

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
CLEAN COAL TECHNOLOGY

PROPOSED APPROPRIATION LANGUAGE
(INCLUDING DEFERRAL)

Of the funds made available under this heading for obligation in prior years, [\$10,000,000 of such funds shall not be available for obligation until October 1, 1999: \$15,000,000] *\$189,000,000* shall not be available until October 1, 2000; [and \$15,000,000] *\$40,000,000* shall not be available until October 1, 2001: *and \$27,000,000 shall not be made available until October 1, 2002:* Provided, That funds made available in previous appropriations Acts shall be available for any ongoing project regardless of the separate request for proposal under which the project was selected.

Explanation of Change

For FY 2000, the Clean Coal language proposes that \$256,000,000 in unobligated balances is to remain unavailable for obligation as follows \$189,000,000 until October 1, 2000, \$40,000 until 2001, and 27,000,000 until October 1, 2002.

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL REVIEW BUDGET

CLEAN COAL TECHNOLOGY

CLEAN COAL TECHNOLOGY (CCT)

I. Mission Supporting Goals and Objectives:

The CCT Program is a technology development effort jointly funded by government and industry, in which the most promising advanced coal-based technologies are being demonstrated at a scale large enough to generate the data needed for the marketplace to judge their commercial potential. The Program is consistent with and directly supportive of DOE's energy strategy and the implementing legislation in the Energy Policy Act of 1992 (Public Law 102-486). The Program began in 1985 with the objective of accelerating the pace at which advanced coal-based utilization technologies would enter commercial service. Underlying this objective was the recognition that the vast, and relatively inexpensive, U.S. coal reserves represent a critical energy resource which can provide a significant economic advantage to the Nation. However, these benefits can only be realized when coal can be used in ways which are environmentally responsible, and when advanced technology can achieve significantly higher efficiencies than existing commercial technology.

The 40 active projects in the Program have a total cost of \$5,671,472,000, of which DOE has committed \$1,941,365,000. As of December 31, 1998, 20 projects had completed operation and reporting requirements, 12 projects were in operation or were completing reporting requirements, and eight projects were in design or construction. By law, the DOE cost share is restricted to no more than 50% of total project costs. However, the program has achieved significantly greater leverage of the Federal investment with the overall average non-DOE cost share now at 66%. Several of the largest projects in the program, with individual project costs approaching one billion dollars, are being financed with non-DOE funds which exceed 75% of the total cost.

The technologies being demonstrated in the Program are grouped into four primary market applications: (a) Advanced Electric Power Generation Systems, which offer the prospect of much higher efficiency coal-based powerplants to meet the energy demand requirements of the Nation well into the next century; (b) Environmental Control Devices, which offer more attractive ways to reduce emissions from existing powerplants and industrial facilities both domestically and in international markets; (c) Coal Processing for Clean Fuels, which offer coal feedstock conversion to produce a stable fuel of high energy density that can be used to produce steam, electricity, or be used as a transportation fuel; and (d) Industrial Applications, which offer superior ways to competitively manufacture

I. **Mission Supporting Goals and Objectives:** CLEAN COAL TECHNOLOGY (Cont'd)

key commodities such as steel in an environmentally responsive manner.

For FY 1998, P.L. 105-18 included a rescission of \$101,000,000 in unobligated balances from the CCT Program.

For FY 1999, P.L. 105-277 deferred \$40,000,000 with \$10,000,000 to be made available in FY 2000, \$15,000,000 in FY 2001, and \$15,000,000 in FY 2002.

For FY 2000, the Department proposes that \$256,000,000 be deferred until FY 2001 and beyond. In addition, the Department requests that \$10,000,000 of the \$40,000,000 deferred in FY 1999 be available for obligation in FY 2000. The FY 2000 budget request is a net amount of \$-246,000,000 from available balances.

FY 2000 performance measures include:

- Complete demonstration of the third integrated gasification combined cycle project (Pinion Pine) utilizing air-blown gasification and hot gas cleanup for improved thermal efficiency, and continue operations of one other project (Polk) in order to establish the engineering foundation leading to a new generation of 60 percent efficient powerplants.

II. A. **Funding Schedule:**

<u>Activity</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>\$Change</u>	<u>%Change</u>
Cooperative Agreements	\$-101,000	\$-40,000	\$-246,000	\$-206,000	-515%
Program Direction	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>0%</u>
Total, Clean Coal Technology (CCT)	<u>\$-101,000</u>	<u>\$-40,000</u>	<u>\$-246,000</u>	<u>\$-206,000</u>	<u>-515%</u>

II. B. **Laboratory and Facility Funding Schedule:** CLEAN COAL TECHNOLOGY (Cont'd)

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>\$Change</u>	<u>%Change</u>
All Other	<u>\$-101,000</u>	<u>\$-40,000</u>	<u>\$-246,000</u>	<u>\$-206,000</u>	<u>-515%</u>
Total, Clean Coal Technology (CCT)	<u>\$-101,000</u>	<u>\$-40,000</u>	<u>\$-246,000</u>	<u>\$-206,000</u>	<u>-515%</u>

III. **Performance Summary:**

<u>Activity</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Cooperative Agreements	<p>Overall Program:</p> <p>For FY 1998, P.L. 105-83 rescinded \$101,000,000 from unobligated balances. The funds for the proposed rescission became available from savings resulting from restructured projects and projects that ended prior to completion.</p> <p>At the end of FY 1998, 20 projects were completed and three additional projects had completed operation and were preparing final reports. Nine projects were operating and eight projects were in design or construction.</p>	<p>Overall Program:</p> <p>For FY 1999, P.L. 105-277 deferred \$40,000,000 until FY 2000 and beyond.</p> <p>At the end of FY 1999, 28 projects are expected to be completed. Five projects are expected to be in operation and seven projects in design or construction. At the end of FY 1999, two projects are expected to have outstanding obligation commitments.</p>	<p>Overall Program:</p> <p>For FY 2000, the Department proposes that \$246,000,000 be deferred until FY 2001 and beyond.</p> <p>At the end of FY 2000, 29 projects are expected to be completed and one additional project is expected to complete operation and be preparing final reports. Four projects are expected to be in operation, three projects in construction, and three projects in design. At the end of FY 2000, two projects are expected to have outstanding obligation commitments.</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

Activity	FY 1998	FY 1999	FY 2000
Cooperative Agreements (Cont'd)	<p>Adv. Power Gen. Sys:</p> <p>During FY 1998, the COAL DIESEL project initiated construction activities (previously obligated funds). CLEAN ENERGY completed project definition activities for a restructured project. McINTOSH 4A (\$87,294,864), McINTOSH 4B (\$95,671,907) and JACKSONVILLE continued design activities. AIDEA and SIERRA initiated operation (previously obligated funds). WABASH RIVER and TAMPA continued operation.</p>	<p>Adv. Power Gen. Sys:</p> <p>During FY 1999, McINTOSH 4A and McINTOSH 4B will continue design activities. CLEAN ENERGY will continue design activities for a restructured project. JACKSONVILLE (previously obligated funds) will initiate construction. The COAL DIESEL project (previously obligated funds) will initiate operation. TAMPA and SIERRA will continue operation. AIDEA and WABASH RIVER will complete operating and reporting requirements.</p>	<p>Adv. Power Gen. Sys:</p> <p>During FY 2000, McINTOSH 4B and CLEAN ENERGY will continue design activities. The McINTOSH 4A (previously obligated funds) project is expected to join JACKSONVILLE in the construction phase. TAMPA and COAL DIESEL will continue operation. SIERRA will complete operation.</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

Activity	FY 1998	FY 1999	FY 2000
Cooperative Agreements (Cont'd)	<p>Emission Control Systems:</p> <p>During FY 1998, MICRO REBURN continued operation. NOXSO continued restructuring activities. NYSE&G and SCS-WF completed operation and joined CHIYODA and PS-COL in final report preparation. EER-SI, LIFAC, SCS-WF, and EER-WF completed final reporting requirements.</p>	<p>Emission Control Systems:</p> <p>During FY 1999, MICRO REBURN will complete operating and reporting requirements. NOXSO (previously obligated funds) is expected to initiate design activities for a restructured project. NYSE&G, CHIYODA, and PS-COL will complete final reporting requirements.</p>	<p>Emission Control Systems:</p> <p>NOXSO (previously obligated funds) is expected to initiate construction.</p>
	<p>Coal Proc. for Clean Fuels:</p> <p>During FY 1998, ROSEBUD and LPMEOH continued operation. CUSTOM COALS was restructuring.</p>	<p>Coal Proc. for Clean Fuels:</p> <p>During FY 1999, LPMEOH will continue operation. CUSTOM COALS will restructure and resume operation. ROSEBUD will complete final reporting requirements.</p>	<p>Coal Proc. for Clean Fuels:</p> <p>During FY 2000, LPMEOH and CUSTOM COALS will continue operation.</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

Activity	FY 1998	FY 1999	FY 2000
Cooperative Agreements (Cont'd)	<p>Industrial Applications:</p> <p>During FY 1998, BETHLEHEM STEEL continued operation and CPICOR continued restructuring activities. THERMOCHEM was granted approval to proceed with a reduced-scope project (\$2,799,450).</p> <p>Funding Activities:</p> <p>Funding provided from Program Direction.</p> <p>Project obligations for FY 1998 were \$186,072,221.</p>	<p>Industrial Applications:</p> <p>During FY 1999, CPICOR will complete restructuring activities and continue design activities. BETHLEHEM STEEL will complete operation and reporting requirements.</p> <p>Funding Activities:</p> <p>Continue operation of US/China Center for Energy and Environment (prior year funds).</p> <p>There are no project obligations scheduled for FY 1999. One project is expected to request a cost growth.</p>	<p>Industrial Applications:</p> <p>During FY 2000, CPICOR will continue design activities.</p> <p>Funding Activities:</p> <p>Continue operation of US/China Center for Energy and Environment and transition to private sector funding (prior year funds).</p> <p>There are no project obligations scheduled for FY 2000.</p>
	\$-101,000	\$-40,000	\$-246,000

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

<u>Activity</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Program Direction	<p>Continued to monitor progress on the active projects, including development of independent performance assessments on the projects scheduled to complete the operating phase during FY 1998. (Prior year funds)</p> <p>Continued to review actual versus planned project accomplishments and approved key decision points in the continuation of projects fully satisfying the criteria to proceed to the next major phase of activity. (Prior year funds)</p> <p>Continued to monitor and evaluate the status of program funding. (Prior year funds)</p> <p>Maintained a detailed information base on all project activity and status data, update monthly, and provide key program inputs to the planning, budgeting, and management activities of the Department. (Prior year funds.)</p>	<p>Continue to monitor progress on the active projects, including development of independent performance assessments on the projects scheduled to complete the operating phase during FY 1999. (Prior year funds)</p> <p>Continue to review actual versus planned project accomplishments and approved key decision points in the continuation of projects fully satisfying the criteria to proceed to the next major phase of activity. (Prior year funds)</p> <p>Continue to monitor and evaluate the status of program funding. (Prior year funds)</p> <p>Maintain a detailed information base on all project activity and status data, update monthly, and provide key program inputs to the planning, budgeting, and management activities of the Department. (Prior year funds.)</p>	<p>Continue to monitor progress on the active projects, including development of independent performance assessments on the projects scheduled to complete the operating phase during FY 2000. (Prior year funds)</p> <p>Continue to review actual versus planned project accomplishments and approved key decision points in the continuation of projects fully satisfying the criteria to proceed to the next major phase of activity. (Prior year funds)</p> <p>Continue to monitor and evaluate the status of program funding. (Prior year funds)</p> <p>Maintain a detailed information base on all project activity and status data, update monthly, and provide key program inputs to the planning, budgeting, and management activities of the Department. (Prior year funds.)</p>

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

Activity	FY 1998	FY 1999	FY 2000
Program Direction (Cont'd)	Continued to compile, evaluate and model project performance and cost data, and publish results. Initiated activities for the development of a CCT Reference Database Compendium. (Prior year funds)	Continue to compile, evaluate and model project performance and cost data, and publish results. Continue development of a CCT Reference Database Compendium. (Prior year funds)	Continue to compile, evaluate and model project performance and cost data, and publish results. Continue development of a CCT Reference Database Compendium. (Prior year funds)
	Continued technology transfer and outreach activities as the availability of technical and economic performance data increases. (Prior year funds)	Continue technology transfer and outreach activities as the availability of technical and economic performance data increases. (Prior year funds)	Continue technology transfer and outreach activities as the availability of technical and economic performance data increases. (Prior year funds)
	Continued technology assessments for SOx and NOx control, advanced power generating systems, coal fuels technology, and industrial applications. (Prior year funds)	Continue technology assessments for SOx and NOx control, advanced power generating systems, coal fuels technology, and industrial applications. (Prior year funds)	Continue technology assessments for SOx and NOx control, advanced power generating systems, coal fuels technology, and industrial applications. (Prior year funds)
	Subject to direction from the Administration and Congress, continued activities to implement Section 1332 of the Energy Policy Act. (Prior year funds)	Subject to direction from the Administration and Congress, continue activities to implement Section 1332 of the Energy Policy Act. (Prior year funds)	Subject to direction from the Administration and Congress, continue activities to implement Section 1332 of the Energy Policy Act. (Prior year funds)
Program Direction (Cont'd)	Continued feasibility studies and project development activities for a China IGCC project. (Prior year funds)	Continue feasibility studies and project development activities for a China IGCC project. (Prior year funds)	Complete feasibility studies and project development activities for a China IGCC project. (Prior year funds)

III. **Performance Summary:** CLEAN COAL TECHNOLOGY (Cont'd)

Activity	FY 1998	FY 1999	FY 2000
Continued NEPA compliance activities. (Prior year funds)	Continue NEPA compliance activities. (Prior year funds)	Continue NEPA compliance activities. (Prior year funds)	
Provided funding for Working Capital Fund. (Prior year funds)	Provide funding for Working Capital Fund. (Prior year funds)	Provide funding for Working Capital Fund. (Prior year funds)	
Continued operation of US/China Center for Energy and Environment. (Prior year funds)	Provide funding from Cooperative Agreements.	Provide funding from Cooperative Agreements.	
Funding Activity:	Funding Activity:	Funding Activity:	
Obligated approximately \$17,700,000 to finance activities at HQ and FETC (61 FTEs). (Prior year funds)	Obligate approximately \$14,900,000 to finance activities at HQ and FETC (67 FTEs). (Prior year funds)	Obligate approximately \$14,400,000 to finance activities at HQ and FETC (60 FTEs). (Prior year funds)	
Clean Coal Technology, Total	\$-101,000	\$-40,000	\$-246,000

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST

CLEAN COAL TECHNOLOGY

PROGRAM FUNDING PROFILE

<u>Sub-program</u>	FY 1998 <u>Enacted</u>	FY 1999 <u>Enacted</u>	FY 2000 <u>Base</u>	FY 2000 <u>Request</u>	Program Change Request vs. Base	
					<u>Dollar</u>	<u>Percent</u>
Clean Coal Technology						
Rescission						
Operating Expenses	\$-100,000	\$0	\$0	\$0	\$0	0%
Deferral						
Operating Expenses	\$0	\$-40,000	\$-40,000	\$-256,000	\$-216,000	-540%
New Appropriation						
Operating Expenses	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$10,000</u>	<u>\$10,000</u>	<u>100%</u>
Total	<u>\$-100,000</u>	<u>\$-40,000</u>	<u>\$-40,000</u>	<u>\$-246,000</u>	<u>\$-206,000</u>	<u>-515%</u>
Summary						
Operating Expenses	\$-100,000	\$-40,000	\$-40,000	\$-246,000	\$-206,000	-515%
Construction	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>\$0</u>	<u>0%</u>
Total Program	<u>\$-100,000</u>	<u>\$-40,000</u>	<u>\$-40,000</u>	<u>\$-246,000</u>	<u>\$-206,000</u>	<u>-515%</u>
Staffing (FTEs)						
Headquarters	18	18	18	17		
Field	<u>43</u>	<u>49</u>	<u>49</u>	<u>43</u>		
Total Staffing	<u>61</u>	<u>67</u>	<u>67</u>	<u>60</u>		

Authorizations:
P.L. 95-91, "Department of Energy Organization Act" (1997)

DEPARTMENT OF ENERGY
 FY 2000 CONGRESSIONAL BUDGET REQUEST
 FOSSIL ENERGY

TOTAL STAFFING SUMMARY
 DISTRIBUTION OF FTE'S
 OFFICE OF FOSSIL ENERGY
 SUMMARY

	Full-Time Equivalents		
	FY 1998 <u>Actual</u>	FY 1999 <u>Request</u>	FY 2000 <u>Request</u>
Fossil Energy Research and Development	579	594	582
Headquarters	116	116	116
National Petroleum Technology Office	25	23	27
Federal Energy Technology Center - Morgantown	205	214	206
Federal Energy Technology Center - Pittsburgh	233	241	233
Clean Coal Technology	61	67	60
Headquarters	18	18	17
Federal Energy Technology Center - Morgantown	17	23	20
Federal Energy Technology Center - Pittsburgh	26	26	23
Naval Petroleum and Oil Shale Reserves	53	41	39
Headquarters	16	15	12
Casper Naval Petroleum and Oil Shale Reserves	18	20	22
Elk Hills Naval Petroleum and Oil Shale Reserves	19	6	5
Strategic Petroleum Reserve	132	135	125
Headquarters	29	25	25
Project Management Office	103	110	100
Mining Research and Development	81	85	85
Bureau of Mines - FETC (Pittsburgh)	0	0	14
 Total	 906	 922	 905

DEPARTMENT OF ENERGY
 FY 2000 CONGRESSIONAL BUDGET REQUEST
 FOSSIL ENERGY

DISTRIBUTION OF FTE'S
 FOSSIL ENERGY RESEARCH AND DEVELOPMENT
 SUMMARY

	Full-Time Equivalents		
	FY 1998 <u>Request</u>	FY 1999 <u>Request</u>	FY 2000 <u>Request</u>
Advanced Clean Fuels Research	33	33	33
Advanced Clean/Efficient Power Systems	83	99	83
Advanced Research and Technology Development	11	11	11
Natural Gas Research	24	24	24
Program Direction	409	408	412
Fuels Program	19	19	19
Mining Research and Development	81	85	85
Bureau of Mines - FETC (Pittsburgh)	<u>0</u>	<u>0</u>	<u>14</u>
 Total	 660	 679	 681

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
HEADQUARTERS

	Full-Time Equivalents		
	<u>FY 1998</u> <u>Request</u>	<u>FY 1999</u> <u>Request</u>	<u>FY 2000</u> <u>Request</u>
Program Direction	97	97	97
Fuels Program	<u>19</u>	<u>19</u>	<u>19</u>
Total	116	116	116

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
FEDERAL ENERGY TECHNOLOGY CENTER - MORGANTOWN

	Full-Time Equivalents		
	<u>FY 1998</u> <u>Request</u>	<u>FY 1999</u> <u>Request</u>	<u>FY 2000</u> <u>Request</u>
Advanced Clean/Efficient Power Systems	36	44	36
Advanced Research and Technology Development	11	11	11
Natural Gas Research	24	24	24
Program Direction	<u>134</u>	<u>135</u>	<u>135</u>
Total	205	214	206

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
FEDERAL ENERGY TECHNOLOGY CENTER - PITTSBURGH

	Full-Time Equivalents		
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
	<u>Request</u>	<u>Request</u>	<u>Request</u>
Advanced Clean Fuels Research	33	33	33
Advanced Clean/Efficient Power Systems	47	55	47
Program Direction	<u>153</u>	<u>153</u>	<u>153</u>
Total	233	241	233

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
NATIONAL PETROLEUM TECHNOLOGY OFFICE

	Full-Time Equivalents		
	<u>FY 1998 Request</u>	<u>FY 1999 Request</u>	<u>FY 2000 Request</u>
Program Direction	<u>25</u>	<u>23</u>	<u>27</u>
Total	25	23	27

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
CLEAN COAL TECHNOLOGY

	Full-Time Equivalents		
	<u>FY 1998</u> <u>Request</u>	<u>FY 1999</u> <u>Request</u>	<u>FY 2000</u> <u>Request</u>
Headquarters	18	18	17
Federal Energy Technology Center - Morgantown	17	23	20
Federal Energy Technology Center - Pittsburgh	<u>26</u>	<u>26</u>	<u>23</u>
Total	61	67	60

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
STRATEGIC PETROLEUM RESERVE

	Full-Time Equivalents		
	<u>FY 1998</u> <u>Request</u>	<u>FY 1999</u> <u>Request</u>	<u>FY 2000</u> <u>Request</u>
Headquarters	29	25	25
Project Management Office	<u>103</u>	<u>110</u>	<u>100</u>
Total	132	135	125

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
NAVAL PETROLEUM AND OIL SHALE RESERVES

	Full-Time Equivalents		
	<u>FY 1998</u> <u>Request</u>	<u>FY 1999</u> <u>Request</u>	<u>FY 2000</u> <u>Request</u>
Headquarters	16	15	12
Casper Naval Petroleum and Oil Shale Reserves	18	20	22
Elk Hills Naval Petroleum and Oil Shale Reserves	<u>19</u>	<u>6</u>	<u>5</u>
Total	53	41	39

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
BUREAU OF MINES - FETC (Pittsburgh)

	Full-Time Equivalents		
	<u>FY 1998 Request</u>	<u>FY 1999 Request</u>	<u>FY 2000 Request</u>
Bureau of Mines - FETC (Pittsburgh)	<u>0</u>	<u>0</u>	<u>14</u>
Total	0	0	14

DEPARTMENT OF ENERGY
FY 2000 CONGRESSIONAL BUDGET REQUEST
FOSSIL ENERGY

DISTRIBUTION OF FTE'S
FOSSIL ENERGY RESEARCH AND DEVELOPMENT
MINING RESEARCH AND DEVELOPMENT

	Full-Time Equivalents		
	<u>FY 1998 Request</u>	<u>FY 1999 Request</u>	<u>FY 2000 Request</u>
Mining Research and Development	<u>81</u>	<u>85</u>	<u>85</u>
Total	81	85	85