFT
BLOOMBERG L P INC
BMC SOFTWARE DISTRIBUTION INC
BOOM VANG TECHNOLOGY SERVICE INC
BRIO TECHNOLOGY
BUSINESS EDUCATION COMPACT
C&L CATERING
CABRI LTD
CADRE COMPUTER RESOURCES CO
CALENCE LLC
CALTA COMPUTER SYSTEMS LIMITED
CAMINUS CORPORATION
CAPTARIS INC
CARDINAL POINT SOLUTIONS, LLC
CASCADE A&E SUPPLIES INC
CASCADE POWER EQUIPMENT
CASSO CORPORATION
CATALYST CONCEPTS INC
CATHERINE M NEEDLEMAN
CDDHOWARD CONSULTING LTD
CDI VAULTS
CDW COMPUTER CENTERS INC
CDW GOVERNMENT INC
CELLULAR ONE
CENTERSTANCE INC
CENTRAL PRINT & REPROGRAPHICS
CENTURY TEL
CHALLIS MESSENGER
CHAMPSYSTEMS
CHOICE SOLUTIONS LLC

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

CHRISTENSON ELECTRIC INC
CHRISTENSON POWER SERVICES
CHRISTENSON VELAGIO INC
CIBER INC
CIBER, INC ADMINISTRATIVE SERVICES
CINGULAR WIRELESS
CINGULAR WIRELESS LLC
CITIZENS COMMUNICATIONS
CITRIX SYSTEMS INC
CLAYTON GROUP SERVICES INC
CLICK2LEARN.COM
COAST 2 COAST
COMP VIEW INC
COMPAQ FEDERAL LLC
COMPUTER ASSOCIATES INTL INC
COMPUTER TECHNOLOGY LINK
COMPUTERS AND STRUCTURES INC
COMPUWARE CORP
CONNECT: THE KNOWLEDGE NETWORK CORPORATI
CONSTRUX SOFTWARE
CONTINENTAL SERVICES GROUP INC
CORDAX INC
CORE INTEGRATION PARTNERS INC
CORPORATE EXPRESS OFFICE PRODUCTS INC
CORPORATE SECURITY SERVICES INC
COVANSYS INC
CPU OPTIONS INC
CRESCENT ELECTRIC SUPPLY CO
CROSSTEC CORPORATION
CSG PROFESSIONAL SERVICES INC
CTEKS LLC
CUSTER PUBLISHING INC
CYBERSAFE CORPORATION
DATA ADMINISTRATION MANAGEMENT ASSOC
DATA CLEAN CORPORATION
DATA RESOURCE DESIGN AND REMODELING
DAVIES CONSULTING INC
DAZEL CORP
DB PROFESSIONALS INC
DEAN L VAILLANCOURT
DECISION CONSULTANTS INC
DEFENSE FINANCE & ACCOUNTING
DELL COMPUTER CORPORATION
DEMAND EXCHANGE
DEPOT AMERICA INC
DESI TELEPHONE LABELS INC
DESIGNTECH ASSOCIATES
DFAS
DIANA SCOGGINS

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

DICTAPHONE CORP
DIGITAL CONSULTING INC
DIGITAL INSPECTIONS A KEMA COMPANY
DIGITAL SIGNATURE TRUST
DLT SOLUTIONS INC
DOBLE ENGINEERING CO
DRAKE BEAM MORIN INC
DSI TECHNOLOGY ESCROW SERVICES INC
DUMONDE SOLUTIONS
DYNAMIC SYSTEMS INC
EADS TELECOM NORTH AMERICA INC
EARTHQUAKE PROTECTION SPECIALISTS INC
EARTHSTAR GEOGRAPHICS LLC
EASYSTREET ONLINE SERVICES INC
EBSCO
EC POWER SYSTEMS OF OREGON
ECONOMISTS.COM
EGLOBE SOLUTIONS INC
ELECTRIC LIGHTWAVE INC
ELECTRIC LIGHTWAVE LLC
ELECTRICAL CONSTRUCTION COMPANY
ELLENSBURG TELEPHONE CO
EMA DESIGN AUTOMATION INC
EMBARCADERO TECHNOLOGIES INC
EMBARQ
EMERGENT ONLINE INC
EMPRESSA SOLUTIONS
ENABLEMART
ENERGRATION A DIVISION OF INFORMATICS CO
ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE
EPIS INC
EQUARIUS INC
ERDAS
ERGO PRO CONSULTING
ESA INC
ESIGNAL
ESKER SOFTWARE
EVEREST CONSULTING GROUP
EVERGREEN COMPUTER PRODUCTS INC
EXECUTIVE INFO SYSTEMS LLC
EXTENSIS INC
F&G CONSULTING
FABIAN PASCAL
FEDERAL AIRWAYS & AIRSPACE INC
FEDERAL CONSULTING GROUP
FEDERAL NETWORK SERVICES INC
FEDERALLY EMPLOYED WOMEN
FEDTEK
FEI AMERICA INC

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

FERRAND CONSULTING GROUP INC
FIBER INSTRUMENT SALES
FINANCIAL ENGINEERING ASSOCIAT
FIRST AMERICAN REALTY
FIRST INC
FLUKE NETWORKS INC
FOUR POINTS TECHNOLOGY INC
FRANK GUENDELSBERGER
FRONTIER COMMUNICATIONS
FSH COMMUNICATIONS LLC
GAGNON'S DIGITAL IMAGING
GARY E STEMLER
GATEWAY COMPANIES INC
GEOGRAPHIC DATA TECHNOLOGY INC
GEOTRUST INC
GILIAN TECHNOLOGIES INC
GL SOLUTIONS
GLOBALSTAR USA LLC
GLUMAC INTERNATIONAL
GOBOSH INC
GONZALES CONSULTING SVCS INC
GOOD TECHNOLOGY
GOVERNMENT TECHNOLOGY SOLUTIONS INC
GRAYBAR ELECTRIC CO INC
GROUPARMENTROUT INC
GTSI CORP
GURRY & ASSOCIATES, INC
HALCYON MONITORING SOLUTIONS
HALIFAX CORPORATION
HANSON DIRECTORY SERVICE INC
HARRIS CORP
HEARING RESOURCES
HEWLETT PACKARD CO
HITACHI DATA SYSTEMS
HUMMINGBIRD USA INC
HYPERION SOLUTIONS CORPORATION
HYPERLINK TECHNOLOGIES INC
IBM CORP
IBM DIRECT
IDM COMPUTER SOLUTIONS INC
IESOLUTIONS
IGAGE MAPPING CORP
IKON OFFICE SOLUTIONS INC
IMAGE REGION X
IMAGESOURCE INC
IMMIX TECHNOLOGY INC
IMPARTICA
IMPERIAL OFFICE MACHINES INC
IMPERIAL SOFTWARE TECHNOLOGY

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

INCENTRA SOLUTIONS
INDUS INTERNATIONAL INC
INDUSTRIAL INFO RESOURCE INC
INFINITY INTERNET
INFOCUS CORPORATION
INFORMATICA CORPORATION
INFORMATICS CORP
INFORMATION MAPPING INC
INFORMIX SOFTWARE INC
INFRAGISTICS INC
INFRARED TECHNOLOGIES AMERICA LLC
INPOWERSOFT CORPORATION
INSIGHTFUL CORPORATION
INTECOM
INTEGRA INFORMATION TECHNOLOGIES
INTEGRA TELECOM
INTEGRATED DESKTOP
INTELLIGENT COMPUTER SOLUTIONS INC
INTELLIGENT DECISIONS INC
INTERNET SECURITY SYSTEMS INC
INVESTORTOOLS INC
IPASS INC
IPI GRAMMTECH, LTD
IRON MOUNTAIN INTELLECTUAL
IRON MOUNTAIN OFF-SITE DATA PROTECTION
IT MASTERS INC
ITOUCH COMMUNICATIONS INC
ITRON INC
ITRONIX CORPORATION
JACOB G TAASEVIGEN
JB CUBED INC
JUDITH H MONTGOMERY COMMUNICATIONS
JUNIPER NETWORKS
JWG & ASSOCIATES
KEITH RITLAND
KEMA CONSULTING INC
KIMBERLEE CREASER LARSEN
KINETIC COMPUTER SOLUTIONS INC
KINGSTON TECHNOLOGY CO INC
KNOWMADIC INC
KONICA BUSINESS TECH INC
KPMG CONSULTING INC
KUKER RANKEN OREGON INC
KWI
LACAMAS CONSULTING INC
LASCOM SOLUTIONS INC
LASCOM SOLUTIONS INC
LASER SERVICE INC
LATITUDE GEOGRAPHICS GROUP LTD

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

LCN TECHNOLOGY
L-COM INC
LDS TEST AND MEASUREMENT LLC
LEGATO SOFTWARE
LEICA GEOSYSTEMS GEOSPATIAL IMAGING LLC
LEICA GEOSYSTEMS GIS & MAPPING LLC
LIEBERMAN & ASSOCIATES
LINCO MICRO-IMAGE SYSTEMS INC
LOCKHEED MARTIN INFORMATION TECHNOLOGY
LOGICALIS INC
LOGICON FDC
LRP PUBLICATIONS INC
LSI MARKETING
LSI MARKETING & DESIGN
L-SOFT INTERNATIONAL INC
MA FEDERAL INC
MANAGED OBJECTS
MARQUAM GROUP SRC INC
MARWAY POWER SYSTEMS INC
MATHWORKS
MAZAK CORPORATION
MCDATA SERVICES CORPORATION
MCI
MCI WORLDCOM INC
MCKNIGHT ASSOCIATES
MCLEOD USA PUBLISHING
MEDIA MOSAIC INC
MERANT INC
MERCURY INTERACTIVE CORP
MERIDIAN TECHNOLOGY GROUP INC
MERIT NETWORK INC
MERRICK & COMPANY
META GROUP INC
METROCALL INC
MGM CONSULTING INC
MICRO FOCUS INC
MICROSOFT CORPORATION
MICRO-TEL INC
MORALES & ASSOC LLC
MOXI MEDIA INC
MPUG-GLOBAL
MRV COMMUNICATIONS-BOSTON DIVI
MSE TECHNOLOGY APPLICATIONS INC
MT TECHNOLOGIES INC
MTI TECHNOLOGY CORPORATION
MUNCHWORKS INC
MUZAK LLC
MYRIAD SOLUTIONS INC
NATIONAL ASSOCIATION OF PURCHASING MANAG

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

NATIONAL INSTRUMENTS CORPORATI
NATIONAL SYS & RESEARCH
NATURAL VIDEO
NAYAK CORPORATION INC
NEC COMPUTERS INC
NEIL R MCINNIS
NETWORK APPLIANCE INC
NETWORK ASSOCIATES INC
NETWORK TECHNOLOGIES INC
NETWORKS INC
NEW HORIZON COMPUTER
NEXL INC
NEXTEL COMMUNICATIONS
NEXTIRAONE FEDERAL LLC
NICE SYSTEMS INC
N-LINK CORPORATION
NORTHROP GRUMMAN COMPUTING SYSTEMS INC
NORTHROP GRUMMAN SPACE AND MISSION
NORTHWEST MICRO INC
NORTHWEST TRAINING SYSTEMS INC
NORTHWINDS PUBLISHING & PRINTING
NSR INFORMATION INC
OCE FINANCIAL SERVICES INC
OCE NORTH AMERICA INC
OCE USA INC
OFFICE ORGANIX
OPEN ACCESS TECHNOLOGY INTERNATIONAL INC
OPEN LINK OPERATING PARTNERSHIP
OPENLINK
OPTRICS INC
ORACLE CORP
ORACLE USA INC
OREGON STATE UNIVERSITY
OREGON-IDAHO UTILITIES INC
ORION DEVELOPMENT GROUP
OSI SOFTWARE INC
OSWEGO TECHNOLOGY CORP
P.A.C.E.
PACIFIC CASCADE IT INC
PACIFIC LEARNING SYSTEMS INC
PACIFIC NORTHWEST ELECTRIC POWER &
PACIFIC SURVEY SUPPLY
PALISADE CORPORATION
PANORAMA BUSINESS VIEWS (US) INC
PANTELLOS GROUP LIMITED PARTNERSHIP
PATHLORE SOFTWARE CORPORATION
PATRIOT TECHNOLOGIES INC
PC & NETWORK SERVICES INC
PC CLUB

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

PC MALL
PEDDINGHAUS CORPORATION
PEOPLESOFT NW REGIONAL
PEOPLESOFT USA INC
PERFICIENT INC
PILOT SOFTWARE
PIONEER-STANDARD ELECTRONICS INC
PIXELL
PLANET TECHNOLOGIES INC
PLANETARY DATA INC
PLATTS
POCKETINET COMMUNICATIONS INC
POPKIN SOFTWARE
PORTLAND NAP
PORTLAND STATE UNIVERSITY
POSDATA INC
POSTGRE SQL GLOBAL DEVELOPMENT GROUP
POWERLINE SYSTEMS INC
POWERQUEST CORPORATION
POWERTECH LABS
POWERWORLD CORPORATION
PRECISE SOFTWARE SOLUTIONS INC
PRECISION IMAGES INC
PRICEWATERHOUSECOOPERS LLP
PRO PHOTO SUPPLY INC
PROACTRIO INC
PROCESS ALLIANCE, INC
PROCESS SOFTWARE LLC
PRODUCT SOURCE INTERNATIONAL
PRODX , A BUSINESS UNIT OF HEPIERIC INC
PROFESSIONAL DATA EXCHANGE INC
PROGRAM PLANNING PROFESSIONALS
PROGRAMMERS PARADISE INC
PROMULA DEVELOPMENT CORPORATIO
PULIZZI ENGINEERING
PWI TECHNOLOGIES INC
QIQ SOLUTIONS PTY LTD
QUANTUM CORPORATION
QUEST
QUILOGY INC
QWEST CORPORATION
RADIANT RESOURCES INC
RADISYS CORPORATION
RAPIDIGM INC
RATIONAL SOFTWARE CORP
RED RIVER COMPUTER COMPANY INC
REGIONAL ECONOMIC RESEARCH INC
REGNET
REIGN PRINT SOLUTIONS INC

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

RELAY APPLICATION INNOVATION I
REMEDY A BMC SOFTWARE CO
RESOURCE ASSOCIATES INTERNATIONAL INC
RESOURCES CORPORATION
RICHARD A NELSON
RICHARD L HAINES
RICOH BUSINESS SYSTEMS
RMM CADD SERVICE
ROBERT HALF TECHNOLOGY
ROGER EISS
ROGUE WAVE SOFTWARE INC
ROSE CITY BLUEPRINT & SUPPLY COMPANY INC
SAIC
SANDRA L ROUSE
SANDSTORM ENTERPRISES INC
SAWTOOTH TECHNOLOGIES LLC
SBC DATACOMM INC
SBC/Cisco
SCHNEIDER AUTOMATION INC
SCHWEITZER ENGINEERING LAB INC
SCIENCE APPLICATIONS INTERNATIONAL CORP
SCN RESEARCH INC
SCOGGINS SERVICES LLC
SELBYS
SERENA SOFTWARE INC
SERIF PUBLISHING CO
SIEMENS POWER TRANSMISSION &
SIGNING RESOURCES & INTERPRETERS LLC
SILICON VALLEY EXPERT WITNESS GROUP INC
SIRSIDYNIX
SITUS INC
SIX DEGREES CONSULTING
SLICKEDIT INC
SMITHCFI
SOFTGATE INC
SOFTMART
SOFTSMITHS INC
SOFTSTUF INC
SOFTWARE HOUSE INTERNATIONAL
SOFTWARE QUALITY MANAGEMENT
SOFTWARE SPECTRUM INC
SOURCE ONE MANAGEMENT INC
SPEAKERBUS INC
SPECIALIZED PRODUCTS COMPANY
SPECIALIZED RESOURCES INC
SPECIALTY ENG & CONSUL SERV INC
SPECTEL-MULTILINK INC
SPECTORSOFT CORPORATION
SPIRENT COMMUNICATIONS, INC

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

SRA
STARPLUS SOFTWARE INC
STEELCLOUD CORP
STERLING COMMERCE INC
STEVE CLARK
STROHL SYSTEMS GROUP INC
STRUCTURE GROUP
STRUCTURED COMMUNICATIONS INC
SUBLIME SOLUTIONS
SUMMATION LEGAL TECHNOLOGIES I
SUMTOTAL SYSTEMS INC
SUN MICROSYSTEMS FEDERAL INC
SUN MICROSYSTEMS INC
SUNGARD ENERGY SYSTEMS INC
SUPER SPEED SOFTWARE INC
SYBARI SOFTWARE INC
SYBASE INC
SYMANTEC CORPORATION
SYNERGY CONSULTING INC
SYNEXUS GLOBAL INC
SYSTEM ENGINEERING & COMPUTER APPLICATIO
SYSTEM TOOLS SOFTWARE INC
SYSTEMS MANUFACTURING CORP
SYSTEMS RESEARCH AND APPLICATIONS CORP
T3E CO INC
TACTICAL SOFTWARE LLC
TACTIX INC
TACTIX REENGINEERING INC
TAPECONVERSIONS.COM
TDS TELECOM
TDS TELECOM SERVICE CORP
TECHPOWER SOLUTIONS INC
TEKSYSTEMS INC
TELCO DIRECTORIES INC
TELELOGIC NORTH AMERICA INC
TELERIK CORPORATION
TELLEFSEN CONSULTING GROUP INC
TELTONE CORP
TENFOLD CORP
TENINO TELEPHONE COMPANY
TEST LABORATORIES INTERNATIONAL
TEXAS DIGITAL SYSTEMS INC
THE DATA WAREHOUSING INSTITUTE
THE MATHWORKS INC
THE NEW CYBERPORT LLC
THE PORTLAND PRINTER PLACE INC
THE STRUCTURE GROUP
TIBCO SOFTWARE INC
TIME WARNER TELECOM INC

IT VENDORS & CONTRACTORS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

T-MOBILE
TOM D ENGERS
TREND MICRO
TRIAD INTERNATIONAL TECHNOLOGY, INC
TRI-CITIES HERALD
TRIMBLE NAVIGATION LIMITED
TWO DEGREES
UNISYS CORPORATION
URS ELECTRONICS INC
US CELLULAR
US GENERAL SERVICES ADMIN
UTILITY SYSTEM EFFICIENCIES IN
VANDERHOUWEN & ASSOCIATES INC
VAUGHAN SAFETY INC
VERICEPT CORPORATION
VERIO NORTHWEST
VERISIGN INC
VERITAS SOFTWARE GLOBAL CORPORATION
VERIZON
VERIZON DIRECTORIES CORP
VERIZON FEDERAL SERVICE CENTER
VERIZON NORTHWEST INC
VERIZON WIRELESS
VERSO TECHNOLOGIES INC
VIABLELINKS INC
VIDEOLINK
VISION BUSINESS PRODUCTS
VISION BUSINESS PRODUCTS OF ARIZONA INC
VISION MATTERS LLC
VISUALWARE
WALKER & ASSOCIATES INC
WEATHERBANK INC
WEBUSENET CORPORATION
WILDPACKETS INC
WILLIAM G SMITH & ASSOCIATES
WINDSTREAM YELLOW PAGES INC
WIRELESS NORTHWEST
WORKSAFE TECHNOLOGIES NW INC
WORLD WIDE TECHNOLOGY INC
WYGANT SCIENTIFIC INC
WYLE SYSTEMS
XEBEC DATA CORP
XEROX CORPORATION
XIOLOGIX LLC
XO COMMUNICATIONS INC
ZETTAWORKS LLC
ZONES INC

IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

Project	Amount Paid
DITTMER CC - WECC NO SANCTION (TMS BUSINESS PROCESS)	$186,238.01
200400100 FC PISCES	$491,177.57
200400100 IC PISCES	$649,821.72
AGENCY BILLING HARDWARE	$483.48
AGENCY BILLING SOFTWARE	$190,196.69
AGENCY BILLING-CAP HW	$791.11
AGENCY BILLING-CAP SW	$2,531,249.66
AGENCY CCIS - CAP - SW	$19,799.23
AGENCY CCIS - CAP-SW	$398,740.87
AGENCY METERING SERV CAP SW	$113,765.83
AGENCY METERING SERV CAP SW	$1,296.21
ALTERNATE IT DATA CENTER CAP HW	$2,270,773.66
ALTERNATE IT DATA CENTER CAP SW	$3,630.69
ANNAMS - SUNFLOWER ACQUISITION AND CUSTOMIZATION	$419,889.98
ASSET INVESTMENT CAP/SW	$155,051.93
AUTHENTICATION SERVERS UPGRADE	$27,072.12
BACKUP SERVER SERVICES	$383,576.29
BAL SCORECARD MGMT-CAP SW	$405,373.69
BAL SCORECARD MGMT-CAP SW	$6,812.00
BES HW UPGRADE AND STORAGE EXPANSION	$739,058.00
BES PEOPLESOFT WAREHOUSE (EPM) IMPLEMENTATION	$989,432.34
BILLING EFFICIENCIES PROJECT	$11,871,055.45
BPA SYS- TBL ENGR. DOC. MANAGEMENT SYS. (JDB)	$833,657.83
BPA SYSTEM-ACQUIRE INTEGRATED SOFTWARE DEVELOPMENT TOOL	$146,857.91
BPA SYSTEM-CONST TRANS LINE INFO DATABASE & SYSTEM	$1,370,079.54
BPA SYSTEM-DEVELOP BSP-MS PROJECT 2000 SCHEDULING INTERFACE	$947,594.64
BPA SYSTEM-PURCH & INST LINE DSN SOFTWARE (PLS-CADD, LD-PRO)	$350,925.88
BRIO INFRASTRUCTURE AUGMENTATION	$245,608.84
BSP ASSET MGMT SYSTEMS	$8,658,326.40
BSP FINANCIAL & COST MMT SYSTM	$8,037,560.96
BULK/TF LOAD/REV FRCST	$137,681.47
BULK/TF LOAD/REV FRCST-IT	$598,095.14
BUSINESS SOLUTION PROJECT	$14,947,496.40
C&RD SOFTWARE DEVELOPMENT	$779,128.19
CAISO SETTLEMENT CAP/SW	$83,896.79
CAP IT-DEVELOP TBL EAI TOOLS FOR MARKETING SYSTEMS	$807,579.63
CAP IT-SHORT-TERM LOAD FORECASTING SYSTEM EXPANSION	$228,374.28
CAPITAL IT-DEVELOP & IMPLEMENT TBL REVENUE FORECASTING SYST	$649,424.84
CAPITAL WORK TOOLS	$88,902.99
CBPI-OASIS CAP HW	$142,728.56
CBPI-OASIS CAP SW	$361,366.23
CBPI-SCHEDULING OFF RODS CAP/HW	$114,449.71
CBPI-SCHEDULING OFF RODS CAP/SW	$808,075.14
CCIS DEVELOPMENT	$393,976.63
CCIS PHASE 2	$138,371.56
CCIS PHASE 3 SOFTWARE	$1,196.35
CCTV REPLACE UPGRADES	$174,948.99
CISS PHASE 3--CAP SW	$50,562.40

IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

Project	Amount Paid
COLUMBIA SUB - FY05 EMERG RPL OF.BANK 2 TRANSFER SWITCH.	$22,456.78
COLUMBIA VISTA--IT--PHASE 1	$1,153,443.08
COLUMBIA VISTA-PH 1	$3,830,068.48
CONTENT SERVICES SWITCH (CSS) LOAD BALANCER ENHANCEMENT	$92,987.37
CONTRACTS SYSTEM TRANSAT-CAP	$299.12
COOP MANAGEMENT CAP-SW	$230,389.82
CV LONG TERM	$291,849.83
CV LONG TERM	$157,906.83
DATA SERVICES NT SERVER UPGRADES AND REPLACEMENTS 2	$140,465.98
DATA SERVICES ORACLE INSTALL AND TRANSITION ENVIR TRU64 PROJ	$63,184.00
DATA SERVICES ORACLE MONITORING TOOLS	$206,375.64
DATA SERVICES SERVER REPLACEMENTS	$4,496.00
DATA WH CONSOLIDATION -CAP-HW	$527,568.49
DATA WH CONSOLIDATION -CAP-SW	$10,162.50
DISK SPACE GROWTH FY06 CAP HW	$321,618.83
DISK SPACE GROWTH-CAP	$176,180.13
DISTRIBUTED FILE SYSTEM INFRASTRUCTURE	$27,362.81
DITT CC:TRANS BILLING SYS REPL	$24,815,137.74
DITT CC:TRANS BILLING SYSTEM REPLACEMENT	$2,162,526.71
DITT. CC- REPL RODS AGC WITH A NEW ESCA SYSTEM (JDB)	$2,022,344.72
DITT. CC- UPGRADE EMP ON THE ESCA SERVER (JDB)	$3,715,678.98
DITTMER - TBL REVENUE DATA STORES PROJECT	$2,151,496.26
DITTMER - TRANS CONT IMAGE MGM	$1,305,740.12
DITTMER BPA SYS CNTL CNTR SFTW	$253,604.83
DITTMER CC - AGENCY BILLING SYSTEM PROJECT (TBL PART)	$177,809.33
DITTMER CC - AUTOMATION TOOLS FOR ETMS/CRIT. BUS. SYSTEMS	$9,459,414.79
DITTMER CC - DISPATCH LOGGING SYSTEM REPL/UPGRADE	$230,486.46
DITTMER CC - IMPLEMENT TAP 4C PHASE	$620,949.77
DITTMER CC - MDM1 RELIABILITY IMPROVEMENTS	$1,327,942.37
DITTMER CC - PI OPERATIONAL INFRASTRUCTURE PROJECT	$56,423.74
DITTMER CC - RAI METER RECORDING TECHNOLOGY PILOT PROJECT	$243,174.91
DITTMER CC - RODS SPLIT EFFORTS FOR FY02 ONLY	$391,163.94
DITTMER CC - RODS SPLIT EFFORTS FOR FY03 ONLY	$122,319.50
DITTMER CC - TBS-2 BILLING SYSTEM ENHANCEMENTS	$922,765.53
DITTMER CC - TBS2 ENHANCEMENTS	$499,768.87
DITTMER CC - WBS/MDM TRANSITION AND DECOMMISSIONING	$179,510.05
DITTMER CC : MARKET MONITORING (ATC) PART OF TBL DATA WHSE.	$3,554.00
DITTMER CC : METADATA REPOSITORY PART OF TBL DATA WHSE.	$45,474.18
DITTMER CC : PART OF AGENCY LOAD FORECASTING IT PROJECT	$27,307.13
DITTMER CC DTF - PI OPERATIONAL INFRASTRUCTURE PROJECT	$63,028.96
DITTMER CC: WECC NO SANCTIONS - ETMS TECHNICAL	$563,713.93
DITTMER CC: WECC SA TECHNICAL	$562,615.93
DITTMER CC-PART OF CYBER SECURITY-SUBS-PHASE I	$14,448.06
DITTMER CONTROL CENTER - GEN ICCP LINK (PHASE 1)	$27,278.51
DITTMER CONTROL CENTER - INSTALL FO DACS SYSTEM	$114,812.19
DITTMER CONTROL CENTER - OARS REPLACEMENT/UPGRADE	$316,373.31
DITTMER CONTROL CENTER - PART OF COMPASS MIGRATION	$198.94
DITTMER CONTROL CENTER - REPLACE EPIC WITH XML SOAP	$45,686.19

IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

Project	Amount Paid
DITTMER CONTROL CENTER RPS PJT	$185,326.04
DS/NT SERVICE UPGRADES	$140,028.50
E PERFORMANCE MGMT-CAP SW	$39,559.82
E10K REPLACEMENT	$1,486,396.94
EAI/CV DEVELOPMENT-IT	$119,714.06
EAI/CV DEVELOPMENT-IT	$7,205.40
EAI/GENERIC DEVELOPMENT-IT	$1,293,392.16
EAI/GENERIC DEVELOPMENT-IT	$71,571.18
EAI/GMS DEVELOPMENT-IT	$60,855.23
EAI/GMS DEVELOPMENT-IT	$249.34
EAI/LF DEVELOPMENT-IT	$44,359.24
EAI/NRTO DEVELOPMENT-IT	$387.76
EAI/POWER BILLING-IT	$234,992.44
EAI/SLICE DEVELOPMENT-IT	$5,518.29
EAI/TMS DEVELOPMENT	$695.61
EAI/TSS DEVELOPMENT-IT	$1,120,553.20
EAI/WEATHER DEVELOPMENT-IT	$101,589.72
EE CONTRACT AUTOMATION CAP SW	$8,439.16
EE INTERVAL DATA ANAL CAP SW	$1,235.13
EE INTERVAL DATA ANALYSIS TOOLKIT	$4,224.00
ELECTRONIC RECORDS MANAGEMENT SYSTEM IMPLEMENTATION	$92,045.37
ENHANCE PEOPLESOFT MIDDLEWARE RELIABILITY	$16,459.55
ENTERPRISE BACKUP EXPAN-CAP	$608,925.54
ENTERPRISE SCHEDULING SYSTEM EXPANSION	$127,300.38
ENTERPRISE STOR/BACKUP CAP HW	$656,629.37
ENTERPRISE SYSTEMS INFORMATICA POWER CENTER	$400,109.70
ESC INDEPENDENCE PROJECT	$836,751.66
EVALUATION AND TEST ENVIRONMENT	$393,229.95
FIELD NETWORK EXPANSION-CAP HW	$25,267.43
FIELD SERVER REPLACEMENT - CAPITAL	$127,560.00
FIREWALL REPLACEMENT IN CORPORATE DMZS	$123,109.35
FIREWALL UPGRADE - CAPITAL	$55,776.27
GENERATION MANAGEMENT SYSTEM	$829,605.69
GIGABIT MIGRATION PHASE 2	$125,633.49
GIGABIT NETWORK	$304,200.34
GMS PHASE 1 - IT	$204,964.11
GMS PHASE 2 - IT	$186,922.10
GMS PHASE 2 - IT	$155,597.27
GMS PHASE 2	$768,091.84
GMS PHASE 2-CAP HW	$390.00
GMS PHASE 2-CAP SW	$14,178.74
GTA SYSTEM DEVELOPMENT	$864,052.16
HANDHELD EQUIP DATA -CAP HW	$95,710.52
HANDHELD EQUIP DATA -CAP SW	$523,707.52
HRMIS SUPPORT - CAPITAL	$358,114.92
INDUS BUY DEMAND	$387,431.95
INFOFACTORY TSS#1 - IT	$540,586.95
INFORMATICA CAP HW	$93,414.43

IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

Project	Amount Paid
INFORMATICA CAP SW	$2,013,992.02
INTERUTILITY ELECTRNC TRNSCTNS	$1,112,627.47
IT CAPITAL SUPPORT ACCRUAL	$42,347.00
IT DEVELOPMENT- CREATE A TRANSMISSION REFERENCE DATABASE	$82,515.61
IT PEOPLESOFT/PASSPORT ENVIRONMENT UPGRADE	$63,247.19
ITE UPGRADE CAP HW	$95,933.84
JP-CCIS PHASE 2	$35,005.96
JP-EAI/GTAS DEVELOPMENT-IT	$178.19
JP-EAI/POWER BILLNG DVLPMNT-IT	$6,929.84
JP-EAI/TMS DEVELOPMENT	$14,293.74
JP-EAI/TSS DEVELOPMENT-IT	$140,684.11
JP-EPISILN TO SCS INTGRTN DVLP	$366.45
JP-GTA SYSTEM DEVELOPMENT	$4,482.79
JP-INFOFACTORY TSS#1 - IT	$80,196.91
JP-PBS PHASE 2 (PDOC)	$48,616.58
JP-SCHDLNG DSKTP (WNDWS) MGRTN	$4,641.37
JP-TSS -- IT	$219,402.30
JT-TRANSMISSION LINE DESIGN DATA (TLDD)	$271,353.85
LIBBY-BONNERS FERRY NO. 1 115KV LINE IDENTIFICATION	$328,544.23
LOAD FORECAST PH2 - SOFTWARE	$546,706.76
LOAD FORECASTING-CAP HW	$100,224.10
LOAD FORECASTING-CAP SW	$1,976,384.65
LOAD FORECASTING-IT-PHASE 1	$269,504.91
LOAD FORECASTING-PH 1	$283,470.42
LOAD FORECT-PH 1-FY04	$159,544.44
MARKET MONITORING, INVENTORY MGMT-TBL IT PROJ, CAPITAL COSTS	$331,786.83
MEDIA SERVICE INFRASTRUCTURE ENHANCEMENT	$20,744.61
MICROFOCUS SERVER EXPRESS 2.2	$102,620.30
MIDTERM LOAD/REV FORCST	$1,002,051.35
MIDTRM LOAD/REV FRCST SET-IT	$722,535.92
MONTHLY PAYROLL ACCRUALS HOLDING ACCOUNT	$6,976.25
MS WINDOWS SERVER 2003	$203,335.85
MUNRO CC - PART OF UPGRADE TO EMP 2.X	$1,404,419.60
MUNRO CC - PI OPERATIONAL INFRASTRUCTURE PROJECT	$325,707.36
MUNRO CONTROL CENTER - DISPATCH LOGGING SYSTEM REPL/UPGRADE	$161,487.85
MUNRO CONTROL CENTER - GEN ICCP LINK (PHASE 1)	$22,455.28
MUNRO CONTROL CENTER - PART OF COMPASS MIGRATION	$198.94
MUNRO CONTROL CENTER - REPLACE EPIC WITH XML SOAP	$8,196.82
NEAR-LINE STORAGE	$206,887.23
NETWORK RECONSTRUCTION CAP HW	$37,442.34
NETWORK RECONSTRUCTION CAP SW	$39,906.29
NETWORK SWITCH REPLACEMENT	$3,151,706.91
NETWORK UPGRADE FOR BPA FIELD SITES	$194,511.66
NETWORK UPGRADES	$1,198,575.51
NRTO PHASE 2 (IT DEVELOPMENT)	$3,057.90
NRTO PHASE 2 (IT DEVELOPMENT) - PBL	$189,669.34
NRTO PHASE 2	$352,683.73
NRTO--IT--PHASE 1 BASIC PROGRM	$448,691.43

IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

Project	Amount Paid
NRTO-PH 1 BASIC PRGRM	$1,252,606.80
NT SERVER UPGRADE - CAPITAL	$999,758.80
NT SERVER UPGRADES AND REPLACEMENTS	$127,273.30
NT SERVERS REPLACEMENT	$301,621.71
OPERATIONAL NETWORKS - INFRASTRUCTURE	$74,119.79
OPERATIONS PLANNING	$45,790.23
OPTIMIZATION PROJECT	$3,458,980.15
PASSPORT:PROJECT 2002 INTERFACE	$139,911.32
PBL - CAPITAL 10FOLD PROJECT	$3,422.01
PBL BILL SCAN SOFTWARE	$36,102.61
PBL BILL SCAN-CAP SW	$633,067.04
PBL BILL SCANG-CAP HW	$147,169.59
PBL DATA WAREHOUSE PROJECT	$706,474.20
PBL EAI	$1,364,142.13
PBL ENGINEERING & DSGN CHANGES	$605,766.20
PBL FINNCL&FRCSTNG DATA INFOR	$1,938,624.84
PBL GMS PHASE 2 SOFTWARE	$34,319.72
PBL INFORMATION FACTORY EAI PROJECT	$2,958,139.80
PBL INFORMATION FACTORY PRJCT	$3,666,261.55
PBL INFORMATION SYSTEM-PYRAMID	$297,853.73
PBL INFORMATION TECHNOLOGY	$2,152,653.05
PBS PHASE 2 (PDOC)	$5,089,232.15
PBS PHASE 2 (PDOC)	$34,442.14
PEOPLESOFT CODE ROLL-OUT SUPPORT	$146,565.53
PEOPLESOFT EPM	$222,085.06
PEOPLESOFT MONITORING TOOLS IMPLEMENTATION	$22,103.03
PEOPLESOFT PRODUCTION UPGRADE	$91,695.82
PISCES - PHASE 2	$990,286.21
PISCES FY07	$78,930.00
PORTLAND HQ - PART OF THE TCMS UPGRADE PROJECT	$199.08
POWER DATA PROC SRVCS CAP SW	$44,210.41
POWER OPERATIONAL NETWRK PRJCT	$367,511.13
POWER SCHDLNG NETWORK SEPARTN	$2,194,334.24
QUALITY CONFIGURATION MANAGEMENT SYSTEM	$40,126.00
QUALITY CONTROL CHANGE MANAGEMENT SYSTEM - CAPITAL	$72,875.93
REVERSE PROXY IMPLEMENTATION PROJECT	$340,370.15
ROBII CAP SW	$642,082.66
ROSS TELEPHONE SWITCH UPGRADE	$1,341,150.15
SAN CAPACITY EXPANSION	$1,014,003.55
SAN CAPACITY EXPANSION AT HEADQUARTERS	$74,280.99
SCH DESKTOP MIGRATN	$108,812.66
SCHDLNG DESKTP (WINDWS) MIGRTN	$585,728.69
SCHEDULING COMPUTER SYSTEM	$159,955.99
SECURITY-CCTV REPLACE/UPGRADES	$7,994.63
SLICE	$2,651,964.94
SOFTWARE QUALITY ASSRNCE PRJCT	$78,829.16
SOFWARE DEVELOPMENT CAP SW	$4,224.00
SPACE MGMT AUTOMATION-CAP SW	$129,987.70

IT PROJECTS FY2000 TO FY2007 (as of 12/13/06)

(10/01/1999 to 12/13/2006)

Project	Amount Paid
SQL SERVER UPGARDES/REPLACEMENT 04	$106,512.27
STORAGE FABRIC PERFORMANCE-CAP	$334,763.11
STORAGE INFRASTRUCTURE ENHANCEMENT	$1,174,384.03
SUN/UNIX CONVERSION	$1,481.91
SUN/UNIX CONVERSION-IT	$68,546.81
SYBASE PLATFORM MIGRATION DEV	$2,656,626.81
SYBASE PLATFORM MIGRATION DEV	$246,919.12
SYSTEM BACKUP & RECOVERY PRJCT	$823,633.02
SYSTEM BACKUP & RECOVERY PRJCT	$64,643.04
SYSTEMS STEAMLINING PROJECT	$2,465,235.06
T&L/PAYROLL SYSTEM CONFIGURATION	$6,185,888.81
TAPE DRIVE AND UPS REPLACEMENTS FOR FIELD SITES	$44,256.52
TBL - CAPITAL 10FOLD PROJECT	$4,720.00
TBL EQUIPMENT & MATERIAL DATA WAREHOUSE - DESIGN & BUILD	$1,097,565.25
TBL REALTY IMAGING SYSTEM-PURCH & INSTALL REPL FOR WATERMARK	$210,095.90
TBL-IMPLEMENTATION OF SHAREPOINT	$1,736,942.68
TCMS-TRANS CONTRACT MGT-CAP SW	$73,222.91
TEL RESOURCES UPGRADE-CAP HW	$170,161.83
TEL RESOURCES UPGRADE-CAP SW	$23,357.33
TEL SECURITY MIRROR-CAP HW	$54,450.87
TELEPHONE CONFERENCE BRIDGE UPGRADE	$466,830.94
TETON SUBSTATION - TEMPERATURE RTU INSTALLATION	$5,585.54
TRADE MGMT SYSTEM (TMS)	$2,321,610.12
TRADE MGMT SYSTEMS	$1,709,696.50
TRADING FLOOR CAPITAL IT	$1,233,883.36
TRANS CONTRACT MGMT SYS-CAP	$1,488.37
TRANSMISSION SCHEDULING AND TSIN PHASE II APPLICATION DEVELO	$385.97
TSS -- IT	$5,987,980.67
TSS	$5,265,974.54
TSS PHASE 2	$642,733.99
UNIT OUTAGE PHASE 1 DEVELOPMNT	$304,685.36
UNIX SERVER LIFE CYCLE MGT-CAP	$404,036.48
UNIX SERVERS UPGRADE FY04	$298,146.94
UNIX SRVR DISPLCMNT CAP HW	$464,292.95
UNIX SUPPORT - CAPITAL	$15,604.78
UPDATE SERV MONITOR TOOL-CAP SW	$66,062.56
UPGRADE NT/WINDOWS SERVERS	$421,976.71
UPGRADE PORTLAND FIREWALL	$65,999.03
VIDEO CONFERENCING EQUIPMENT UPGRADE	$32,714.64
WEB SERVER RELIABILITY	$11,920.25
WINDOWS SERVER REPLACEMENT FY06 CAP HW	$270,454.30
WINDOWS SERVER REPLACEMENT-CAP	$240,263.56
	$229,784,398.73

DOE F 1325.8e Electronic Form Approved by CILR – 10/08/2002
(08-89)

United States Government | Department of Energy

Bonneville Power Administration

memorandum

DATE: September 4, 2003

REPLY TO ATTN OF: KN-7

SUBJECT: Review of Softsmiths (Contract No. 00001236)

TO: Jane Selby – TM

On July 7, 1999, BPA entered into a time and materials agreement with Softsmiths, Inc. (Contract No. 99AC17333, now re-numbered as Contract No. 00001236) for the development and installation of computer software involving BPA's transmission reservation and scheduling systems. Since the inception of this agreement through 2002 total invoiced costs have exceeded $13 million, the project scope for several line items has dramatically increased, and there have been numerous project delays and time extensions. To improve the administration of the contract, you asked that we review the contract and vendor invoices to identify how, where, and why the costs and scope have increased. You also asked that we provide recommendations for improving the administration of the contract.

We reviewed the contract and summarized the vendor invoices provided by your staff covering the period 1999 through 2002. Working with knowledgeable persons on your staff, we also identified four recommendations to improve the administration of the contract.

Invoices show cost acceleration and substantial requirements definition costs

Table 1 (below) summarizes the invoiced costs for the four years, and detail on the costs and contract line items charged is attached (with significant cost categories highlighted). Table 1 shows that, of the $13,381,993 invoiced, percent ( ) was for contractor labor and travel, and percent ( ) was for technical support, maintenance, the purchase of licenses, software, and hardware, and other costs. The table also shows that total hours were invoiced, that the average hourly contractor labor and travel rate was $, and that cost acceleration occurred over the period.

Table 1 – Summary of Invoiced Costs

	Total	1999	2000	2001	2002
Labor					
Travel					
Labor & travel costs					
Other costs					
Total costs	$13,381,993	$1,619,966	$2,516,031	$4,102,604	$5,143,392
Percentages by year	*100.00%*	*12.11%*	*18.80%*	*30.65%*	*38.44%*
Invoiced hours					
Hourly labor & travel rate					

For the four years reviewed, contractor labor consisted of fourteen skill categories, four of which accounted for percent ($) of total costs, and percent of contractor labor costs. Those four skill categories included: Business Architect (BA), Project Software Architect (PSA), Project Software Engineer (PSE), and Systems Software Engineer (SSE). In addition, total summarized invoiced costs for the four-year period ($13,381,993) were within the overall budget/contract ceiling of $17,022,929.

We found that invoiced costs were charged to 95 contract line items, and that percent ($) of total contract costs were attributable to six line items. We also found that thirteen line items accounted for percent ($) of total contract costs (percent of invoiced contractor hours), and involved having the vendor "identify and document additional business requirements" for future undesignated customers, for the implementation of the FY 2002-2003 rate case, and for other work (see Table 2, below.)

Table 2 - Business Requirements Line Items

Line item number	Invoiced hours	Invoiced dollars	Percent of contract costs
10J , 10N			
10A - 10I			
Total	28,087.00	$5,459,868	40.80%

The Contracting Officer's Technical Representative (COTR) and Contracting Officer (CO) told us that the costs shown in Table 2 were the result of Marketing and Sales (TM) deferring to Softsmiths the task of inventorying business processes and defining business requirements. We were also told that cost increases occurred because management had requested changes to some project requirements after the requirements phase for those projects had been completed, and after development had started. Those changes resulted in reopening the project requirements phase and extending the project completion deadline.

Multiple invoices received each month; supporting documentation generally adequate

We found that the number of invoices sent by Softsmiths in any given month varied during the period reviewed, and that the company routinely sent separate invoices for each line item, for each contractor employee, for each contractor employee travel activity, and for other purchases. As a result, BPA received numerous invoices in any given month. We found that the supporting documentation included in Softsmiths invoices was generally complete, with the limited exception that some invoiced travel costs were not supported by travel documentation.

Recommendation 1: Require consolidated invoices with additional support.

Softsmiths' submission of numerous invoices each month complicated both the COTR's monthly invoice review process and our reconciliation of amounts invoiced, allowed and

disallowed with amounts paid by BPA. To simplify the COTR review process and reconciliation of work activity and payments, we recommend that TBL require Softsmiths to submit one invoice per month for all contract work activity (contract release activity). In addition, we recommend that invoices contain supporting schedules that summarize all contractor labor related costs. The schedules should show the name(s) of employees who worked on the contract during the period, their labor classification, the hours they worked, their billing rates, and extended totals. For major non-labor purchases, we recommend that Softsmiths provide copies of the expenditure documentation (invoices).

Recommendation 2: Simplify travel reimbursement and limit travel costs.

The contract authorizes contractor employee travel reimbursement for actual costs incurred (i.e., lodging, meals, airline fare and other expenses), which must be supported by detailed travel receipts. This burdens both Softsmiths, which must retain and submit documentation in order to receive reimbursement, and the COTR, who must verify travel expenditures with the invoice. To reduce the administrative burden of actual cost travel reimbursement and set predictable reimbursement standards, we recommend a contract change to base travel reimbursement on Federal per-diem for Vancouver, Washington. We also recommend that reimbursement for rental vehicles for contractor use be limited to one vehicle for every four contractor employees stationed in Vancouver, with a maximum $25-per-week gasoline and parking allowance per vehicle. Finally, we recommend that the COTR approve in advance all reimbursable contractor travel between Vancouver and Texas, with a limit of two such trips per month.

Recommendation 3: Create umbrella contract and use releases for work activities.

We recommend that, by October 1, 2003, TBL establish a new umbrella contract to incorporate Recommendation 1 and 2, and to use releases, rather than line items, in managing major work activity. Included in those releases would be work activity for maintenance and IT development.

Recommendation 4: Define requirements prior to new contracts/releases and fully review proposed changes.

As mentioned above, it appears that significant causes of the cost increases and delayed completion date were (1) not fully defining the business processes and requirements for several IT projects before the contract was awarded; and (2) changing or adding requirements after the business requirements definition phase had been completed, and after development efforts had started. Similar concerns were mentioned in "Information System Development Practices at the Bonneville and Western Area Power Administrations" issued by the Department of Energy Inspector Generals Office (Report 0586, February 2003). This report attributed BPA project schedule slippages and cost increases to: (a) not performing key planning activities and cost-benefit analysis, (b) not evaluating (or inadequately evaluating) potential software solutions, (c) not adequately performing project monitoring and control activities (project baselines and plans were not revisited after scope changes), and (d) not performing business process improvement reengineering studies prior to development. In addition, the report mentions that BPA had not instituted an adequate system development methodology.

Since identification of business requirements for new systems is inherently a BPA responsibility, we recommend that business processes be inventoried and requirements fully defined before TBL selects a new contractor or issues new contract releases. Because developing systems based on changed requirements will require additional time and money, we recommend that after the system requirements phase of a project is completed (or nearly completed), requests for new or changed requirements (scope changes) be evaluated for their impact on cost and on the project schedule before they are approved.

If you have any questions, please contact Fred Lehr at (503) 230-3537.

Mike Sparks, Manager
Internal Audit

Attachment

cc:
F. Lehr – DN-7
B. Gable – TLC-MODW
G. Matthews – TMC-DITT2
Official File – DN (MN-17-11/36189-35)

c)

SoftSmiths Contract No. 1236
Summary of Vendor Invoices by Contract Line Item: 1999 - 2002

		Summary 1999 Through 2002						Summary 1999		Summary 2000		Summary 2001		Summary 2002	
Cost and Line Item Descriptions	Line Item	Hours	Hourly Percent	Dollars	Dollars Percent	Line Item Contract Amount	Line Item Variance Over (Under)	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
Core ETMS System Master License Agreement with a developmental license.	1			279,166.67		250,000.00	29,166.67		225,000.00		50,000.00		0.00		4,166.67
Technical Support & Maint. Services for item 1 Seats at Bronze Level.	2			85,138.97		83,333.40	1,805.57				47,638.94		33,333.36		4,166.67
Base license upgrade for NERC tagging. Spec. 1.4 or later, for item 1 Seats.	3			72,000.00		72,000.00	0.00				72,000.00				
Technical support & maint for Item 3 tagging.	4			25,720.00		24,000.00	1,720.00				13,720.00		9,600.00		2,400.00
Additional ETMS Master License Agreement Seats.	5			270,000.00		270,000.00	0.00				210,000.00		60,000.00		
Additional ETMS master license agreement seats for shared use by SoftSmiths. Unit 4 license agreement applies.	5A			15,000.00		15,000.00	0.00						15,000.00		
Technical support & maintenance services for item 5 Seats.	6			73,500.00		70,000.00	3,500.00				38,500.00		28,000.00		7,000.00
Technical support and maintenance saervices for the 5 additional seats added to item 5 by amendment 6.	6A			3,700.00		2,500.00	1,200.00						2,700.00		1,000.00
Technical support & maintenance services for item 5A seats.	6B			1,850.00		1,250.00	600.00						1,350.00		500.00
Technical support and maintenance services for the 5 additional seats added to item 5 by amendment 8.	6C			2,250.00		1,000.00	1,250.00						1,250.00		1,000.00
Add. base lic. upgrades for NERC tagging, Spec. 1.4 or later, for item 5 seats.	7			33,750.00		33,750.00	0.00				26,250.00		7,500.00		
Additional base license upgrades for NERC tagging, spec. 1.4 or later, for item 5 shared seats.	7A			1,887.50		1,875.00	12.50						1,887.50		
Technical support & maint. Services for item 7 upgrades.	8			9,390.00		8,750.00	640.00				5,015.00		3,500.00		875.00
Technical support & maintenance services for the 5 additional seat upgrades added to item 7 by amendment 6.	8A			53,231.75		312.50	52,919.25				52,769.25		337.50		125.00
Technical support and maintenance services for item 7A upgrades.	8B			218.75		156.25	62.50						156.25		62.50
	8C			281.25		125.00	156.25						156.25		125.00
Perform hardware cluster analysis & provide a recommendation for BPAT approval prior to authorization of SoftSmiths procuring system hardware. Install the ETMS software and perform configuration for operation in the BPAT enviornment. Provide site support consisting of system configuration and tuning, ORACLE configuration and tuning, and, general consulting.	9			130,214.75		183,000.00	(52,785.25)		130,214.75				0.00		
Bumping market study. Identify and document additional business requirements.	10A			32,832.00		42,000.00	(9,168.00)		29,457.00				3,375.00		
Loadsheet module includes: **Identify and document additional business requirements.** Develop software capabilities.	10B			23,398.88		90,000.00	(66,601.12)		21,778.88		1,620.00		0.00		
Curtailment module includes: **Identify and document additional business requirements.** Develop software capabilities.	10C			25,220.25		97,000.00	(71,779.75)		25,220.25				0.00		

SoftSmiths Contract No. 1236
Summary of Vendor Invoices 1999 - 2002

		Summary 1999 Through 2002						Summary 1999		Summary 2000		Summary 2001		Summary 2002	
Cost and Line Item Descriptions	Emp. Categ.	Hours	Hourly Percent	Dollars	Dollars Percent	Avg. Hourly Labor Rate		Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
				146,814.00					113,629.50		1,066.50		0.00		32,118.00
				1,710.00					1,710.00				0.00		
				259,048.13					38,677.50		61,104.38		87,277.50		71,988.75
	1			2,430.00									2,430.00		
				1,057,668.75					337.50		322,200.00		408,825.00		326,306.25
				1,051,087.50					155,025.00		264,600.00		424,125.00		207,337.50
				4,187.48					4,187.48				0.00		
				78,637.50									78,637.50		
	2			711,618.75							159,187.50		191,475.00		360,956.25
				217,575.00							225.00				217,350.00
				556,470.00					101,148.75		96,693.75		197,235.00		161,392.50
				9,090.00					675.00				112.50		8,302.50
	3			11,846.25									11,846.25		
				54,517.50									112.50		54,405.00
)	4			450.00									450.00		
				188,865.00									181,170.00		7,695.00
	5			24,300.00									24,300.00		
				214,020.00					6,480.00		19,170.00		84,780.00		103,590.00
				54,450.00							24,480.00		29,970.00		
				546,480.00							23,670.00		169,155.00		353,655.00
	6			125,010.00									14,220.00		110,790.00
				538,498.50							76,171.50		227,563.50		234,763.50
				4,495.50									4,495.50		
				72,054.00									22,896.00		49,158.00
				3,816.00											3,816.00
	7			73,676.26											73,676.26
				223,537.50							10,237.50		121,725.00		91,575.00
	8			49,725.00									33,300.00		16,425.00
				178,795.50											178,795.50
	9			43,963.50											43,963.50
				2,610.00					2,610.00				0.00		
				67.50									67.50		
	10			585.00							585.00				
	11			144,005.63					23,073.75		68,591.25		27,483.75		24,856.88
				45,621.00					45,621.00				0.00		
				3,746.25									3,746.25		
				2,747.25							2,747.25		0.00		
	12			69,255.00									9,990.00		59,265.00
				80,080.90					28,929.38		47,696.64		3,454.88		
				1,415.25							1,415.25				
				1,332.00							1,332.00				
				10,323.00							10,323.00				
	13			27,555.75									27,555.75		
				7,863.75							7,863.75				
				21,289.50					21,289.50				0.00		
	14			146,250.00									63,562.50		82,687.50
				7,069,585.40					**543,394.36**		**1,199,360.27**		**2,451,961.88**		**2,874,868.89**

SoftSmiths Contract No. 1236
Summary of Vendor Invoices 1999 - 2002

Cost and Line Item Descriptions	Emp. Categ.	Summary 1999 Through 2002 Hours	Hourly Percent	Dollars	Dollars Percent	Avg. Hourly Labor Rate	Summary 1999 Hours	Dollars	Summary 2000 Hours	Dollars	Summary 2001 Hours	Dollars	Summary 2002 Hours	Dollars
Meals				24,034.24				1,087.01		5,953.67		8,742.17		8,251.39
Airfare				161,692.73				10,688.22		58,771.29		43,875.60		48,357.62
Lodging				82,499.15				3,880.92		22,036.42		26,265.70		30,316.11
Car Rental				47,205.36				1,030.29		12,156.73		16,154.65		17,863.69
Mileage / Gas				7,296.78				361.94		1,733.04		2,582.11		2,619.69
Tolls/Parking				7,397.33				316.75		2,619.84		2,027.50		2,433.24
Telephone				831.02				33.99		247.89		430.13		119.01
Other				3,943.31				192.25		562.72		1,487.02		1,701.32
Total Travel Costs				**334,899.92**				**17,591.37**		**104,081.60**		**101,564.88**		**111,662.07**
Total Personnel Related				**7,404,485.32**				**560,985.73**		**1,303,441.87**		**2,553,526.76**		**2,986,530.96**
Unit 6 - ETMS Cluster Hardware														
Unit 10 Stagging Mkt Hardware														
Unit 9 Real Time Server Hardware														
Core ETMS Sys.Quan. 5														
Transportation Charges														
Tech Support & Maint.														
API														
License Fees														
Correction														
Miscellaneous / Other														
Total Other Costs				**5,977,508.25**				**1,058,980.57**		**1,212,589.20**		**1,549,077.01**		**2,156,861.47**
Invoice Dollars				**13,381,993.57**				**1,619,966.30**		**2,516,031.07**		**4,102,603.77**		**5,143,392.43**
Invoice Hours														

SoftSmiths Contract No. 1236
Summary of Vendor Invoices by Contract Line Item: 1999 - 2002

	Summary 1999 Through 2002							Summary 1999		Summary 2000		Summary 2001		Summary 2002	
Cost and Line Item Descriptions	Line Item	Hours	Hourly Percent	Dollars	Dollars Percent	Line Item Contract Amount	Line Item Variance Over (Under)	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
Contract Data Base Module includes: **Identify and document additional business requirements**. Develop software capabilities.	10D			70,471.50		104,000.00	(33,528.50)		27,461.25		10,203.75		29,070.00		3,736.50
DC Loss calculator module includes: **Identify and document additional business requirements.** Develop software capabilities.	10E			88,866.00		110,000.00	(21,134.00)		42,993.00		7,728.75		37,739.25		405.00
AGC Net Schedule Module includes: **Identify and document additional business requairements.** Develop software capabilities.	10F			38,721.37		39,000.00	(278.63)		31,048.88		7,672.49		0.00		
Numbers desk module includes: **Identify and document additional business requirements.** Develop software capabilities.	10G			31,275.23		34,000.00	(2,724.77)		31,173.98		101.25		0.00		
Transmission schedule module includes: **Identify and document additional business requirements.** Develop software capabilities.	10H			33,584.63		33,787.13	(202.50)		33,584.63				0.00		
Electronic checkout module includes: **Identify and document additional business requirements.** Develop software capabilities.	10I			129,585.75		9,888.75	119,697.00		6,851.25		3,037.50		0.00		119,697.00
Future undesignated customers. **Identify and document additional business requirements.** Develop software capabilities.	10J			4,229,231.75		4,938,498.75	(709,267.00)		80,803.60		782,728.50		1,574,273.25		1,791,426.40
Disaster Recovery Planning.	10K			32,523.00		48,000.00	(15,477.00)						405.00		32,118.00
TAP applications. **Identify and document additional business requirements.** Develop software capabilities.	10L					120,000.00	(120,000.00)								
Dispatcher interconnection. **Identify and document additional business requirements.** Develop software capabilities.	10M					30,000.00	(30,000.00)								
FY 02-03 rate case implementation. **Identify and document additional business requirements.** Develop software capabilities.	10N			724,157.25		928,612.50	(204,455.25)						382,617.00		341,540.25
Contract demand check process custom.	10O			84,690.00		85,500.00	(810.00)								84,690.00
Wheeling loss module. **Identify and business document requirements.** Develop software capabilities.	10P			0.00		150,000.00	(150,000.00)								
Training, including development training plan for user personnel on site at BPAT's Dittmer facility, for ETMS End User, ETMS System Administration, ETMS (BPAT Customs), ORACLE Database and other training as required.	11			410,512.14		524,000.00	(113,487.86)		26,219.13		80,507.91		80,101.35		223,683.75
Travel in support of line item 2, 4, 6 and 8-11. No travel is authorized under this line item until ordered pursuant to indefinite quantity contract.	12			311,443.44		310,319.97	1,123.47		17,398.99		80,675.08		101,121.70		112,247.67
Application programmers interface API 1st seat.	13			22,222.50		15,000.00	7,222.50				22,222.50		0.00		
Technical support and maintenance for item 13.	14			5,250.00		5,000.00	250.00				2,750.00		2,000.00		500.00
Additional API seat licenses.				2,000.00		2,000.00	0.00				2,000.00				
API technical support and maintenance services for tw 15 seats.				700.14		666.80	33.34				366.74		266.72		66.68

SoftSmiths Contract No. 1236
Summary of Vendor Invoices by Contract Line Item: 1999 - 2002

		Summary 1999 Through 2002						Summary 1999		Summary 2000		Summary 2001		Summary 2002	
Cost and Line Item Descriptions	Line Item	Hours	Hourly Percent	Dollars	Dollars Percent	Line Item Contract Amount	Line Item Variance Over (Under)	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
Provide the hardware identified at Unit	17			833,198.98		833,198.85	0.13		833,198.98				0.00		
The contractor shall provide the additional hardware listed under the additional hardware added by contract modification 3 heading as incorporated into unit 6 by modification 3.	17A			19,796.10		19,796.10	0.00				19,796.10				
The contractor shall provide the additional hardware listed under the additional hardware added by amendment 6 heading as incorporated into unit 6.	17B			112,697.00		112,697.00	0.00						112,697.00		
Provide installation and configuration of unit 6 hardware purchased under the item 71 and subline item 17A. Following verification, testing, provide transportation of the equipment to BPA's Dittmer facility and reinstall, configure and tune as required at the new location.	18			89,025.25		99,444.97	(10,419.72)		57,561.75		31,463.50		0.00		
Provide installation and configuration of unit 6 hardware purchased under subline item 17B. Following verification testing, provide transportation of the equipment of BPA's Dittmer facility and reinstall, configure and tune as required at the new location.	18A			28,948.50		29,000.00	(51.50)						28,948.50		
Provide miscellaneous software maintenance support to ETMS customers.	19			16,942.50		50,000.00	(33,057.50)						1,800.00		15,142.50
Provide on-site software and Oracle support for 1 ETMS in accordance with unit 7.	20			499,871.25		564,798.00	(64,926.75)				45,369.75		219,738.00		234,763.50
Developmental server as training service agreement as set forth at Unit 8. The master license at Unit applies. Technical support and maintenance services are included.	21					26,000.00	(26,000.00)								
Real time server licenses. The master license agreement at unit 4 applies.	22			0.00		195,000.00	(195,000.00)						0.00		
Technical support and maintenance services for item 22 above (5 seats).	23			44,849.92		39,000.00	5,849.92				12,349.92		26,000.00		6,500.00
Provide the real time server hardware identified at unit 9. Standard commercial warranties shall be provided.	24			415,705.71		220,705.11	195,000.60				415,705.71				
	24A			20,789.11		20,789.11	0.00						20,789.11		
Provide real time server installation, configuration and verification at Houston. In addition, provide real time server project management, engineering and administration.	25			27,437.53		24,607.03	2,830.50				27,437.53				
Ship item 24 product and provide real time server on-site installation and configuration at Dittmer.	26			25,594.38		24,928.38	666.00				25,594.38				
License for the staging market server. Unit master license agreement applies.	27			72,000.00		72,000.00	0.00				72,000.00		0.00		
Technical support and maintenance for item 27, staging market server.	28			16,560.00		14,400.00	2,160.00				4,560.00		9,600.00		2,400.00
Provide the ETMS staging market hardware listed in Unit 10.	[illegible]			186,000.00		186,000.00	0.00				186,000.00				
				15,978.70		15,191.20	787.50						15,978.70		

SoftSmiths Contract No. 1236
Summary of Vendor Invoices by Contract Line Item: 1999 - 2002

Cost and Line Item Descriptions	Line Item	Summary 1999 Through 2002 Hours	Hourly Percent	Dollars	Dollars Percent	Line Item Contract Amount	Line Item Variance Over (Under)	Summary 1999 Hours	Dollars	Summary 2000 Hours	Dollars	Summary 2001 Hours	Dollars	Summary 2002 Hours	Dollars
Provide staging market server system installation and configuration at Houston. Provide staging market server project management, engineering and administration.	30			35,646.77		34,231.52	1,415.25				35,646.77				
Ship item 29 product and provide staging market server on-site installation and configuration at Dittmer.	31			38,427.25		34,681.00	3,746.25				38,427.25				
Enhanced maintenance / remote access agreement, as set forth at Unit 11.	32			1,165.50		10,000.00	(8,834.50)				1,165.50		0.00		
Application data replication between the real time server and the AFT server.	33						0.00								
Network reconfiguration (real time, AFT and developmental servers).	34			134,295.75		134,000.00	295.75				83,007.00		51,288.75		
Two (2) server licenses for e-reservation standard module for real time and ATF enviornment. Fifty (50) client licenses for e-reservations module. Two (2) add-on module for OASIS biz rule automation for real time and ATF enviorment. Two (2) add-on modules for schedule posting for real time and ATF enviorments.	35			183,473.63		141,375.00	42,098.63						183,473.63		
Technical support and maintenance services for e-reservation server licenses, item 35.	36			22,816.72		15,416.70	7,400.02						16,650.04		6,166.68
Technical support and maintenance services for the 5 additional client licenses added to item 35 by amendment 8.	36A			3,150.00		1,400.00	1,750.00						1,750.00		1,400.00
Two (2) server licenses for e-checkout module on the production server, real time server and staging enviornment. Fifty (50) client licenses for e-checkout modules on the production server, real time server and ATF enviornment. One (1) data exchange adapter-business partner CISO.	37			70,386.10		69,486.10	900.00						70,386.10		
Technical support and maintenance services for e-checkout licenses item 37.	38			15,750.00		11,250.00	4,500.00						11,250.00		4,500.00
Technical support and maintenance services for the 5 additional - checkout licenses added to item 37 by amendment 8.	38A			450.00		200.00	250.00						250.00		200.00
Provide after the fact cluster installation, configuration and testing-on site. Unit 6 hardware purchased under item 17 and subline item 17A. Following verification testing, provide transportation of the equipment to BPA's Dittmer facility and reinstall, configure and tune as required at the new location.	39			0.00		42,250.00	(42,250.00)						0.00		
eBus Server Licenses for cluster nodes 1 & 2 for each of the market interface system, market interface staging system, real time system, real time staging system and the after the fact system. eBus Server Licenses includes data replication software.	40			450,000.00		225,000.00	225,000.00						450,000.00		
Technical support and maintenance services for eBus licenses, Item 40.				37,000.00		25,000.00	12,000.00						37,000.00		

SoftSmiths Contract No. 1236
Summary of Vendor Invoices by Contract Line Item: 1999 - 2002

		Summary 1999 Through 2002						Summary 1999		Summary 2000		Summary 2001		Summary 2002	
Cost and Line Item Descriptions	Line Item	Hours	Hourly Percent	Dollars	Dollars Percent	Line Item Contract Amount	Line Item Variance Over (Under)	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
Interface adaptor license fees.	42			126,000.00		168,000.00	(42,000.00)						126,000.00		
Technical support and maintenance services for each interface adapter license, item 42.	43			3,500.00		1,750.00	1,750.00								3,500.00
Technical support and maintenance services for the 6 option interface adapter licenses added to item 42 by amendment 8.	43A			8,050.00		5,600.00	2,450.00						8,050.00		
Schedule Web interface (SWI) site license to permit BPAT to extend the use of the SWI interface through the internet to BPAT customers in accordance with unit 12 of the contract.	44			70,000.00		70,000.00	0.00						70,000.00		
Technical support and maintenance for SWI, item 44.	45			10,267.70		5,833.35	4,434.35						7,933.36		2,334.34
e-Stat Module license afor Production and Staging Server, including 55 client licenses.	46			28,400.00		14,200.00	14,200.00						14,200.00		14,200.00
Technical support and maintenance for item 46 licenses.	47			2,662.52		1,183.34	1,479.18						2,662.52		
e-Meter server license for real time cluster, after the fact cluster, staging cluster and 55 client licenses.	48			80,421.05		80,421.05	0.00						80,421.05		
Technical support and maintenance for item 48 licenses.	49			6,534.22		3,183.34	3,350.88						3,350.88		3,183.34
Provide SQL resources in support of the statement of work at unit 13 to the contract.	50			50,562.00		76,002.00	(25,440.00)						22,896.00		27,666.00
Technical support and maintenance for all SoftSmith software identified at unit 3.	51					64,054.22	(64,054.22)								
One time fee adjustment due the contractor to bring the technical support and maintenance line items and subline items deleted by amendment 11 to a common completion date of 10/7/01.	51A			16,312.89		16,312.89	0.00								16,312.89
Technical support and maintenance for the software identified in unit 3 including the added ATC module.	51B					68,387.54	(68,387.54)								
Technical support and maintenance for the software identified in unit 3 including the added e-note.	51C			216,232.56		36,517.73	179,714.83								216,232.56
Technical support and maintenance for the software identified in Unit 3 including the added BuyAmarket software and 4.X update.	51D			35,863.60		74,275.12	(38,411.52)								35,863.60
Technical support and maintenance for the software identified in unit 3 including the added 4.X software upgrade.	51E			46,460.48		46,460.48	0.00								46,460.48
Technical support and maintenance for the software identified in unit 3 including the added 2 adapters (8 in total).	51F			94,320.96		141,481.44	(47,160.48)								94,320.96
The subline item is created to provide for one-time fee payment due the contractor to change the monthly completion date for technical support and maintenance from the 7th day of the month to the last day of the month.	51G			138,463.50		36,156.37	102,307.13								138,463.50
Technical support and maintenance for the software identified in unit 3 including the added w-wheel source code access.	51H					2,410,937.76	(2,410,937.76)								
BuyAmarket module software and licenses including 55 user seat licenses and 5 shared-use seat licenses.	5			94,750.00		94,750.00	0.00								94,750.00

SoftSmiths Contract No. 1236
Summary of Vendor Invoices by Contract Line Item: 1999 - 2002

		Summary 1999 Through 2002						Summary 1999		Summary 2000		Summary 2001		Summary 2002	
Cost and Line Item Descriptions	Line Item	Hours	Hourly Percent	Dollars	Dollars Percent	Line Item Contract Amount	Line Item Variance Over (Under)	Hours	Dollars	Hours	Dollars	Hours	Dollars	Hours	Dollars
ATC Module software and licenses. Includes real-time production/staging, after-the-fact, 2 market production/staging servers, 50 client licenses, plus 5 share-use client licenses.	53			104,000.00		104,000.00	0.00						104,000.00		
ETMS upgrade to vwersion 4.X software and license. Includes real-time production/staging, after the fact, 2 market production/staging servers. Includes 50 client licenses plus 5 share-use client licenses.	54			447,500.00		447,500.00	0.00								447,500.00
e-Notes server software and licenses. Includes after-the-fact, market production/staging servers with 50 client licenses plus 5 share-use client licenses.	55			29,750.00		29,750.00	0.00						29,750.00		
e-Wheel source code access license per unit	56			1,000,000.00		1,000,000.00	0.00								1,000,000.00
Total Costs				**13,381,993.60**		**7,022,928.75**	**(3,640,935.15)**		**1,619,966.32**		**2,516,031.07**		**4,102,603.77**		**5,143,392.44**
Total Hours															