



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20545

Provided in response

April 13, 1982

MEMORANDUM FOR: William O. Miller, Chief
License Fee Management Branch
Office of Administration

FROM: Herbert N. Berkow, Chief
Management Analysis Branch
Planning and Program Analysis Staff, NRR

SUBJECT: PROFESSIONAL MANPOWER EXPENDED AND ASSOCIATED COSTS
FOR DIABLO CANYON 1 & 2

In response to your March 26, 1982 memorandum, we are providing the professional staff hours and associated costs for Diablo Canyon 1 & 2. Subsequent to your memorandum we were informed that it would be sufficient to just provide data for the period 4/23/81 to 2/28/82.

The consultant contractual cost for the above period was \$728,899 for Units 1 and 2. We were unable to separate the contractual cost by Units. The total professional staff hours amounted to 75,455, broken out as follows:

Diablo Canyon 1	60,969	(54,409 regular and 6,560 non-regular)
Diablo Canyon 2	14,496	(12,840 regular and 1,656 non-regular)

Of the total hours, 8,449 were charged to the Diablo 1 hearing and 3,352 to Diablo 2.

The manpower data is preliminary. MPA has informed us of some discrepancies. The data will be refined by the time we provide final figures for billing the licensee.

Herbert N. Berkow, Chief
Management Analysis Branch
Planning and Program Analysis Staff, NRR

4-14-82
A.M.
B.G.S.

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10 CFR 170.21
Schedule of Facility Fees

Operating License Reviews
 Full (100%) Power Licenses Issued
 in FY 1981

	Regular Hours	2/78 Schedule FY 1977 Cmts	Proposed Schedule FY 1981 Cmts
<u>Initial Costs = 1ST Unit at a SITE</u>			
<u>McGuire 1</u>			
NRR	20,320	1,182,480	1,579,540
NRR contracts		353,509	353,509
IE	15,610.4	561,974	827,351
ACRS	270	13,500	16,740
	46,200	2,111,463	3,077,440 = 3.1 million

COST RANGE FOR FACILITY AMENDMENTS

	<u>Staff Hour Range</u>	<u>Cost Range</u>
<u>FACILITIES</u>		
<u>Power Reactors</u>		
Staff Hours	1 Hour to 2,608.9 Hours	\$62 to \$161,752
Contracts		<u>-0- to \$2,800</u>
Totals		\$62 to \$164,552
 <u>Test & Research Reactors</u>		
	1 Hour to 678.7 Hours	\$62 to \$42,079

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CEILING FOR FACILITY INSPECTION FEES

COMMISSION APPROVAL 4/26/84

<u>Power Reactor Regular Hours</u>	X	<u>IE Professional Rate</u>	=	<u>Power Reactor Ceiling</u>	<u>Commission Approval</u>
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Routine Health and Safety
and Safeguards Inspections
Based on FY 1981 Actual
Operating Experiences

Trojan		5,872.5	X	\$53 =	\$311,243	\$300,000
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Setting the Pricing Standard
FINAL RULE

	Power Rates
<u>Routine Inspection fees</u>	
SAFETY	15,800
SAFEGUARDS	14300
TOTAL Combined	<u>\$ 166,100</u>

	TEST + Repair + Reprints
<u>Routine Inspection Fees</u>	
SAFETY	* 2400
SAFEGUARDS	800
TOTAL Combined	<u>\$ 3200</u>

RANGE OF INSPECTION FEES FOR FACILITY LICENSES
FOR INSPECTIONS CONDUCTED DURING YEAR

Fee Category	ROUTINE INSPECTION FEES				REACTIVE INSPECTION FEES				
	Safety		Safeguards		Safety		Safeguards		
	From	To	From	To	From	To	From	To	
<u>Power Reactors</u>									
Single Unit Site	\$64,660	\$151,845	\$4,240	\$14,310	\$4,240	\$73,140	-0-	\$5,035	
Two Unit Site	54,325	91,690 ^{1/}	2,385	8,215 ^{1/}	4,505	27,030 ^{1/}	-0-	2,650	
Three Unit Site	41,505	71,285 ^{1/}	2,120	6,625 ^{1/}	7,950	21,730 ^{1/}	-0-	2,385	
<u>Test & Research Reactors</u>	795	2,385	265	795	-0-	795	-0-	795	
<u>Possession Only Licenses</u>	424	1,272	53	106	-0-	424	-0-	424	

Footnotes:

1/ Range Applies To Each Unit At The Site.

Calculation Range Of Inspection Fees For Facility Licenses For Inspections Conducted During Year

Facility	Routine Safety Inspections					Routine Safeguards Inspections					Reactive Safety Inspections					Reactive Safeguards Inspections				
	Profess. Inspection Time (M/H)		Cost Per M/H	Cost Range		Profess. Inspection Time (M/H)		Cost Per M/H	Cost Range		Profess. Inspection Time (M/H)		Cost Per M/H	Cost Range		Profess. Inspection Time (M/H)		Cost Per M/H	Cost Range	
	From	To		From	To	From	To		From	To	From	To		From	To	From	To		From	To
<u>Power Reactors</u>																				
Single Unit Site	1,220	2,865	\$53	\$64,660	\$151,845	80	270	\$53	\$4,240	\$14,310	80	1,380	\$53	\$4,240	\$73,140	-0-	95	\$53	-0-	\$5,035
Two Unit Site	1,025	1,730	\$53	\$54,325	\$91,690	45	155	\$53	\$2,385	\$8,215	85	510	\$53	\$4,505	\$27,030	-0-	50	\$53	-0-	2,650
Three Unit Site	2-5	1,345	\$53	\$41,605	\$71,285	40	125	\$53	\$2,120	\$6,625	150	410	\$53	\$7,950	\$21,730	-0-	45	\$53	-0-	\$2,385
<u>Test & Research Reactors</u>																				
Test & Research Reactors	15	45	\$53	\$795	\$2,385	5	15	\$53	\$265	\$795	-0-	15	\$53	-0-	\$795	-0-	15	\$53	-0-	\$795
<u>Possession Only Licenses</u>																				
Possession Only Licenses	8	24	\$53	\$424	\$1,272	1	2	\$53	\$53	\$106	-0-	8	\$53	-0-	\$424	-0-	8	\$53	-0-	\$424

Range of Inspection Manpower Expected Per Typical Licensee
For Inspections Conducted During FY 1981
(Man-Hours)

Category (170.23 & 170.24)	Routine Inspections				Reactive Inspections				
	Safety		Safeguards		Safety		Safeguards		
	From	To	From	To	From	To	From	To	
Power Reactor Sites:									
Single Unit	1,220	2,865	80	270	80	1,380	0	95	
Dual Unit	1,025	1,730	45	155	85	510	0	50	
Triple Unit	785	1,345	40	125	150	410	0	45	
Test and Research Reactors	15	45	5	15	0	15	0	15	
Production or Utilization Facility Licensed for possession but not operation									
<u>170.32</u>									
1A									
1B									
1C									
1D									
1E									
1F									
1G									
1H									
2A									
2B									
2C									
4A									
<u>New Categories</u>									
Ore Buying Station									
Ion Exchange facilities									

PDA Reviews

Source of Information Max. volume & date: d. 9/1/83

DAI #	FDA No.	Vendor	Range Period	Regular Hours	7/1/77 Cmts. '39/hr	Aug 7/81 Cost '61/hr	
1	50-495	8	SWISSA/REACTE	7/74 - 3/77	19,514.9	* 763,811	721,426.2
2			(Swissair - Swissair)				
3	50-531	9	GESSAR 251	9/75 - 3/77	3750.5	147,440	234,391
4			(General Electric - GE)				
5	50-556	10	GESSAR 238	10/75 - 3/77	2542.5	99,158	157,635
6			(General Electric - GE)				
7	50-560	11	BOPSAK	11/75 - 8/77	10227	398,853	634,074
8			(Bosch - Bosch)				
9	50-561	12	BOPSAK 205	9/75 - 8/77	17309	480,051	763,158
10			(Bosch - Bosch)				
11	60-574	13	RESAR-414	10/76 - 11/76	11254.1	443,980	705,814
12			(RESAR - RESAR)				
13							
14				59,528.0	2,333,273	3,709,336	
15				+ 6	-		
16				9971	6		
17				X 60/hr	= 388,860		
18			Average	618,700			
19			Low	157,635			
20			High	1,214,262			
21							
22							
23							
24							
25							
26	50-447	FDA Reviews - GESSAR completed 7/1/80 - From Design NERS					
27							
28			NER Professional Hours	15,175.7	* 59,552	* 940,893	
29			NER Contracts	Contracted	468,493	468,493	
30			Acquisition	285.0	1426.0	1768.0	
31							
32			Totals		1,074,605	1,411,168	
33							
34							
35							
36							
37							
38							
39							
40			* See discussion with date 9/1/83		1980 52 hr		
41			The hours on the PDA reviews are		1981 230		
42			low because performed with another contract		1982 8119		
43					1983 5405.7 + 166		
44					15,175.7 per contract per 1983		

Ceiling For Manufacturing License

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	1	2	3	4
Offshore Show Piece of items	Regular Hours	20,977	4,981	
		Costs	Costs	
NCR	28,051*	1,483,989	2,359,164	
IC	663	23,568	35,139	
ACRS	14,063	70,315	87,191	
NMSS	184	6992	10,674	
	<u>40,304.3</u>	<u>1,585,164</u>	<u>2,492,168</u>	
	Contracts	760,159	760,159	
		<u>2,345,323</u>	<u>3,252,327</u>	
<p>* 53,701 Regular hours - 15,950 Regular Hearing 37,751 + 300 Uncon. T. Port of Hearing 38,051</p>				

Review Report
Completed and Issued in 1981

Topic	Applicant	Date of Contract	NRX Performance Hours	FY 1977 Costs \$/hr	FY 81 Cost \$/hr
VEP-7802	VEPCO	11-7-80 ✓	36	1404	2730
NEDO 24259	General Electric	11-12-80 *	45	1755	2790
WCAP 9410	Westinghouse Electric	5-7-81 ✓	723.5	28217	44557
	CENTRAL COSTS			1424 29601	
VEP-7802	VEPCO	5-13-81 *	52	2028	3204
WCAP 9500	Westinghouse Electric	5-22-81 ✓	1433	55887	88846
NFS-1001	Duke Power Co	7-29-81 ✓	298	11622	18476
NEDO 21061P	General Electric	8-19-81 ✓	3594	140166	222828
NEDO 21297	General Electric	8-19-81 ✓			
	CENTRAL COSTS = 1,203,000			1203000 1342266	1203000 1427128
ATCOR-837A	ATCOR Engineering	9-3-81 ✓	276	10764	17112

The FY 1981 Materials Special Project Category was included and there were no materials to be issued in FY 1981.

Special Projects
For Facilities As Of
September 1981

<u>Licensee</u>	<u>DATE OF Completion</u>	<u>Invoice No.</u>	<u>Professional Service Hours</u>	<u>Fee</u>
1. American Institute of Steel Construction		124-81		\$ 6,435
2. Consumers Power		125-81		780
3. Westinghouse Electric		126-81		78
4. C. F. Braun & Company		173-81		39
5. Southern California Edison		174-81		312
6. Exxon Company		175-81		312
7. Commonwealth Edison Company		176-81		390
8. Dairyland Power Coop.		208-81		760
9. Connecticut Yankee		210-81		1,368
10. General Electric		300-81		78
11. Burns & Roe, Inc.		301-81		273
12. Babcock & Wilcox		302-81		117
13. Westinghouse Electric		328-81		39
14. Commonwealth Edison		351-81		390
* 15. General Electric (BASIC Topical Report)	11-12-80	452-81	45	1,755 *
16. Ebasco Services		453-81		975
* 17. Virginia Electric & Power Company (BASIC Topical)	11-7-80	454-81	56	1,404 *
18. Carolina Power & Light		545-81		342
19. So. California Edison		558-81		152
20. Duke Power Company		577-81		38
21. Duke Power Company		578-81		266
22. NL Industries (Commonwealth Ed)		579-81		608
23. General Electric Company		592-81		562
24. Anaconda Ericsson, Inc.		593-81		429
25. Commonwealth Edison Company		594-81		351
26. General Atomic		595-81		312
27. Dairyland Power Coop.		624-81		76
28. Nuclear Fuel Services		625-81		1,995
29. Florida Power & Light		626-81		2,535
* 30. Virginia Electric & Power Company (BASIC Topical)	5-13-81	628-81		2,028 *
* 31. Westinghouse Electric (BASIC Topical Report)	5-7-81	629-81	725.5 \$1,424 Contract	20,000 *
32. Combustion Engineering (for Baltimore Gas & Electric)		640-81		190
33. Dairyland Power Coop.		641-81		38
34. Jersey Central Power & Light		644-81		76
35. Public Service of Colorado		645-81		76
36. Mississippi Power & Light Company		782-81		1,989
37. Westinghouse Electric (BASIC Topical Report)	5-22-81	783-81	1,433	20,000 *
38. General Electric		836-81		20,000
39. General Electric		836-81		20,000
40. So. California Edison		854-81		152

TOTAL FACILITIES SPECIAL
PROJECTS

\$107,720

* BASIC OR MAINT. PICAL REPORT APPLICATIONS Completed in FY 1981
(NO REVISIONS OR AMENDMENTS)

Special Projects
For Facilities thru
September 1982

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<u>Licensee</u>	<u>DATE of COMPLETION</u>	<u>Invoice No.</u>	<u>Professional STAFF Hours</u>	<u>Fee</u>
Tennessee Valley Authority REV 4	5-18-80	A-0006		\$ 1,482
Commonwealth Edison Rev. 17418	7/14 + 7/17/81	A-0008		117
Duke Power Company Am NO 5	7-14-81	A-0009		741
Ebasco Service Inc. Rev 10	6-10-81	A-0010		156
Duke Power Company (Basic Report)	7-29-81	A-0039	298	12,480*
General Electric (Basic Report)	8/19/81	A-0071	394	20,000*
General Electric (Basic Report)	8/19/81	A-0071		20,000*
Exxon Nuclear Supp 3	8-17-81	A-0093		702
Duke Power (Route Approval)	-	A-0094		228
Omaha Public Power (Route Approval)	-	A-0095		228
ATCOR Engineering Systems (Basic Report)	9-3-81	A-0102	276	11,505*
Chem Nuclear Systems (Basic Report)	12-5-81 (initial acc)	A-0113		624
So. California Edison Rev. 1	10-26-81	A-0119		624
Exxon Nuclear Company Am. 4	11-2-81	A-0120		4,902
Babcock & Wilcox Company Basic	11-10-81	A-0131		897
Exxon Nuclear Company Basic	11-10-81	A-0132		13,299
Consumer Power Basic	1-12-82	A-0151		5,577
Commonwealth Edison Rev 19	5-20-81	A-0154		117
American Institute of Steel Construction, Inc. 12462		A-0156		546
Consumer Power Company (Route Approval)	-	A-0181		266
Nuclear Fuel Service - West Valley	-	A-0185		1,102
Commonwealth Edison Company Rev 20	3-12-82	A-0187		78
Westinghouse Electric Company Rev 1	12-1-81	A-0188		10,725
So. California Edison Rev. 5	3-29-82	A-0190		117
Northeast Utilities Rev 4	4-9-82	A-0236		390
Babcock & Wilcox Company Rev 4	4-9-82	A-0241		3,159
Public Service Co. of Colorado (Route Approval)	-	A-0281		152
Ebasco Services Rev 11	5-17-82	A-0284		351
Yankee Atomic Electric Co. Rev. 11	5-24-82	A-0285		117
Consumers Power Co. Rev. 12	5-19-82	A-0286		78
Ex. Nuclear Rev. 4	5-24-82	A-0287		156
VEPCO (Route Approval)	-	A-0321		418
Public Service Co. (Route Approval)	-	A-0325		152

Total \$111,486 paid

* Basic or New Topical Report Applications Completed in 74,951

FY 1981

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SNM, Source and Byproduct Materials

Special Projects^{1/}
As Of September 1981

<u>Licensee</u>	<u>Docket No.</u>	<u>Invoice No.</u>	<u>Fee</u>
Union Carbide	70-687	820-80	\$ (304) ^{2/}
General Electric	70-754	207-81	589
Tri-State Motors	70-1739	209-81	152
General Atomic	70-734	211-81	494
Battelle	70-8	559-81	494
General Electric	70-754	627-81	494
General Electric	70-754	674-81	228
General Electric	70-754	643-81	247
General Electric	70-754	642-81	399
General Electric	70-7754	740-81	190
Duke Power	70-2623	781-81	<u>2,356</u>
		Total SP - Materials	<u>\$5,339</u>

1/ All of the special projects were route approvals.

- No Topical Reports

2/ Refund of route approval fee. Manpower reported in FY 1980 was in error.

SMM, Source and Byproduct Materials

Special Projects

Thru September 1982

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<u>Licensee</u>	<u>Docket No.</u>	<u>Invoice No.</u>	<u>Fee</u>
General Electric	70-754	A-0038 - RA	\$ 38 - RA
Union Carbide	70-687	A-0073	190 RA
General Electric Co.	70-754	A-0074	76 RA
Tri-State Motor Transit	70-1739	A-0114	2,242 RA
Battelle	70-8	A-0133	114 RA
Babcock & Wilcox	70-824	A-0157	190 RA
Duke Power	70-2623	A-0164	228 RA
General Electric Co.	70-754	A-0193	190 RA
Battelle	70-8	A-0213	114 RA
General Electric Co.	70-754	A-0214	228 RA
General Atomic	70-734	None	190 RA
Tri-State Motor Transit	70-1739	A-0288	See Plan 38 - Sec. RA
General Atomic	70-734	A-0289	228 RA
Combustion Engineering	70-1100	A-0322	114 RA
Union Carbide	70-687	A-0323	190 RA
Tri-State Motor Transit	70-1739	A-0328	See Plan 418 - Sec. RA
			TOTAL \$4,788

All of the Special projects were route approvals or security plans - there were no topical reports

10 CFR 170.31
Schedule of Materials Licenses

Comparison of NMS Fee Ceilings ^{1/} With Proposed 11 Rule (Top of Range)
 Fuel Cycle and Transportation Categories

Fee Category	New Licensing Fees		Renewal Fees		Amendment Fees	
	Ceilings ^{1/}	Top of Range 11/22/82	Ceilings ^{1/}	Top of Range 11/22/82	Ceilings ^{1/}	Top of Range 11/22/82
1A	Full Cost	\$825,000	\$140,600	\$313,000	\$190,200	\$170,000
1B	Full Cost	616,000	140,600	261,000	138,000	147,000
1C	Full Cost	1,444,000	Full Cost	461,000	Full Cost	222,000
1D	Full Cost	408,000	52,200	114,000	63,800	121,000
1E	Full Cost	1,083,000	52,200	280,000	46,400	170,000
1F	Full Cost	408,000	52,200	114,000	46,400	120,000
1G	Full Cost	288,000	20,300	104,000	40,600	68,000
1H ₁	Full Cost	609,000	Full Cost	No Estimate	Full Cost	159,000
1H ₂	405,200	419,000	Full Cost	No Estimate	Full Cost	159,000
2A	341,000	343,000	105,400	128,000	44,000	54,000
2B (Prod.) (R & D)	267,800 54,200	258,000 91,000	73,000 31,100	91,000 40,000	44,000 24,720	43,000 22,000
2C	Full Cost	407,000	140,600	209,000	103,200	112,000
2D	Full Cost	54,000	140,600	22,000	103,200	11,000
2E	Full Cost	Full Cost	Full Cost	Full Cost	Full Cost	Full Cost
4A	803,700	818,000	285,600	409,000	46,400	152,000
10A	204,400	164,000	1,400	1,400	123,200	43,000
10B	167,800	143,000	1,400	1,400	98,200	43,000
10C	96,400	65,000	900	900	61,600	32,000
10D	53,200	43,000	900	900	35,800	16,000
10E	37,400	27,000	900	900	25,800	16,000

^{1/} NMSS data provided by memoranda 9/29/83 and 10/7/83.

DETERMINATION OF PROPOSED LICENSE FEE
Based on 9/29/83 and 10/7/83 NMSS Data

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
1A SNM Licenses For Processing & Fuel Fabrication Highly Enriched Uranium (>20%)									
Safety Review		Full Cost		700	\$58	\$ 40,600	400	\$58	\$ 23,200
Safety Contracts						100,000			80,000
Subtotal Safety						<u>\$140,600</u>			<u>\$103,200</u>
Safeguards						-	1,500	\$58	87,000
Total						<u>\$140,600</u>			<u>\$190,200</u> ^{1/}
1B SNM Licenses For Processing & Fuel Fabrication Low Enriched Uranium (<20%)									
Safety Review		Full Cost		700	\$58	\$ 40,600	400	\$58	\$ 23,200
Safety Contracts						100,000			80,000
Subtotal Safety						<u>\$140,600</u>			<u>\$103,200</u>
Safeguards						-	600	\$58	34,800
Total						<u>\$140,600</u>			<u>\$138,000</u>

^{1/} Since NMSS cost estimate of 11/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$170,000, the lower fee will be used.

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CALCULATION OF NUCLEAR LICENSE FEES

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
1C SNM License For Plutonium Processing and Fuel Fabrication Plants									
Safety Review		Full Cost			Full Cost			Full Cost	
Safety Contracts									
Subtotal Safety									
Safeguards									
Total									
1D SNM Licenses with quantities of 5Kgs or more of U-235 or 2Kgs or more of U-233 for other than fuel processing or fabrication									
Safety Review		Full Cost	900	\$58	\$52,200	400	\$58	\$23,200	
Safety Contracts					-			-	
Subtotal Safety					\$52,200			\$23,200	
Safeguards					-	700	\$58	40,600	
Total					\$52,200			\$63,800	

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
IE SNM Licenses For Possession and Use of quantities of plutonium of 2Kgs or more for activities other than fuel processing									
Safety Review		Full Cost		900	\$58	\$52,200	100	\$58	\$ 5,800
Safety Contracts						-			-
Subtotal Safety						<u>\$52,200</u>			<u>\$ 5,800</u>
Safeguards						-	700	\$58	<u>40,600</u>
Total						<u>\$52,200</u>			<u>\$46,400</u>
IF SNM Licenses For Possession and Use of 200 grams but less than 2Kgs of plutonium									
Safety Review		Full Cost		900	\$58	\$52,200	100	\$58	\$ 5,800
Safety Contracts						-			-
Subtotal Safety						<u>\$52,200</u>			<u>\$ 5,800</u>
Safeguards						-	700	\$58	<u>40,600</u>
Total						<u>\$52,200</u>			<u>\$46,400</u>

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
1H Spent Fuel Storage (2) Licenses for receipt and storage of spent fuel where the independent spent fuel storage installation is to be located at the site of an existing facility									
Safety Review	4,000	\$58	\$232,000			Full Cost			Full Cost
Safety Contracts			150,000						
Subtotal Safety			\$382,000						
Safeguards	400	\$58	23,200						
Total			\$405,200						
I. License authorizing decommissioning, decontamination, reclamation or restoration activities.									
Safety Review			Full Cost			Full Cost			Full Cost
2A Licenses for Milling operations									
Safety Review	2,000	\$58	\$116,000	1,300	\$58	\$75,400	500	\$58	\$29,000
Safety Contracts			225,000			30,000			15,000
Total			\$341,000			\$105,400			\$44,000

CALCULATION OF FEE FOR LICENSE REVIEW

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
2B Licenses for processing and recovery of source material in in-situ leaching or heap leach operations									
<u>Commercial Scale In-situ</u>									
Safety Review	1,600	\$58	\$92,800	1,000	\$58	\$58,000	500	\$58	\$29,000
Safety Contracts			<u>175,000</u>			<u>15,000</u>			<u>15,000</u>
Total			<u>\$267,800</u> ^{2/}			<u>\$73,000</u>			<u>\$44,000</u> ^{3/}
<u>Heap Leach and R&D Scale In-situ</u>									
Safety Review	675	\$58	\$39,150	450	\$58	\$26,100	340	\$58	\$19,720
Safety Contracts			<u>15,000</u>			<u>5,000</u>			<u>5,000</u>
Total			<u>\$54,150</u>			<u>\$31,100</u>			<u>\$24,720</u> ^{4/}

^{2/} Since NMSS cost estimate of 9/29/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$258,000, the lower fee will be used.

^{3/} Since NMSS cost estimate of 9/29/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$43,000, the lower fee will be used.

^{4/} Since NMSS cost estimate of 9/29/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$22,000, the lower fee will be used.

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
2C Licenses for refining uranium mill concentrates to uranium hexafluoride									
Safety Review		Full Cost		700	\$58	\$40,600	400	\$58	\$23,200
Safety Contracts						100,000			80,000
Total						<u>\$140,600</u>			<u>\$103,200</u>
2D Licenses for ion exchange and ore-buying stations									
Safety Review		Full Cost		700	\$58	\$40,600	400	\$58	\$23,200
Safety Contracts						100,000			80,000
Total						<u>\$140,600</u> ^{5/}			<u>\$103,200</u>
2E Licenses authorizing decommissioning, reclamation or restoration activities.									
Safety Review		Full Cost				Full Cost			Full Cost

^{5/} Since NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$22,000, the lower fee will be used.

^{6/} Since NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$11,000, the lower fee will be used.

Calculation of Nuclear Waste License Fees

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	New License Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
4A Commercial waste disposal involving burial or licenses authorizing contingency storage of low level waste at power reactor sites.									
Safety Review	7,650	\$58	\$443,700	3,200	\$58	\$185,600	800	\$58	\$46,400
Safety Contracts			<u>360,000</u>			<u>100,000</u>			-
Total			<u>\$803,700</u>			<u>\$285,600</u>			<u>\$46,400</u>
			Approval Fee						
10A Evaluation of spent fuel casks for greater than 1W decay heat									
Contract	1,800	\$58	\$104,400	24	\$58	\$ 1,392	400	\$58	\$23,200
			<u>100,000</u>			-			<u>100,000</u>
Total			<u>\$204,400</u> ^{7/}			<u>\$ 1,392</u>			<u>\$123,200</u>

^{7/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$164,000, the lower fee will be used.

^{8/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$43,000, the lower fee will be used.

CATEGORIZATION OF NUCLEAR SAFETY LICENSE FEES

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	Approval Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
10B Evaluation of spent fuel casks for less than 20 W decay heat; air shipping packages for Pu, etc.									
Safety Review	1,600	\$58	\$92,800	24	\$58	\$1,392	400	\$58	\$23,200
Safety Contracts			<u>75,000</u>			<u>-</u>			<u>75,000</u>
Total Safety			<u>\$167,800</u> ^{9/}			<u>\$1,392</u>			<u>\$98,200</u> ^{10/}
10C Evaluation of fissile packages containing greater than type "A" quantities									
Safety Review	800	\$58	\$46,400	16	\$58	\$ 928	200	\$58	\$11,600
Safety Contracts			<u>50,000</u>			<u>-</u>			<u>50,000</u>
Total Safety			<u>\$96,400</u> ^{11/}			<u>\$ 928</u>			<u>\$61,600</u> ^{12/}

^{9/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$143,000, the lower fee will be used.

^{10/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$43,000, the lower fee will be used.

^{11/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$65,000, the lower fee will be used.

^{12/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$32,000, the lower fee will be used.

CALCULATION OF NUCLEAR LICENSE FEES

Fee Category	New License Review			Renewal Review			Amendment Review		
	Profess. Process Time (S/H) X	Cost Per S/H =	Approval Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Renewal Fee	Profess. Process Time (S/H) X	Cost Per S/H =	Amendment Fee
10D Evaluation of fissile packages containing less than type "A" quantities									
Safety Review	400	\$58	\$23,200	16	\$58	\$928	100	\$58	\$ 5,800
Safety Contracts			30,000			-			30,000
Total Safety			<u>\$53,200</u> ^{13/}			<u>\$928</u>			<u>\$35,800</u> ^{14/}
10E Evaluation of package containing radioactive material less than 20 times the type "A" quantity									
Safety Review	300	\$58	\$17,400	16	\$58	\$928	100	\$58	\$ 5,800
Safety Contracts			20,000			-			20,000
Total Safety			<u>\$37,400</u> ^{15/}			<u>\$928</u>			<u>\$25,800</u> ^{16/}

^{13/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$43,000, the lower fee will be used.

^{14/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$16,000, the lower fee will be used.

^{15/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$27,000, the lower fee will be used.

^{16/} Since the NMSS cost estimate of 10/7/83 exceeds the top of the range shown in the 11/22/82 proposed rule of \$16,000, the lower fee will be used.

<u>FEE CATEGORIES</u>	<u>TYPE OF LICENSE</u>	<u>Profess. Process Time (S/H)</u>	x	<u>Cost Per S/H</u>	=	<u>Fee</u>
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1. SPECIAL NUCLEAR MATERIAL

J. Licenses for possession and use of special nuclear material in sealed sources contained in devices used in industrial measuring systems.	New License	4		\$58		\$230
	Renewal	2		"		120
	Amendment	1		"		60
K. All other special nuclear material licenses, except licenses authorizing special nuclear material in unsealed form in combination that would constitute a critical quantity as defined in § 150.11 of Part 150 which shall pay fees in accordance with Category 1A.	New License	6		\$58		\$350
	Renewal	6		"		350
	Amendment	2		"		120

2. SOURCE MATERIAL

F. Use of source material for shielding.	New License	1		\$58		\$60
	Renewal	1		"		60
	Amendment	1		"		60
G. All other source material licenses.	New License	6		\$58		\$350
	Renewal	4		"		230
	Amendment	2		"		120

3. BYPRODUCT MATERIAL

A. Licenses of broad scope for possession and use of by-product material issued pursuant to Parts 30 and 33 of this chapter for processing or manufacturing of items containing byproduct material for commercial distribution to specific licensees.	New License	20		\$58		\$1,200
	Renewal	12		"		700
	Amendment	2		"		120

<u>FEL CATEGORIES</u>	<u>TYPE OF LICENSE</u>	<u>Profess. Process Time (S/H)</u>	x	<u>Cost Per S/H</u>	=	<u>Fee</u>
<u>BYPRODUCT MATERIAL (con't.)</u>						
B. Other licenses for possession and use of byproduct material issued pursuant to Part 30 of this chapter for processing or manufacturing of items containing byproduct material for commercial distribution to specific licensees.	New License	8		\$58		\$460
	Renewal	8		"		460
	Amendment	2		"		120
C. Licenses issued pursuant to §32.72, 32.73 and/or 32.74 of Part 32 of this chapter authorizing the processing or manufacture and distribution of radiopharmaceuticals, generators, reagent kits and/or sources and devices containing byproduct material.	New License	24		\$58		\$1,400
	Renewal	24		"		1,400
	Amendment	4		"		230
D Licenses issued pursuant to §32.72, 32.73 and/or 32.74 of Part 32 of this chapter authorizing distribution of radiopharmaceuticals, generators, reagent kits and/or sources or devices not involving processing of byproduct material.	New License	12		\$58		\$700
	Renewal	12		"		700
	Amendment	2		"		120
E. Licenses for possession and use of byproduct material in sealed sources for irradiation of materials where the source is not removed from its shield (self-shielded units).	New License	4		\$58		\$230
	Renewal	3		"		170
	Amendment	2		"		120
F. Licenses for possession and use of less than 10,000 curies of byproduct material in sealed sources for irradiation of materials where the source is exposed for irradiation purposes.	New License	10		\$58		\$580
	Renewal	6		"		350
	Amendment	4		"		230
G Licenses for possession and use of 10,000 curies or more of byproduct material in sealed sources for irradiation of materials where the source is exposed for irradiation purposes.	New License	40		\$58		\$2,300
	Renewal	16		"		930
	Amendment	4		"		230

FL. CATEGORIES	TYPE OF LICENSE	Profess. Process Time (S/H)	x	Cost Per S/H	=	Fee
<u>BYPRODUCT MATERIAL (con't.)</u>						
H. Licenses issued pursuant to subpart A of Part 32 of this chapter to distribute items containing byproduct material which require device review to persons exempt from the licensing requirements of Part 30 of this chapter.	New License	10		\$58		\$580
	Renewal	4		"		230
	Amendment	2		"		120
I. Licenses issued pursuant to subpart A of Part 32 of this chapter to distribute items containing byproduct material or quantities of byproduct material which do not require device evaluation to persons exempt from the licensing requirements of Part 30 of this chapter.	New License	5		\$58		\$290
	Renewal	4		"		230
	Amendment	1		"		60
J. Licenses issued pursuant to subpart B of Part 32 of this chapter to distribute items containing byproduct material which require sealed source and/or device review to persons generally licensed under Parts 31 or 35 of this chapter, except specific licenses authorizing redistribution of items which have been authorized for distribution to persons generally licensed under Parts 31 or 35 of this chapter.	New License	20		\$58		\$1,200
	Renewal	12		"		700
	Amendment	4		"		230
K. Licenses issued pursuant to subpart B of Part 32 of this chapter to distribute items containing byproduct material or quantities of byproduct which do not require sealed source and/or device review to persons generally licensed under Parts 31 or 35 of this chapter.	New License	5		\$58		\$290
	Renewal	4		"		230
	Amendment	1		"		60

OFFICE OF REGULATORY AFFAIRS AND COMPLIANCE

<u>FL CATEGORIES</u>	<u>TYPE OF LICENSE</u>	<u>Profes- Process Time (S/H)</u>	x	<u>Cost Per S/H</u>	=	<u>Fee</u>
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3. BYPRODUCT MATERIAL (con't.)

L. Licenses of broad scope for possession and use of byproduct material issued pursuant to Parts 30 and 33 of this chapter for research and development which do not authorize commercial distribution.	New License	20		\$58		\$1,200
	Renewal	12		"		700
	Amendment	2		"		120
M. Other licenses for possession and use of byproduct material issued pursuant to Part 30 of this chapter for research and development which do not authorize commercial distribution.	New License	12		\$58		\$700
	Renewal	8		"		460
	Amendment	2		"		120
N. Licenses which authorize services for other licenses, except for leak testing and waste disposal pickup services.	New License	16		\$58		\$930
	Renewal	16		"		930
	Amendment	2		"		120
O. Licenses for byproduct material issued pursuant to Part 34 of this chapter for industrial radiography operations.	New License	12		\$58		\$700
	Renewal	12		"		700
	Amendment	4		"		230
P. All other specific byproduct material licenses, except those in the categories 4A through 9B.	New License	4		\$58		\$230
	Renewal	4	1	"		130 230
	Amendment	1		"		60

4. WASTE DISPOSAL

B. Licenses specifically authorizing the receipt of waste byproduct material, source material, or special nuclear material from other persons for the purpose of packaging or repackaging the material. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	New License	24		\$58		\$1,400
	Renewal	16		"		930
	Amendment	6		"		350

! Changed to 2 hours to agree with similar licenses in FCC Category 1J.

FEE CATEGORIES	TYPE OF LICENSE	Profess. Process Time (S/H)	x	Cost Per S/H	=	Fee
<u>WASTE DISPOSAL (con't.)</u>						
C. Licenses specifically authorizing the receipt of prepackaged waste byproduct material, source material, or special nuclear material from other persons. The licensee will dispose of the material by transfer to another person authorized to receive or dispose of the material.	New License	16		\$58		\$930
	Renewal	8		"		460
	Amendment	2		"		120
D. Licenses specifically authorizing the receipt of waste byproduct material, source material, and/or special nuclear material from other persons for treatment or disposal by incineration; packaging of residues resulting from incineration; and transfer of packages containing residues to another person authorized to receive or dispose of waste material.	New License	<u>3/</u>				
	Renewal	<u>3/</u>				
	Amendment	<u>3/</u>				
<p>NOTE: CATEGORY 4D IN PROPOSED RULE COMBINED WITH CATEGORY 4A IN THE FINAL RULE</p>						
<u>WELL LOGGING</u>						
A. Licenses specifically authorizing use of byproduct material and/or special nuclear material for well logging, well surveys, and tracer studies other than field flooding tracer studies.	New License	12		\$58		\$700
	Renewal	12		"		700
	Amendment	3		"		170
B. Licenses specifically authorizing use of byproduct material for field flooding tracer studies.	New License	<u>3/</u>				
	Renewal	<u>3/</u>				
	Amendment	<u>3/</u>				

3/ Fee will be determined on an actual-cost basis.

<u>FEES CATEGORIES</u>	<u>TYPE OF LICENSE</u>	<u>Profess Process Time (S/H)</u>	x	<u>Cost Per S/H</u>	=	<u>Fee</u>
6. <u>NUCLEAR LAUNDRIES</u>						
A. Licenses for commercial collection and laundry of items contaminated with byproduct material, source material, or special nuclear material.	New License	12		\$58		\$700
	Renewal	12		"		700
	Amendment	3		"		170
7. <u>HUMAN USE OF BYPRODUCT, SOURCE OR SPECIAL NUCLEAR MATERIAL</u>						
A. Licenses issued pursuant to Parts 30, 40, and 70 of this chapter for human use of byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices.	New License	10		\$58		\$580
	Renewal	6		"		350
	Amendment	4		"		230
B. Licenses of broad scope issued to medical institutions or two or more physicians pursuant to Parts 30, 33, 35, 40 and 70 of this chapter authorizing research and development including human use of byproduct material, except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices.	New License	20		\$58		\$1,200
	Renewal	12		"		700
	Amendment	2		"		120
C. Other licenses issued pursuant to Parts 30, 35, 40 and 70 of this chapter for human use of byproduct material, source material, and/or special nuclear material, except licenses for byproduct material, source material, or special nuclear material in sealed sources contained in teletherapy devices.	New License	10		\$58		\$580
	Renewal	10		"		580
	Amendment	4		"		230

1) Changed to 2 hours to agree
with similar license amendments
in Fee Category 7B

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS (con't.)

<u>FEE CATEGORIES</u>	<u>TYPE OF LICENSE</u>	<u>PROFESSIONAL PROCESS TIME (S/H)</u>	x	<u>COST PER PROFESSIONAL S/H</u>	=	<u>LICENSE FEE</u>
8. <u>CIVIL DEFENSE:</u>						
A. Licenses for possession and use of Byproduct material, source material, or special nuclear material for civil defense activities.	New License	5		\$58		\$290
	Renewal	4		"		230
	Amendment	1		"		60
9. <u>DEVICE, PRODUCT OR SEALED SOURCE SAFETY EVALUATION</u>						
A. Safety evaluation of devices or products containing byproduct material, source material, or special nuclear material, except reactor fuel devices, for commercial distribution.	New License	28		\$58		\$1,600
	Amendment	10		"		580
B. Safety evaluation of devices or products containing byproduct material, source material, or special nuclear material manufactured in accordance with the unique specifications of, and for use by a single applicant, except reactor fuel devices.	New License	14		\$58		\$800
	Amendment	5		"		290
C. Safety evaluation of sealed sources containing byproduct material, source material, or special nuclear material, except reactor fuel, for commercial distribution.	New License	6		\$58		\$350
	Amendment	2		"		120

OFFICE OF NUCLEAR MATERIAL SAFETY AND SAFEGUARDS (cont.)

<u>FEE CATEGORIES</u>	<u>TYPE OF LICENSE</u>	<u>PROFESSIONAL PROCESS TIME (S/H)</u>	x	<u>COST PER PROFESSIONAL S/H</u>	=	<u>LICENSE FEE</u>
D. Safety evaluation of sealed sources containing byproduct material, source material, or special nuclear material, manufactured in accordance with the unique specifications of, and for use by a single applicant, except reactor fuel.	New License	3		\$58		\$175
	Amendment	1		"		60