UNION OF
CONCERNED
SCIENTISTS

April 5, 1998

Mr. L. Joseph Callan
Executive Director for Operations
United States Nuclear Regulatory Commission
Washington, DC 20555-0001

SUBJECT: PETITION PURSUANT TO 10 CFR 2.206, BROWNS FERRY NUCLEAR PLANT UNIT 1, DOCKET NO. 50-259

Dear Mr. Callan:

The Union of Concerned Scientists submits this petition pursuant to 10 CFR 2.206 requesting that the operating license for Tennessee Valley Authority's Browns Ferry Nuclear Plant Unit 1 be revoked.

Background

The NRC issued TVA a full power operating license for Browns Ferry Unit 1 on December 20, 1973. TVA declared Unit 1 to be in commercial operation in August 1974.

Browns Ferry Units 1 and 3 were shut down in March 1985 after "TVA identified a failure at BFN to consistently maintain a documented design basis and to control the plant's configuration in accordance with that basis."[1] Unit 2, which had been shut down in September 1984 for a scheduled refueling outage, remained shut down because of the same programmatic deficiencies that affected Units 1 and 3. After extensive upgrades to the plant's equipment, procedures, and organizational structure, Unit 2 returned to service in May 1991. Unit 3 subsequently resumed operation in early 1996.

[1] Letter from O. J. Zeringue, Senior Vice President - Nuclear Operations, Tennessee Valley Authority, to United States Nuclear Regulatory Commission, "Response to Request for Information Regarding Adequacy, Availability, and Control of Design Bases Information," February 12, 1997.

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Add: A. De Agazio 1 1

DFO1 Per Albert De Agazio 1/1

On June 1, 1985, TVA placed Unit 1 on administrative hold so as to be able to focus resources on the efforts necessary to restart Units 2 and 3. Unit 1 remains on administrative hold. According to the NRC staff, there are no plans to restart the unit.[2]

Basis for Requested Action

UCS is a non-profit, public-interest organization with sponsors across the United States, including the territories serviced by TVA.

TVA has an operating license for Unit 1, but the facility has not been operated since March 1985 and has been on administrative hold since June 1, 1985. The NRC has issued approximately 39 bulletins, 141 generic letters, and 1,047 information notices to its licensees while Unit 1 has been on administrative hold. While some of these 1,228 NRC documents do not apply to Browns Ferry Unit 1, the majority of them do. TVA's typical response to these document has been as follows:

> "BFN Unit 1 is shutdown, defueled, and under administrative hold. The conditions described by this GL will be addressed prior to its return to service."[3]

On October 9, 1996, the NRC asked TVA to provide a response regarding the adequacy, availability, and control of design basis information for all three Browns Ferry units. This NRC request, prompted by the three unit shut down at Millstone in March 1996, went to the very core of the problems that forced the three unit shut down at Browns Ferry beginning in March 1985. TVA's response described several improvement programs, including a comprehensive design basis verification program (DBVP) for Units 2 and 3. TVA's response included the following statement, in a footnote, covering Unit 1:

> "In accordance with TVA's prior commitments, TVA will implement the DBVP on Unit 1 prior to its return to service."[4]

Due to design similarities, the work required for the restart and sustained operation of Units 2 and 3 will have collateral benefit for Unit 1 if and when TVA pursues restarting it. However, due to design differences, substantial work in the configuration management area is still required before Unit 1 could resume operating

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[2] Letter from Albert W. DeAgazio, Senior Project Manager, Nuclear Regulatory Commission, to David A. Lochbaum, Union of Concerned Scientists, January 20, 1998.

[3] Letter from T. E. Abney, Manager of Licensing and Industry Affairs, Tennessee Valley Authority, to United States Nuclear Regulatory Commission, "Browns Ferry Nuclear Plant (BFN) – Revision 1, Response to NRC Generic Letter (GL) 96-06, Assurance of Equipment Operability and Containment Integrity During Design Basis Accident Conditions," October 23, 1997.

[4] Letter from O. J. Zeringue, Senior Vice President - Nuclear Operations, Tennessee Valley Authority, to United States Nuclear Regulatory Commission, "Response to Request for Information Regarding Adequacy, Availability, and Control of Design Bases Information," February 12, 1997.

Unit 1 was shut down due to configuration management problems, problems which can only have deepened after 12 years on "administrative hold." In addition, the plant's material condition is, at best, equal to that which contributed to it being shut down in 1985 and is, more likely, deteriorated from that deficient state.

Browns Ferry Unit 1 has been on "administrative hold" longer than it operated. No US commercial nuclear power plant has ever returned to service after an outage lasting over 12 years.

While there are no precedents for restarting Browns Ferry Unit 1 after such a lengthy outage, there are precedents if it does not restart. The first of the three nuclear units constructed at Indian Point, Dresden, and San Onofre were all permanently shut down by their owners. The remaining two units at each of these sites are still operational. The permanently closed units at these sites are covered by decommissioning plans. These plans provide reasonable assurance that the irradiated fuel at the permanently closed units is safely stored and that the operating plants are sufficiently independent from the closed facility.

If TVA elects not to restart Unit 1 at Browns Ferry, then like Dresden, San Onofre, and Indian Point, it should arguably be made subject to federal regulations designed to provide assurance that irradiated fuel is safely stored and that operating units are independent from the closed unit. Revoking its operating license would initiate the sequence of actions necessary to follow the Indian Point, Dresden, and San Onofre precedents. Thus, granting this petition would move Browns Ferry Unit 1 out of "administrative hold," a non-defined regulatory state, into a condition governed by applicable regulations.

Even if TVA elects to restart Unit 1, revoking its operating license now should actually facilitate the restart process or at least make this process safer. The NRC's current administrative process for restarting problems plants, controlled by Inspection Manual Chapter 0350, could be twisted to fit a plant closed for over a decade, but a license application process would be a much better, and safer, avenue. Thus, granting UCS's petition would essentially wipe the licensing slate clean and allow TVA, the NRC, and the public to examine restarting the plant without the burden of unraveling the mess caused by more than a decade of licensing limbo.

Despite Browns Ferry Unit 1 being on "administrative hold," it "is inspected by NRC inspectors as is any other operating nuclear power station."[5] [See Attachment 1 for a copy of the NRC letter to UCS describing how Browns Ferry Unit 1 is inspected by the NRC.] TVA has not restored the unit's design and licensing bases, the extensive configuration management problems which forced the plant to be shut down. TVA is not taking actions required by the NRC for Unit 1 while it is on "administrative hold." In other words, TVA's configuration management for Browns Ferry, inadequate to support plant operation in March 1985, has been degraded by subsequent neglect.

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[5] Letter from Albert W. DeAgazio, Senior Project Manager, Nuclear Regulatory Commission, to David A. Lochbaum, Union of Concerned Scientists, January 20, 1998.

It is not clear what criteria the NRC inspectors are using when they inspect a facility that has been frozen in time more than a decade ago in a degraded condition. For example, it would seem impossible for the NRC to have meaningfully inspected Unit 1's Generic Letter 89-10 Motor-Operated Valve (MOV) program as it has done for operating plants. The NRC should not be wasting its inspection efforts on a facility in an uncertain licensing condition. Denying this petition would sustain ineffective oversight.

Denying this petition could have far more serious consequences if TVA ever seeks to restart Browns Ferry Unit 1. Presently, restarting the plant would require evaluating its material condition and administrative programs against a complicated, confusing patchwork of applicable regulations spanning three decades. This time-consuming effort is extremely vulnerable to mistakes. Commitments might be overlooked and design bases requirements might be changed without NRC approval. Considerable effort would still be required to restart Unit 1 if this petition is granted, but that effort would be properly focused on determining if the applicable regulations were satisfied. Otherwise, much of the effort will be unnecessarily diverted to determining which regulations are applicable. Since both approaches require intensive effort, it is prudent to chose the option that yields greater assurance of safety. The only prudent approach for restarting Unit 1 would be for TVA to seek a new license rather than attempt to resurrect an old, long-disused license.

It is not clear that the NRC's reassuring words about Browns Ferry Unit 1 being inspected like any other operating plant are consistent with their actions. UCS recently obtained a copy of the NRC's response to a Freedom of Information Act request (No. 98-101). Part of that response listed the NRC inspection hours for each plant in 1995-1997. [See Attachment 2 for portions of this FOIA response.] The data clearly shows that there are zero (0) inspection hours indicated for Browns Ferry Unit 1. In fact, the Browns Ferry site is designated by the NRC as a "Dual Unit Site" and inspection hours are provided for Units 2 and 3. Thus, it appears to UCS that the NRC is already treating Browns Ferry as if Unit 1 were not an operating reactor.

Requested Actions

UCS petitions the NRC to revoke the operating license for Browns Ferry Unit 1. Additionally, UCS petitions the NRC to require TVA to submit either a decommissioning plan or a lay-up plan for Unit 1.

The NRC should conduct its inspections at Browns Ferry Unit 1 against the decommissioning plan or the lay-up plan submitted by TVA. The NRC should stop conducting inspections on Unit 1 as it does for operating plants.

UCS respectfully requests a hearing on this petition to present new information on Browns Ferry Unit 1. This new information will include, but is not limited to, a discussion of the voluminous licensing bases reconstitution that would be required to support restart and a presentation on the potential for TVA wanting to keep Unit 1 on "administrative hold" to prevent exceeding its statutory debt ceiling. UCS would prefer that this hearing be held in the DC area with at least 30 days notice.

Sincerely,

David A. Lochbaum
Nuclear Safety Engineer

attachments: as stated

ATTACHMENT 1

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

January 20, 1998

Mr. David A. Lochbaum
Union of Concerned Scientists
1616 P Street, NW., Suite 310
Washington, DC 20036-1495

Dear Mr. Lochbaum:

This is in response to your January 14, 1998, E-mail query sent to the U.S. Nuclear Regulatory Commission (NRC), Office of Public Affairs. You asked if the fees charged to the Tennessee Valley Authority (TVA) for Browns Ferry Unit 1 are discounted in some manner because the unit is on administrative hold.

Browns Ferry Unit 1 has been shutdown since March 1985 and has been in a defueled condition since late 1985. The unit is on administrative hold pending resolution of regulatory concerns, and there are no plans currently to restart the unit.

The Unit 1 Technical Specifications are maintained and they are amended periodically along with those of the other units. Many of the Unit 1 systems and components are in layup status to protect and preserve the equipment in the event a decision is made to restart the unit, and certain other systems are required to support the unit in the defueled condition and the continued operation of Units 2 and 3. The unit is inspected by NRC inspectors as is any other operating nuclear power station.

The administrative hold notwithstanding, TVA is the holder of an operating license for Browns Ferry Unit 1, as defined in Part 171 of Title 10 of the *Code of Federal Regulations* (10 CFR 171.5) Furthermore, the exemption provisions of 10 CFR 170.11 and 10 CFR 171.11 do not apply. Thus, TVA is fully subject to all applicable fees as specified in 10 CFR Parts 170 and 171 for Browns Ferry Unit 1, and the fee schedules and annual fees specified in the regulations are not discounted in any manner because of the current operational status of the facility.

Sincerely,

Albert W. De Agazio

Albert W. De Agazio, Senior Project Manager
Project Directorate II-3
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

9801280050-2

FOIA 98-101

TOTAL INSPECTION EFFORT FOR SINGLE UNIT SITES
FY 1997

No Browns Ferry

PLANT	TOTAL HOURS	
BIG ROCK POINT	3,475.6	
WOLF CREEK 1	3,964.9	
OYSTER CREEK	4,131.2	
HADDAM NECK	4,388.8	
SUMMER	4,436.7	MEDIAN HOURS = 4,436.7
DUANE ARNOLD	4,471.0	MEAN HOURS = 4,275.2
MONTICELLO	4,483.5	
MILLSTONE 1	4,553.0	
MILLSTONE 2	4,571.7	
FITZPATRICK	4,594.7	
KEWAUNEE	4,673.5	
PALISADES	4,705.0	
GRAND GULF 1	4,743.4	
RIVER BEND	4,757.1	MEDIAN HOURS = 4,757.1
HOPE CREEK 1	4,766.4	MEAN HOURS = 4,780.3
GINNA	4,797.9	
DAVIS-BESSE	4,822.6	
SEABROOK 1	5,162.4	
THREE MILE ISLAND 1	5,200.1	
ROBINSON 2	5,202.4	
MAINE YANKEE	5,213.6	
CALLAWAY	5,399.1	
HARRIS 1	5,472.5	MEDIAN HOURS = 5,472.5
PILGRIM 1	5,605.0	MEAN HOURS = 5,489.7
WATTS BAR 1	5,667.2	
FORT CALHOUN 1	5,712.0	
PERRY 1	5,935.5	
VERMONT YANKEE	6,227.3	
COOPER	6,707.3	
WATERFORD 3	6,967.7	
INDIAN POINT 2	7,181.1	
INDIAN POINT 3	7,293.5	MEDIAN HOURS = 7,300.1
MILLSTONE 3	7,306.6	MEAN HOURS = 7,717.9
FERMI 2	7,475.0	
WNP 2	7,529.8	
CRYSTAL RIVER 3	8,853.3	
CLINTON	11,637.0	

Source: RITS DATA - End of FY 1997

File = rio-19 98

March 12, 1998 (4:06pm)

All

Question 1
FOIA 98-101

TOTAL INSPECTION EFFORT FOR DUAL UNIT SITES
FY 1997

NO BROWNS FERRY 1

	PLANT	TOTAL HOURS	
	BROWNS FERRY 2,3	4,233.3	
*	NORTH ANNA 1,2	4,234.8	
*	LIMERICK 1,2	4,252.6	
	CALVERT CLIFFS 1,2	4,622.8	
*	TURKEY POINT 3,4	4,641.4	MEDIAN = 4,632.1
	PEACH BOTTOM 2,3	4,655.1	MEAN = 4,652.9
	BYRON 1,2	5,140.2	
*	COMANCHE PEAK 1,2	5,442.7	
	PRAIRIE ISLAND 1,2	5,475.5	
	VOGTLE 1,2	5,546.7	
	SUSQUEHANNA 1,2	5,663.5	
	LA SALLE 1,2	5,702.2	MEDIAN = 5,705.2
	BEAVER VALLEY 1,2	5,708.2	MEAN = 5,777.7
	DIABLO CANYON 1,2	5,930.2	
	SURRY 1,2	6,027.1	
	SOUTH TEXAS 1,2	6,168.5	
	QUAD CITIES 1,2	6,246.9	
	FARLEY 1,2	6,313.5	
	CATAWBA 1,2	6,674.7	
	ARKANSAS 1,2	6,684.1	
	HATCH 1,2	6,766.7	MEDIAN = 6,725.4
	SAN ONOFRE 2,3	6,987.8	MEAN = 6,734.0
	BRUNSWICK 1,2	7,004.6	
	BRAIDWOOD 1,2	7,193.8	
	McGUIRE 1,2	7,209.5	
	ST. LUCIE 1,2	7,521.7	
	SEQUOYAH 1,2	8,033.0	
	COOK 1,2	8,095.0	
	NINE MILE POINT 1,2	8,383.2	MEDIAN = 8,383.2
	ZION 1,2	9,427.8	MEAN = 9,849.7
	POINT BEACH 1,2	10,537.9	
	DRESDEN 2,3	11,413.3	
	SALEM 1,2	18,025.9	

* Site with N + 1 exemption

Source: RITS Data - End of FY 1997

File = rio-20.98

March 12, 1998 (4:06pm)

Question 1
FOIA 98-101

TOTAL INSPECTION EFFORT FOR TRIPLE UNIT SITES
FY 1997

No Brown Fer

PLANT	TOTAL HOURS	
PALO VERDE 1,2,3	6,426.4	MEDIAN = 8,170.7
OCONEE 1,2,3	9,914.9	MEAN = 8,170.7

Source: RITS Data - FY 1997

TOTAL HOURS EXPENDED ON OPERATING REACTORS BY SITE
BY NRR HEADQUARTERS AND REGIONS
OCTOBER 1, 1995 - SEPTEMBER 30, 1996

DUAL UNIT

NORTH ANNA 1,2	6568.0	VOGTLE 1,2	11271.8
PEACH BOTTOM 2,3	7388.2	CALVERT CLIFFS 1,2	11467.9
FARLEY 1,2	7818.3	ST LUCIE 1,2	11804.3
PRAIRIE ISLAND 1,2	7723.7	ARKANSAS 1,2	11743.3
COMANCHE PEAK 1,2	7786.2	NINE MILE POINT 1,2	11782.9
LIMERICK 1,2	7825.2	COOK 1,2	11834.3
BYRON 1,2	9050.8	LASALLE 1,2	12681.8
DIABLO CANYON 1,2	9540.2	SEQUOYAH 1,2	12758.1
BRAIDWOOD 1,2	9814.7	BROWNS FERRY 2,3	13003.8
TURKEY POINT 3,4	9963.0	CATAWBA 1,2	13511.3
SURRY 1,2	9967.6	SOUTH TEXAS 1,2	13578.1
SAN ONOFRE 2,3	10006.2	ZION 1,2	14791.4
MCGUIRE 1,2	10078.4	SALEM 1,2	15719.0
QUAD CITIES 1,2	10316.9	DRESDEN 2,3	16003.3
SUSQUEHANNA 1,2	10378.1		
BRUNSWICK 1,2	10499.3		
POINT BEACH 1,2	10603.1		
HATCH 1,2	10668.9		
BEAVER VALLEY 1,2	10911.6		

MEDIAN = 10640.1 MEAN = 10619.4

TRIPLE UNIT

PALO VERDE 1,2,3	13586.6
OCONEE 1,2,3	15945.9

MEDIAN = 14758.6 MEAN =14758.6

TOTAL HOURS EXPENDED ON OPERATING REACTORS BY SITE BY NRR HEADQUARTERS AND REGIONS OCTOBER 1, 1995 - SEPTEMBER 30, 1996

SINGLE UNIT

INDIAN POINT 2	4977.6	OYSTER CREEK	9144.2
SUMMER	5669.4	ROBINSON 2	9429.1
HARRIS 1	5804.2	HOPE CREEK 1	9519.8
KEWAUNEE	6160.7	WOLF CREEK 1	9614.8
BIG ROCK POINT	6548.6	MILLSTONE 2	9694.2
MONTICELLO	6798.9	WATERFORD 3	9828.2
CALLAWAY	6845.2	MAINE YANKEE	11265.0
VERMONT YANKEE	6901.8	FERMI 2	11368.7
DUANE ARNOLD	6905.8	INDIAN POINT 3	11942.8
FITZPATRICK	7303.4	PALIDADES	11948.1
GRAND GULF 1	7493.7	MILLSTONE 3	12719.7
SEABROOK 1	7564.8	WASH NUCLEAR 2	13435.2
CLINTON	7918.4	GINNA	13997.8
THREE MILE ISLAND 1	7988.9	WATTS BAR 1	16837.1
DAVIS-BESSE	8181.8	HADDAM NECK	16104.5
FORT CALHOUN 1	8194.3	CRYSTAL RIVER 3	17798.5
PILGRIM 1	8539.4	MILLSTONE 1	22795.4
PERRY 1	8700.1		
COOPER	9063.1		
RIVER BEND	9123.2		

MEDIAN = 8063.1 MEAN = 8907.4

No BROWNS FERRY

ATT 2 5 of 6

TOTAL HOURS EXPENDED ON OPERATING REACTORS BY UNIT BY NRR HEADQUARTERS AND REGIONS OCTOBER 1, 1995 - SEPTEMBER 30, 1996

PEACH BOTTOM 3	2947.2	HATCH 1	5321.7	SEABROOK 1	7894.8
NORTH ANNA 2	2965.7	SAN ONOFRE 2	5336.7	SOUTH TEXAS 2	7535.2
PRAIRIE ISLAND 2	3132.7	HATCH 2	5337.2	SALEM 2	7765.9
LIMERICK 2	3479.0	PALO VERDE 1	5344.1	ZION 1	7878.9
NORTH ANNA 1	3690.3	TURKEY POINT 3	5378.1	CATAWBA 1	7917.7
OCONEE 2	3812.7	BRUNSWICK 1	5454.7	CLINTON	7918.4
PALO VERDE 3	3736.0	QUAD CITIES 1	5478.2	SALEM 1	7956.0
FARLEY 2	3772.6	MCGUIRE 1	5564.2	THREE MILE ISLAND 1	7958.9
COMANCHE PEAK 2	3809.9	COOK 2	5586.8	DAVIS-BESSE	8191.6
BYRON 2	3816.8	CATAWBA 2	5593.6	FORT CALHOUN 1	8194.3
FARLEY 1	3844.8	LASALLE 2	5869.6	DRESDEN 3	8267.2
OCONEE 3	3904.8	BRAIDWOOD 1	5963.7	OCONEE 1	8438.1
COMANCHE PEAK 1	3978.3	NINE MILE POINT 2	5748.6	PILGRIM 1	8536.4
BRAIDWOOD 2	4121.8	SUSQUEHANNA 1	5778.3	PERRY 1	8580.1
BROWNS FERRY 2	4184.7	RUMMER	5880.4	BROWNS FERRY 3	8618.8
POINT BEACH 2	4363.4	HARRIS 1	5884.2	COOPER	9063.1
LIMERICK 1	4346.2	NINE MILE POINT 1	6037.3	RIVER BEND	9122.2
DIABLO CANYON 2	4386.8	SOUTH TEXAS 2	6060.8	OYSTER CREEK	9144.2
PEACH BOTTOM 2	4402.8	KEWAUNEE	6180.7	ROBINSON 2	9428.1
PALO VERDE 2	4402.9	BEAVER VALLEY 1	6233.4	HOPE CREEK 1	9518.8
TURKEY POINT 4	4487.9	COOK 1	6247.8	WOLF CREEK 1	9614.8
MCGUIRE 2	4512.2	POINT BEACH 1	6336.7	DRESDEN 2	9748.1
PRAIRIE ISLAND 1	4591.0	SEQUOYAH 1	6371.8	MILLSTONE 2	9894.2
SUSQUEHANNA 2	4599.8	SEQUOYAH 2	6387.5	WATERFORD 3	9928.2
SAN ONOFRE 3	4668.5	VOGTLE 1	6494.1	MAINE YANKEE	11265.0
BEAVER VALLEY 2	4678.1	CALVERT CLIFFS 1	6563.5	FERMI 2	11303.7
SURRY 2	4708.4	BIG ROCK POINT	6546.6	INDIAN POINT 3	11342.8
VOFTLE 2	4837.7	ST LUCIE 1	6662.3	PALISADES	11646.1
QUAD CITIES 2	4846.7	ARKANSAS 1	6713.6	MILLSTONE 3	12718.7
INDIAN POINT 2	4977.8	MONTICELLO	6798.9	WASH NUCLEAR 2	13433.2
CALVERT CLIFFS 2	5012.4	CALLAWAY	6845.2	GINNA	13657.8
ST LUCIE 2	5022.0	VERMONT YANKEE	6901.8	WATTS BAR 1	16937.1
ARKANSAS 2	5028.7	DUANE ARNOLD	6906.5	HADDAM NECK	16104.5
BRUNSWICK 2	5044.8	ZION 2	6913.4	CRYSTAL RIVER 3	17788.5
DIABLO CANYON 1	5163.7	LASALLE 1	6982.2	MILLSTONE 1	22788.4
SURRY 1	5178.2	FITZPATRICK	7203.4		
BYRON 1	5244.1	GRAND GULF 1	7483.7		

MEDIAN = 6056.8 MEAN = 6808.7

NO BROWNS FERRY 1

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