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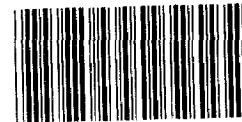
GAO

Briefing Report to the Chairwoman,
Subcommittee on Civil Service,
Committee on Post Office and Civil
Service, House of Representatives

October 1986

TVA NUCLEAR POWER

Management of the Nuclear Program Through Personal Services Contracts



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United States
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Resources, Community, and
Economic Development Division

B-222334

October 24, 1986

The Honorable Patricia Schroeder
Chairwoman, Subcommittee on
Civil Service
Committee on Post Office and
Civil Service
House of Representatives

Dear Madam Chairwoman:

In your March 14, 1986, letter, you requested that we examine certain employment arrangements the Tennessee Valley Authority (TVA) had entered into under personal services contracts. On June 2, 1986, our office provided you with an advisory legal opinion in response to questions raised in your letter concerning the arrangement between TVA and Mr. Steven White, a retired admiral who is serving as Manager of the TVA Office of Nuclear Power. In that opinion, we concluded that Mr. White's retention under these contractual arrangements constituted the improper use of a personal services contract and represented a circumvention of the statutory ceiling on salary payments to TVA employees.

In subsequent discussions with your office, we agreed to provide you information relating to other personal services contracts as well as further information concerning Mr. White's employment by TVA. Specifically, your office requested that we

- compare Mr. White's salary with that of executives in other utilities,
- compare Mr. White's employment contract provisions limiting his personal liability for his actions (waiver-of-liability clause) with liability provisions contained in other TVA personal services contracts,
- identify other contractor personnel employed by TVA under arrangements similar to Mr. White's, and

- describe the organizational and functional changes made to TVA's Nuclear Safety Review Staff since Mr. White has been employed.

In September we briefed your office on the information we had obtained on these items. At the request of your office, this briefing report presents the results of our work. Subsequent to our meeting, Mr. White has taken a leave of absence pending the resolution of conflict-of-interest issues raised by the United States Office of Government Ethics.

Overall, we found that Mr. White's rate of pay is within the range of the salaries paid by a sample of nonfederal utilities to their top executive and is over two and a half times the average salary paid to executives who hold positions which appear to have responsibility for managing the utilities' power or nuclear power operations. In addition, the employment contract provisions limiting Mr. White's personal liability for claims resulting from his performance under his contract appear generally consistent with language in other TVA contracts for personal services.

We also found that TVA's Office of Nuclear Power has employed an additional 25 persons since January 1986 under arrangements similar to the employing arrangements of Mr. White. Based on our previous advisory legal opinion concerning Mr. White's employment arrangements, we believe the employing arrangements for these 25 are questionable.

Finally, TVA's Nuclear Safety Review Staff has been (1) made an organizational component of TVA's Office of Nuclear Power and no longer reports directly to the TVA Board of Directors and General Manager, (2) renamed the Nuclear Manager's Review Group, and (3) relocated from Knoxville to Chattanooga, Tennessee (the location of TVA's Office of Nuclear Power). While the Review Group's responsibilities, in many respects, appear to be largely unchanged, time and operating experience will be needed to assess the implication of other changes on the independence and effectiveness of the Review Group's nuclear safety oversight activities.

SALARY COMPARABILITY

We examined the salaries paid to the executives of 12 private electric utilities that operated and/or had under

construction nuclear power generating units. The salaries paid to the top executive of these utilities averaged \$383,052 per year and ranged between \$152,000 and \$650,211 per year. Executive pay information for eight of these companies showed that the salaries paid to the executive whose position title appeared to include responsibilities for the utilities' power operations averaged \$138,040 per year and ranged between \$87,000 and \$225,301. These salary amounts do not include noncash compensation which may be earned by these executives.

On the basis of this information, the compensation TVA pays for Mr. White's services--\$355,200 per year--is less than the average salary private utilities in our sample pay their top executive and is over two and a half times the average salary private utilities pay their executives who, on the basis of their position titles, appear to hold positions similar to Mr. White's. We could not determine from the position titles the extent to which the actual responsibilities of these executives were comparable to Mr. White's.

WAIVER-OF-LIABILITY CONTRACT CLAUSE

The TVA contract for Mr. White's services contains various clauses that limit or eliminate liability for Mr. White. With regard to liability for claims or damages arising from a nuclear incident, we found no particular differences among Mr. White's contract and other TVA contracts for personal services that we reviewed. Concerning the limit of Mr. White's personal liability for acts or omissions in his performance under his employment agreement, we found that such limits appear generally consistent with language in other TVA contracts for personal services where TVA supervised and controlled the employee.

OTHER CONTRACTOR PERSONNEL

As of September 1, 1986, TVA had contracted for the services of 26 personnel, including Mr. White, under "loaned employee" arrangements. According to TVA's Office of Nuclear Power, loaned employees remain employees of and are paid by their parent companies, but work full-time in TVA line management positions; are under the direction and control of TVA; and fill positions that otherwise would be filled by regular TVA employees. The amount TVA pays, on an annualized basis, for the services of these individuals,

excluding Mr. White, ranges between \$118,416 and \$250,000. These amounts include, among other things, the individual's salary and mark-ups for fringe benefits, company overhead costs, and company profit.

In our advisory legal opinion, previously provided to your office, we concluded that TVA's employment arrangement with Mr. White constituted the improper use of a personal services contract and circumvented the statutory ceiling on salary payments to TVA employees. We based that opinion on (1) our belief that the contractual arrangement between TVA and Mr. White clearly established an employer-employee relationship and therefore constituted an improper personal services contract and (2) the provisions of the TVA Act that state that no regular officer or employee of TVA may receive a salary in excess of that received by a member of the TVA Board of Directors, currently \$72,300. TVA disagreed with our opinion based on its view that Mr. White is not a "regular" TVA employee and therefore is not subject to the statutory limitation on the salaries of TVA employees.

We did not attempt to make such a determination regarding the other 25 loaned employees TVA's Office of Nuclear Power employs. However, we believe TVA's employment arrangements for these individuals are also questionable because they are similar to Mr. White's employment arrangement and the salaries being paid to these individuals could reasonably be expected to exceed the statutory pay ceiling given the amounts TVA is being billed for their services.

Beyond the above discussed loaned employees, TVA's Office of Nuclear Power has employed a number of additional contractor personnel who, according to TVA, serve in advisory roles rather than in line management positions. For example, in the three organizational levels below the Manager, Office of Nuclear Power, 66 contractor personnel are providing services in various areas. As agreed with your office, we did not attempt to determine whether these personnel would be subject to the statutory pay ceiling.

ORGANIZATIONAL AND FUNCTIONAL CHANGES

Since January 1986, following the employment of Mr. White, the organizational placement of the Nuclear Safety Review Staff has changed, the group has been renamed the Nuclear Manager's Review Group, and the Review Group has been physically relocated from Knoxville to Chattanooga,

Tennessee. The Review Group is to assess the design, construction, and operation of TVA's nuclear plants and provide an independent check on the effectiveness of TVA nuclear policies and programs. Although a mission statement had not been formally approved as of early October 1986, a draft organization charter for the Review Group indicated that its areas of responsibility generally will be consistent with the former Review Staff's responsibilities. Concerning the Review Group's operations, areas to be reviewed are to be approved in advance by the Manager of Nuclear Power and recommendations resulting from its reviews are to be made when requested by the Manager.

The former Review Staff was organizationally independent from TVA's nuclear power program operations and had reporting responsibilities to TVA's General Manager and the TVA Board of Directors. Currently, the Review Group is organizationally placed within the Office of Nuclear Power and reports to the Manager, Office of Nuclear Power. The TVA Board took this action because it believes the organizational change will provide the Review Group a direct avenue to "force" corrective actions as a result of its work.

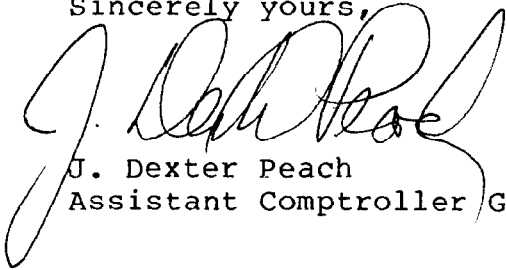
Overall, while current indications are that the Review Group's basic responsibilities will remain largely unchanged, more operating experience will be needed to assess the implications of changes on the independence and effectiveness of the Review Group. For example, preapproval of areas to be reviewed and providing recommendations only when requested could impact on the Review Group's nuclear safety oversight activities.

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In carrying out our work we held discussions with appropriate TVA officials and reviewed TVA records and documents in Knoxville and Chattanooga, Tennessee. We obtained information on the compensation of private industry executives from the Department of Energy, the Federal Energy Regulatory Commission, and the Securities and Exchange Commission. We did not independently verify this information with the individual utilities. Our work was performed between June and September 1986 and was conducted in accordance with generally accepted government auditing standards.

We discussed the information obtained during our review with TVA officials and have included their views where appropriate. As you requested, we did not obtain official TVA comments on a draft of this report. As arranged with your office, unless you publicly release its contents earlier, we plan no further distribution of this report until 10 days after the date of this letter.

Sincerely yours,

A handwritten signature in black ink, appearing to read "J. Dexter Peach". The signature is fluid and cursive, with a large initial "J" and a long, sweeping underline.

J. Dexter Peach
Assistant Comptroller General

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ABBREVIATIONS

FERC	Federal Energy Regulatory Commission
INPO	Institute of Nuclear Power Operations
TVA	Tennessee Valley Authority

SECTION 1

SALARY COMPARISON--
TVA'S MANAGER, OFFICE OF NUCLEAR POWER,
WITH OTHER PRIVATE UTILITY EXECUTIVES

We compared the amount TVA pays to the Manager, Office of Nuclear Power (Mr. Steven White) with the salary paid to executives in 12 selected nonfederal utilities. We found that the amount TVA pays for Mr. White's services is within the range of the top executives' salaries and is over two and a half times the average salaries paid to those executives in 8 of the 12 utilities who, on the basis of position title, appear to have responsibilities for their respective utility's nuclear power operations. However, we could not determine from the position titles whether the executives' actual responsibilities were comparable to Mr. White's.

To compare pay levels of nonfederal utility executives with that of TVA's Manager of Nuclear Power, we judgmentally selected 12 investor-owned utilities giving consideration to the number of nuclear power generating units they had in operation or under construction. We selected the companies from a listing compiled by the Department of Energy that showed all nuclear reactors in the United States. This listing showed 58 companies (investor- and publicly owned utilities) which operate a total of 136 nuclear power generating units. The companies selected for our comparison were

- Commonwealth Edison Company (CommEd)
Chicago, Illinois
- Carolina Power & Light Company (CP&L)
Raleigh, North Carolina
- Duke Power Company (Duke)
Charlotte, North Carolina
- Florida Power & Light Company (FP&L)
Miami, Florida
- Georgia Power Company (GPC)
Atlanta, Georgia
- Houston Lighting & Power Company (HL&P)
Houston, Texas
- Metropolitan Edison Company (MetEd)
Reading, Pennsylvania
- Pacific Gas and Electric Company (PG&E)
San Francisco, California
- Philadelphia Electric Company (Philel)
Philadelphia, Pennsylvania
- Public Service Electric and Gas Company (PSE&G)
Newark, New Jersey
- Southern California Edison Company (SoCalEd)
Rosemead, California

Virginia Power (VaPwr)
Richmond, Virginia

We obtained executive salary information from the reports these companies file with the Federal Energy Regulatory Commission (FERC). Table 1.1 shows the number of nuclear power units, the annual salaries paid to the utility's top executive as reported to FERC for calendar year 1985, and comparable data for TVA.

Table 1.1 Annual Salary of Utility Top Executives^a

<u>Company</u>	<u>No. of Nuclear Units</u>	<u>Executive Position</u>	<u>Salary</u>
PG&E	2	Chairman and Chief Executive Officer	\$650,211
SoCalEd	3	Chairman of the Board and Chief Executive Officer	524,280
HL&P	2	Chairman of the Board and Chief Executive Office	486,233
GPC	4	Chairman of the Board and Chief Executive Officer	412,200
PSE&G	3	Chairman of the Board, President, and Chief Executive Officer	398,468
CommEd	14	Chairman and President	377,737
FP&L	4	President, Chief Executive Officer, and Director	371,151
VaPwr	4	Chairman of the Board and Chief Executive Officer	356,621
Philel	4	Chairman and Chief Executive Officer	336,817
CP&L	4	Chairman, President, and Chief Executive Officer	259,715
Duke	7	Chairman of the Board and Chief Executive Officer	271,190
MetEd	2	President	152,000
		Average for 12 companies	\$383,052
TVA	9	Chairman of the Board	\$ 73,600

^aThe amounts shown are, in most cases, the salaries of the respective executives for calendar year 1985. In the cases of HL&P, PSE&G, FP&L, VaPwr, the utilities, as allowed by FERC, substituted cash compensation data which had been filed with the Securities and Exchange Commission for salary information called for in FERC Form 1. The salary or cash compensation amounts reported by the utilities would not include noncash compensation which may be earned by these executives.

We also examined position titles and salary data for other top executives in these 12 companies in order to identify a position title that appeared comparable to Mr. White's position as TVA's Manager of the Office of Nuclear Power. For 8 of the 12 companies, we identified a position title that appeared to reflect responsibilities for carrying out the utility's power operations or, more specifically, nuclear power operations. We did not, however, compare the specific duties and responsibilities associated with these positions with that of Mr. White, because such information was not readily available. Table 1.2 shows the eight companies, position title, and the salary paid to the individual holding that title, along with comparable information for Mr. White.

Table 1.2: Annual Salary of Utility Power Operations Executives

<u>Company</u>	<u>Position</u>	<u>Salary</u>
GPC	Executive Vice President-Power Supply	\$225,301
PSE&G	Senior Vice President-Nuclear and Engineering	164,368 ^a
PG&E	Vice President-Nuclear Power Generation	145,020
Philel	Senior Vice President-Nuclear Power	144,327
Duke	Senior Vice President-Division Operations	131,998
CP&L	Senior Vice President-Nuclear Generation	104,320
CommEd	Assistant Vice President/General Manager-Nuclear Stations	101,988
MetEd	Vice President-Generation	87,000
	Average for 8 companies	\$138,040
TVA	Manager of Nuclear Power	\$355,200

^aSee footnote a of table 1.1 on page 9.

Overall, our examination showed that the salary paid to the top executive of each of the 12 utilities ranged between \$152,000 and \$650,211 per year, while the salary paid to 8 executives who, based on their position titles, appear to be responsible for nuclear power or power operations ranged between \$87,000 and \$225,301 per year. On the basis of this information, the \$355,200 that TVA pays for Mr. White's services, on an annual basis, falls within the range of the top executives' salary and is higher than the salary paid to private utility executives who appear to be responsible for managing utility power operations.

We recognize, however, that the actual duties and responsibilities of the executives holding these positions may differ substantially from Mr. White's assigned responsibilities at TVA, particularly given the current problems TVA faces related to the shut-down of all of its nuclear power generating units.

Thus, while the private utility executive positions provide some basis for comparison with Mr. White's position, we would have to examine the actual duties and responsibilities of the private executives in order to make a more direct comparison.

SECTION 2

COMPARISON OF MR. WHITE'S WAIVER OF LIABILITY WITH THAT IN OTHER TVA CONTRACTS

The contract between TVA and Stone & Webster Engineering Corporation for Mr. Steven White's services contains various clauses that directly limit or eliminate liability for Mr. White, Stone & Webster, and its employees and subcontractors for their actions. TVA stated that the waiver provisions in its contract with Stone & Webster refer to the Price-Anderson Act (42 U.S.C. 2210 (1982)), which mandates specified insurance coverage and indemnity arrangements on the part of the nuclear plant owners and establishes an exclusive system of public liability for compensation or injuries or property damage arising out of a "nuclear incident."

On the basis of our review of the several contracts TVA entered into both before and after the contract for Mr. White's services, we conclude that the liability provisions are not substantially different in this contract from prior contracts entered into by TVA. With regard to liability for claims or damages arising from a nuclear incident, all pertinent contracts incorporate references to the Price-Anderson Act. We found no particular differences among these contracts with respect to nuclear liability, and we have no legal basis to question the agreements between TVA and Stone & Webster in this regard.

TVA advised us that the nuclear indemnity clauses (Exhibit E in the contract) are standard provisions in prior TVA contracts and throughout the industry. The TVA staff also stated that the personal indemnity clauses (Exhibit F in the contract) provide the same protections to contractor personnel who serve under TVA's direction and control as that afforded "regular" TVA employees under the Claim and Litigation Section of the TVA Code. The TVA staff said these personal indemnity provisions have been used in the past in personal services contracts where the person was considered to be under the supervision and control of TVA.

We found that TVA contracts with other contractors for personal services contain similar provisions. We also noted that similar language has been incorporated in prior TVA contracts. For example, both a 1985 TVA contract with the Institute of Nuclear Power Operations (INPO) for the services of one of its employees to perform chemistry projects at a TVA nuclear plant and a 1983 TVA contract with the Washington Public Power Supply System to loan TVA test and startup engineers for a TVA nuclear plant have contained similar clauses limiting the liability of the contract employee.

The pertinent language on limits of personal liability for acts or omissions by Mr. White or other loaned employees appears

generally consistent with language in prior TVA contracts for personal services where TVA supervised and controlled the loaned employees. The agreement with Stone & Webster provides that except for workers' compensation insurance and claims arising from it, TVA agrees to indemnify and hold harmless Stone & Webster, Mr. White, or other individuals "from any cost, claim, or liability" resulting from or arising out of any loaned employee's performance under the agreement. We believe such language is appropriate since the contractor should not assume liability for the actions of a loaned employee who is under the general supervision and direction of TVA.

We also note that other TVA contracts have excluded TVA liability upon discovering gross negligence or intentional or willful misconduct on the part of the contractor. Examples of these contracts include TVA contracts for contractor personnel with the former Virginia Electric and Power Company, Electric Power Development Company of Japan, INPO, and Fluor Engineering. We asked the TVA staff to explain the distinction between the contracts, which did or did not exclude gross negligence, etc., and we were advised that the difference in contract language depended upon the nature of the negotiations between TVA and the contractor. The TVA staff indicated that when TVA borrows employees from contractors, most contractors will try to negotiate for the greatest protection possible. The TVA staff also advised that even if the contract was silent on the issue of liability for gross negligence or intentional or willful misconduct, TVA would try to argue that such conduct was beyond the scope of the indemnity agreement and was not the responsibility of TVA. In light of the explanation provided by TVA, we find no legal objections to these liability clauses, despite various differences in language from prior TVA contracts.

SECTION 3

OTHER CONTRACTOR PERSONNEL EMPLOYED BY TVA UNDER ARRANGEMENTS SIMILAR TO MR. WHITE

According to TVA's Office of Nuclear Power, as of September 1, 1986, an additional 25 individuals were employed under "loaned employee" contractual arrangements which is the arrangement under which Mr. White is employed. All of these individuals have been hired since January 1986. The Office of Nuclear Power describes loaned employees as those who remain employees of and are paid by their parent companies, but work full-time in TVA line management positions (i.e., supervise regular TVA employees and/or other loaned employees and make management decisions), are under the direction and control of TVA, and fill positions that otherwise would be filled by regular TVA employees. TVA pays between \$118,416 and \$250,000 annually for the services of each of the 25 contractor personnel. Table 3.1 shows the position held at TVA, the contracting company, and billing information for all loaned employees, including Mr. White.

Table 3.1: Loaned Employees in TVA's Office of Nuclear Power

<u>Position</u>	<u>Company</u>	<u>Billing Basis</u>	<u>Annualized Billing Rate^a</u>
1 Manager, Office of Nuclear Power	SWEC	\$29,600/mon	\$355,200
2 Project Engineer, Browns Ferry	GE	21,500/mon	250,000 ^b
3 Director, Nuclear Safety and Licensing	GE	21,300/mon	250,000 ^b
4 Site Director, Watts Bar	West	20,833/mon	249,996
5 Deputy Director, Nuclear Engineering	Ebasco	20,830/mon	249,960
6 Director, Nuclear Engineering	SWEC	137.36/hr. ^c	247,248
7 Director, Nuclear Quality Assurance	SWEC	137.36/hr. ^c	247,248
8 Manager, Engineering & Technical Services	SWEC	137.36/hr. ^c	247,248
9 Assistant Project Engineer, Sequoyah	SWEC	137.36/hr. ^c	247,248
10 Director, Nuclear Construction	Bechtel	20,000/mon	240,000
11 Assistant to the Plant Manager, Browns Ferry	MAC	20,000/mon	240,000
12 Project Manager, Environmental Qualification, Browns Ferry	MAC	20,000/mon	240,000
13 Modification Manager, Browns Ferry	Bechtel	20,000/mon	240,000
14 Deputy Manager, Site Licensing, Browns Ferry	GE	18,860/mon	226,320
15 Supervisor, Engineering Planning and Scheduling, Browns Ferry	GE	18,860/mon	226,320
16 Site Director, Browns Ferry	Bechtel	18,800/mon	225,600
17 Quality Manager, Browns Ferry	SWEC	117.30/hr.	211,140
18 Project Manager, Watts Bar Division of Nuclear Construction	Bechtel	17,000/mon	204,000

	<u>Position</u>	<u>Company</u>	<u>Billing Basis</u>	<u>Annualized Billing Rate^a</u>
19	Manager of Projects, Nuclear Construction	Bechtel	\$16,000/mon	\$192,000
20	Manager, Operations Engineering Services	SWEC	103.79/hr.	186,822
21	Deputy Modification Manager, Browns Ferry	Bechtel	15,200/mon	182,400
22	Manager, Planning & Financial Management Staff	SWEC	92.26/hr.	166,068
23	Project Engineer, Watts Bar	Bechtel	13,000/mon	156,000
24	Chief of the Field Services Branch, Division of Nuclear Construction	Bechtel	12,800/mon	153,600
25	Assistant Project Engineer, Sequoyah	Bechtel	12,300/mon	147,600
26	Manager, Nuclear Manager's Review Group	INPO	9,868/mon	118,416

ABBREVIATIONS

Bechtel - Bechtel North American Power Corporation
Ebasco - Ebasco Services Incorporated
GE - General Electric Company
INPO - Institute of Nuclear Power Operations
MAC - Management Analysis Company
SWEC - Stone & Webster Engineering Corporation
West - Westinghouse Electric Corporation

^aThese annual rates were calculated by multiplying the hourly billing rates by 1800 hours. This was based on TVA's use of this figure for determining an annual rate in hearings of the Senate Appropriations Committee on March 5, 1986.

^bAlthough the billing rate for this employee would cause the annualized billing rate to exceed \$250,000, clause 5 of this contract fixes the maximum annual payment at \$250,000.

^cThis contract originally provided for a schedule of ranges of hourly rates for several levels of employees with a maximum hourly rate of \$210.39. Supplement number 1 of the contract (dated March 14, 1986) provided a fixed rate of \$137.36. Our review showed that the SWEC billings for January and February 1986 (before the supplement) were at the latter rate.

As the table shows, TVA is billed on either an hourly or monthly basis for the loaned employees' services. We converted the billing rates to an annual basis to show what TVA would pay to the parent companies for the loaned employees' services for a full year. In general, the billing rate includes an amount for the employee's salary,¹ and markups for fringe benefits, parent company overhead costs, payroll-related taxes required by law, plus a fee (profit) for the parent company. In addition to the amounts paid through these billing rates, TVA also generally pays for relocating loaned employees and for their official travel expenses after reporting to TVA.

In a June 2, 1986, advisory legal opinion concerning the appropriateness of TVA's employment arrangement with Mr. White, we concluded that this arrangement constituted the improper use of a personal services contract and represented a circumvention of the statutory ceiling on salary payments to TVA employees. We based that opinion on (1) our belief that the contractual arrangement between TVA and Mr. White clearly established an employer-employee relationship and therefore constituted an improper personal services contract and (2) the provisions of the TVA Act (16 U.S.C. 831b (1982)) that states that no regular officer or employee of TVA may receive a salary in excess of that received by a member of the TVA Board of Directors, (\$72,300). TVA disagreed with our opinion based on its view that Mr. White is not a "regular" TVA employee and therefore is not subject to the statutory limitation on the salaries of TVA employees.

We did not attempt to make such a determination regarding the other 25 loaned employees TVA's Office of Nuclear Power employs. However, we believe TVA's employment arrangements for these individuals are questionable because

- they are similar to Mr. White's employment arrangements, and
- the salaries being paid to these individuals could reasonably be expected to exceed the statutory pay ceiling given the amounts TVA is being billed for their services.

In addition to the 26 loaned employees, our review of organizational charts for TVA's Office of Nuclear Power disclosed a number of additional contractor personnel who, according to TVA, serve in advisory roles rather than in line management positions. For example, in the three organizational levels below

¹While we attempted to determine from TVA records and discussions with TVA officials the actual salaries being paid to these individuals by their parent company, this information was not generally available.

the Manager, Office of Nuclear Power, 66 contractor personnel are performing advisory/non-management services in various areas. Of these 66 personnel, 33 are full-time and 33 are part-time. Overall, TVA records show that the Office of Nuclear Power had employed over 1,960 contractor personnel under 153 different contracts as of September 1, 1986.

Table 3.2 shows for each of these 66 contractor personnel (1) the advisory role provided TVA, (2) the contractor furnishing the individual's services, and (3) the billing rate TVA pays for the services. As noted in the table, 33 of the contractor personnel work part-time for TVA and their total annual billings would probably be less than the total annualized billing rates shown in the table for them. As agreed with your staff, we did not attempt to determine whether we would consider these advisory contractor personnel, in effect, to be TVA employees subject to the same statutory ceiling on salary payments as regular TVA employees.

Table 3.2: Contractor Personnel in Advisory Positions
in TVA's Office of Nuclear Power

<u>Position</u>	<u>Company</u>	<u>Billing Rate</u>	<u>Annualized Billing Rate^a</u>
<u>Full-time Contractor Personnel:</u>			
1 Site Representative, Browns Ferry	GE	\$1,000/day	\$225,000
2 Site Representative, Sequoyah	GE	1,000/day	225,000
3 Quality Assurance Engineer, Sequoyah	SWEC	111.55/hr.	200,790
4 Browns Ferry Task Force	APA	105.00/hr.	189,000
5 Senior Consultant Nuclear Procedures Staff	Sturd	99.00/hr.	178,200
6 Advisor to the Manager of Nuclear Power	Bechtel	775/day	174,375
7 Advisor, Employee Concerns, Watts Bar	SWEC	94.66/hr.	170,388
8 Task Force, Sequoyah	Bechtel	710/day	159,750
9 Advisor to the Headquarters Programs Manager Nuclear Procedures Staff	Sturd	87.12/hr.	156,816
10 Nuclear Engineering Procedure Coordinator, Nuclear Procedures Staff	Sturd	87.12/hr.	156,816
11 Procedures Writer, Nuclear Quality Assurance	SWEC	85.57/hr.	154,026
12 Accountability Review, Office of Nuclear Power	SWEC	84.97/hr.	152,946
13 Task Force, Sequoyah	SWEC	79.26/hr.	142,668
14 Senior Consultant, Nuclear Procedures Staff	Sturd	79.20/hr.	142,560
15 Nuclear Safety & Licensing Procedures Nuclear Procedures Staff	Sturd	79.20/hr.	142,560
16 Advisor to the Site Programs Manager, Nuclear Procedures Staff	Sturd	79.20/hr.	142,560
17 Nuclear Construction Procedure Coordinator, Nuclear Procedures Staff	Sturd	79.20/hr.	142,560
18 Advisor (Unit 2), Watts Bar	Bechtel	78.19/hr.	140,742
19 Instructor, Employee Concerns Program	EG&G	78.00/hr.	140,400
20 Instructor, Employee Concerns Program	EG&G	78.00/hr.	140,400
21 Manager, Management Controls Group	SWEC	76.59/hr.	137,862

	<u>Position</u>	<u>Company</u>	<u>Billing Rate</u>	<u>Annualized Billing Rate^a</u>
22	Quality Assurance Engineer, Sequoyah	SWEC	\$ 76.29/hr.	\$137,322
23	Senior Engineer, Nuclear Safety & Licensing	Diben	75.00/hr.	135,000
24	Senior Advisor, Nuclear Safety & Licensing	Diben	75.00/hr.	135,000
25	Task Force, Watts Bar	Bechtel	600/day	135,000
26	Site Representative, Watts Bar	SWEC	72.33/hr.	130,194
27	Support Programs, Nuclear Procedures Staff	Sturd	63.36/hr.	114,048
28	Sequoyah Procedure Coordinator Nuclear Procedures Staff	Sturd	63.36/hr.	114,048
29	Special Projects (Subcontract) Nuclear Procedures Staff	Sturd	60.50/hr.	108,900
30	Special Projects (Subcontract) Nuclear Procedures Staff	Sturd	55.00/hr.	99,000
31	Watts Bar Procedure Coordinator Nuclear Procedures Staff (Subcontract)	Sturd	55.00/hr.	99,000
32	Nuclear Staffs Procedure Coordinator Nuclear Procedures Staff (Subcontract)	Sturd	44.00/hr.	79,200
33	Support Programs (Subcontract) Nuclear Procedures Staff	Sturd	38.50/hr.	69,300

Part-time Contractor Personnel:

1	Senior Advisor, Nuclear Safety Review Board	InTech	\$150.00/hr.	\$270,000
2	Senior Advisor to Manager Nuclear Safety Review Board	GE	1150/day	258,750
3	Senior Advisor to Manager of Nuclear Power	SWEC	137.36/hr. ^b	247,248
4	Senior Advisor to Manager of Nuclear Power	SWEC	137.36/hr. ^b	247,248
5	Senior Advisor to Manager of Nuclear Power	SWEC	137.36/hr. ^b	247,248
6	Senior Advisor to Manager of Nuclear Power	SWEC	137.36/hr. ^b	247,248
7	Senior Advisor to Manager of Nuclear Power	SWEC	137.36/hr. ^b	247,248
8	Browns Ferry Task Force	SWEC	137.36/hr. ^b	247,248
9	Senior Advisor, Nuclear Safety Review Board	GE	1080/day	243,000
10	Senior Advisor, Nuclear Safety Review Board	GE	1080/day	243,000
11	Advisor to the Manager of Nuclear Power	SWEC	127.50/hr.	229,500

<u>Position</u>	<u>Company</u>	<u>Billing Rate</u>	<u>Annualized Billing Rate^a</u>
12 Advisor to the Manager of Nuclear Power	SWEC	\$127.50/hr.	\$229,500
13 Advisor to the Manager of Nuclear Power	SWEC	127.50/hr.	229,500
14 Advisor to the Manager, Nuclear Safety Review Board	SWEC	127.50/hr.	229,500
15 Senior Advisor, Nuclear Safety Review Board	Indep	125.00/hr.	225,000
16 Watts Bar Task Force	GE	1000/day	225,000
17 Senior Review Panel, Watts Bar Employee Concerns Program	PowerCon	120.00/hr.	216,000
18 Watts Bar Task Force	Ebasco	940/day	211,500
19 Advisor to Employee Concerns Program	SPA	115.00/hr.	207,000
20 Senior Advisor, Nuclear Safety Review Board	StrIntg	108.00/hr.	194,400
21 Watts Bar Task Force	SWEC	107.64/hr.	193,752
22 Browns Ferry Task Force	Indep	850/day	191,250
23 Senior Advisor, Nuclear Safety Review Board	Indep	100.00/hr.	180,000
24 Browns Ferry Task Force	GE	93.00/hr.	167,400
25 Senior Advisor, Nuclear Safety Review Board	Indep	87.50/hr.	157,500
26 Senior Advisor, Nuclear Safety Review Board	Indep	84.38/hr.	151,884
27 Human Resource Consultant	CincEmp	75.00/hr.	135,000
28 Human Resource Consultant	CincEmp	75.00/hr.	135,000
29 Senior Review Panel, Watts Bar Employee Concerns Program	Indep	75.00/hr.	135,000
30 Senior Review Panel, Watts Bar Employee Concerns Program	Indep	75.00/hr.	135,000
31 Senior Review Panel, Watts Bar Employee Concerns Program	Querytec	75.00/hr.	135,000
32 Browns Ferry Task Force	SWEC	72.77/hr.	130,986
33 Watts Bar Task Force	SWEC	62.31/hr.	112,158

ABBREVIATIONS

APA - Associated Project Analysts
 Bechtel - Bechtel North American Power Corporation
 CincEmp - Cincinnati Employment, Inc.
 Diben - DiBenedetto Associates, Inc.
 EG&G - EG&G Services, Inc.
 Ebasco - Ebasco Services Incorporated
 GE - General Electric Company
 Indep - Independent Contractor
 InTech - International Technologies

PowerCon - Power Consultants, Inc.
Querytec - Querytech Associates, Inc.
SPA - Senior Policy Associates, Inc
SWEC - Stone & Webster Engineering Corporation
StrIntg - Structural Integrity
Sturd - M. H. Sturdivant & Associates, Inc.

^aThese annual rates were calculated by multiplying the hourly billing rates by 1800 hours. This is based on TVA's use of this figure for determining an annual rate in hearings of the Senate Appropriations Committee on March 5, 1986. Annual rates for employees with daily billing rates were calculated by multiplying the daily billing rate by 225 (1800 hours/8 hours per day = 225 days per year).

^bThis contract originally provided for a schedule of ranges of hourly rates for several levels of employees with a maximum hourly rate of \$210.39. Supplement number 1 of the contract (dated March 14, 1986) provided a fixed rate of \$137.36. Our review showed that the SWEC billings for January and February 1986 (before the supplement) were at the latter rate.

SECTION 4

ORGANIZATIONAL AND FUNCTIONAL CHANGES IN TVA'S NUCLEAR SAFETY REVIEW STAFF SINCE JANUARY 1986

Before TVA employed Mr. White in January 1986, TVA's Nuclear Safety Review Staff, according to a TVA Organization Bulletin, were to serve as advisors to TVA's General Manager and Board of Directors. At that time, the Review Staff's role was to independently monitor, review, and investigate all phases of TVA's nuclear power program, including the design, operation, and support of TVA's nuclear power plants. The Review Staff was organizationally independent of all TVA organizations concerned with design, construction, operation, and support of nuclear plants, and it was responsible for recommending to the General Manager and the Board of Directors changes which would enhance nuclear plant safety.

Since January 1986, the Review Staff has been renamed the Nuclear Manager's Review Group, organizationally realigned as a separate unit within the Office of Nuclear Power, and physically moved from Knoxville (the location of the General Manager and Board of Directors) to Chattanooga, Tennessee (the location of the Office of Nuclear Power). In terms of its functions, with one exception, the Review Group is assigned oversight for the same areas that were assigned to the Review Staff. The exception is that the Review Group will not investigate employee-raised concerns related to nuclear safety issues as the Review Staff did. In terms of the Review Group's operations, subject areas to be reviewed are to be approved in advance by the Manager, Office of Nuclear Power. In addition, the Review Group will only include recommendations in their reports when requested by the Manager, Office of Nuclear Power. After the Review Group reports its findings, the Manager, Office of Nuclear Power, will take appropriate action to determine the necessary corrective actions and to coordinate their implementation.

The TVA Board of Directors established the Nuclear Safety Review Staff in 1979 after the nuclear accident at the Three Mile Island nuclear power plant. According to a 1984 TVA Organization Bulletin, the Review Staff, through its independent oversight role, was to advise TVA's General Manager and the TVA Board on nuclear safety policy and advise and assist in making decisions affecting the safety of TVA nuclear plants. The Review Staff was organizationally independent of all TVA nuclear activities and was responsible for recommending to the General Manager and the Board changes necessary or desirable to enhance nuclear plant safety.

Overall, the Review Staff was to provide an independent check on nuclear safety policies and their implementation. According to the TVA Organization Bulletin, the Review Staff

consisted of senior staff members expert in various aspects of nuclear plant design, construction, and operation. Results of reviews, including recommendations of the Review Staff, were reported directly to TVA line organizations for implementation. Examples of the specific nuclear activities included in the Review Staff's review function were nuclear plant design, construction, and operation; nuclear plant employee training; radiological emergency plans; radiation protection; nuclear plant operating events or incidents; and employee nuclear safety concerns.

In January 1986, on the basis of TVA's employment arrangement with Mr. White, TVA assigned Mr. White managerial authority over all of TVA's nuclear-related activities, including the operations of the Review Staff. On January 17, 1986, TVA's General Manager officially transferred the Review Staff to the Office of Nuclear Power. According to TVA's Board of Directors, the organizational change was to provide the Review Staff a direct avenue to "force" corrective action on the results of its work.

On February 12, 1986, a consultant was employed to advise Mr. White on the future mission for the Review Staff. In a March 27, 1986, report, the consultant stated that the Review Staff believed neither TVA's top management nor its line organizations had made sufficient efforts to implement past recommendations which they had made as a result of their work. The consultant also reported that the Review Staff, in general, had adequate technical qualifications and were intelligent and skilled investigators; however, the staff were "polarized internally" on how to induce TVA management to act on issues raised as a result of their work.

The consultant's recommendations relative to the future mission of the Review Staff included the following:

- The Review Staff should continue reporting directly to the Manager, Office of Nuclear Power, to demonstrate the importance of the Staff's role and to provide greater assurance that the results of its work would receive the direct attention of the highest level of line management.
- The Review Staff should address only complex and significant matters according to priorities approved by the Manager, Office of Nuclear Power.
- The Review Staff should be located in Chattanooga to emphasize its relationship with the Office of Nuclear Power and to make its personnel available to interact with top management.

On April 1, 1986, Mr. White announced that the Review Staff would be relocated from Knoxville to Chattanooga, where it could have frequent and regular contact with him. Mr. White also announced that he was employing a new staff director and was renaming the unit the Nuclear Manager's Review Group. The Review Group was relocated to Chattanooga on a temporary basis on April 21, 1986, and permanently on August 1, 1986. The new manager for the Review Group was hired under a loaned employee contract with INPO.

As of October 1, 1986, a mission statement for the Review Group had been developed but not formally approved. According to a draft organization charter, the Review Group is responsible for developing and implementing a review program to assess activities associated with the design, construction, and operation of TVA's nuclear plants. The Review Group is also to provide an independent check on the effectiveness of nuclear power policies and programs and their implementation as directed by the Manager, Office of Nuclear Power. The Review Group is to report periodically to the Manager, Office of Nuclear Power, on the results of its review program and the safety and effectiveness of TVA's nuclear program, and make recommendations for improvements as requested by the Manager.

According to an Office of Nuclear Power official, the Review Group will not have responsibility for addressing employee concerns. This area, which was an area of responsibility for the former Review Staff, is being addressed under a new Employee Concern Program established by the Office of Nuclear Power in February 1986. This program has a full-time representative at each nuclear site and major corporate nuclear locations, and the Employee Concern Program Manager reports directly to the Manager, Office of Nuclear Power.

With respect to staffing levels, the former Review Staff had 35 professional personnel as of January 1, 1986. Two of the 35 professional personnel were assigned temporarily to the Review Staff to investigate employee concerns. According to the draft organization charter for the Review Group, it is envisioned that the Review Group will have a total of 28 professional positions.

As of September 26, 1986, the Review Group had completed two reviews, and three others were planned. The first completed review was on nuclear plant maintenance. On April 10, 1986, the Manager, Office of Nuclear Power, directed the Review Group to conduct a comprehensive review of corrective and preventative maintenance at the Browns Ferry, Sequoyah, and Watts Bar nuclear plants. A group of 25 persons, including 7 supervisors and managers on loan from nuclear plants and corporate maintenance organizations, performed the review. The review team focused on problems that interfered with correct and efficient performance of maintenance or that impaired effective management and

monitoring of work. The review team also evaluated corrective actions taken on recommendations made by the former Review Staff in July 1985 as a result of its review of the nuclear power maintenance program. The Review Group's final report for its review of maintenance was sent to the Manager, Office of Nuclear Power, on September 30, 1986.

The Review Group had completed one other review; a follow-up of TVA's responses to an INPO report.¹ In 1985 INPO conducted an evaluation of the performance of TVA's nuclear power headquarters staff in support of nuclear power plants, which resulted in a number of findings and recommendations. In August 1986 TVA responded to INPO's report and identified corrective actions that either had been taken, were in process, or were planned to address the findings and recommendations. The Manager, Office of Nuclear Power, requested a review of the adequacy and status of TVA's corrective actions or plans to resolve the issues INPO's report raised. The Review Group has completed its review and was preparing the final report as of September 26, 1986.

As of September 26, 1986, the Review Group had three other topics planned for review and evaluation. These topics are (1) the corrective action system, (2) nuclear equipment clearance procedures, and (3) nuclear procurement processes. The purpose of each review is described below.

Corrective action review

The Manager, Office of Nuclear Power, has asked the Review Group to review TVA's system for resolving problems in the nuclear power program. The review is to assess not only how well and how quickly known nuclear power problems are resolved but also whether the basic causes of the problems are corrected so that the problems do not recur. The report on this review is to be issued by December 28, 1986.

Nuclear equipment clearance procedures

Each nuclear site has procedures for removing equipment from service for maintenance or other purposes and to isolate the equipment from electricity, high-pressure fluids, or other hazards so that work can be conducted safely. These procedures are designed for both nuclear safety and safety of personnel. The Manager, Office of Nuclear Power, has asked the Review Group to evaluate the effectiveness of current clearance procedures.

¹Institute of Nuclear Power Operations Corporate Evaluation of Tennessee Valley Authority, December 9, 1985.

Nuclear procurement processes

The Manager, Office of Nuclear Power, has asked the Review Group to review TVA's procurement processes for materials, parts, and services for the nuclear plants. The purpose of the review is to identify the reasons that parts, materials, and services are sometimes not available when needed at the nuclear plants.

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Overall, a number of changes have been made in the organizational alignment and operations of TVA's former Nuclear Safety Review Staff. While it appears that the current Review Group's basic responsibilities remain largely unchanged, more operating experience will be needed to assess the implications of other changes on its nuclear safety oversight activities. For example, it is unclear how the Manager's preapproval of areas to be reviewed and discretion in requesting recommendations will affect the Review Group's independence and effectiveness.

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