

SUMMARY PROPOSAL BUDGET YEAR 1

ORGANIZATION South Dakota School of Mines and Technology				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR William J Capehart				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
		CAL	ACAD	SUMR			
1.	William J Capehart - PI	3.25	0.00	0.00	\$ 18,322	\$	
2.							
3.							
4.							
5.							
6.	(0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00	0		
7.	(1) TOTAL SENIOR PERSONNEL (1 - 6)	3.25	0.00	0.00	18,322		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1.	(0) POST DOCTORAL ASSOCIATES	0.00	0.00	0.00	0		
2.	(0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00	0		
3.	(0) GRADUATE STUDENTS				0		
4.	(0) UNDERGRADUATE STUDENTS				0		
5.	(0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)				0		
6.	(0) OTHER				0		
TOTAL SALARIES AND WAGES (A + B)					18,322		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					4,031		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					22,353		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT					0		
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)					3,846		
2. FOREIGN					0		
F. PARTICIPANT SUPPORT COSTS							
1.	STIPENDS \$ _____	0					
2.	TRAVEL _____	0					
3.	SUBSISTENCE _____	0					
4.	OTHER _____	0					
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS					0		
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES					2,574		
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0		
3. CONSULTANT SERVICES					0		
4. COMPUTER SERVICES					0		
5. SUBAWARDS					37,547		
6. OTHER					618		
TOTAL OTHER DIRECT COSTS					40,739		
H. TOTAL DIRECT COSTS (A THROUGH G)					66,938		
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) SALARIES AND WAGES (Rate: 44.0000, Base: 18322)							
TOTAL INDIRECT COSTS (F&A)					8,062		
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)					75,000		
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)					0		
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)					\$ 75,000	\$	
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME William J Capehart				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
		Date Checked	Date Of Rate Sheet	Initials - ORG			

SUMMARY PROPOSAL BUDGET Cumulative

ORGANIZATION South Dakota School of Mines and Technology				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR William J Capehart				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
				CAL	ACAD	SUMR	
1. William J Capehart - PI				3.25	0.00	0.00	\$ 18,322
2.							
3.							
4.							
5.							
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)				0.00	0.00	0.00	0
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)				3.25	0.00	0.00	18,322
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL ASSOCIATES				0.00	0.00	0.00	0
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)				0.00	0.00	0.00	0
3. (0) GRADUATE STUDENTS							0
4. (0) UNDERGRADUATE STUDENTS							0
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)							0
6. (0) OTHER							0
TOTAL SALARIES AND WAGES (A + B)							18,322
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)							4,031
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)							22,353
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT							0
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							3,846
2. FOREIGN							0
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ _____ 0							
2. TRAVEL _____ 0							
3. SUBSISTENCE _____ 0							
4. OTHER _____ 0							
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS							0
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES							2,574
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION							0
3. CONSULTANT SERVICES							0
4. COMPUTER SERVICES							0
5. SUBAWARDS							37,547
6. OTHER							618
TOTAL OTHER DIRECT COSTS							40,739
H. TOTAL DIRECT COSTS (A THROUGH G)							66,938
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
TOTAL INDIRECT COSTS (F&A)							8,062
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)							75,000
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)							0
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)							\$ 75,000
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME William J Capehart				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
		Date Checked		Date Of Rate Sheet		Initials - ORG	

C *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

SDSM&T BUDGET EXPLANATION

A. SENIOR PERSONNEL: Faculty members at the Institute of Atmospheric Sciences (IAS) depend primarily upon outside grant monies to fund their salaries. While IAS faculty members are an integral part of the teaching faculty at SDSM&T, the fraction of an IAS faculty member's salary that can be earned each year through teaching ranges between only 0-25% of a full 12-month salary. Hence, IAS faculty members typically conduct 9-12 months of research per year that is supported by funding outside of the University. Therefore, the salary support requested in this proposal will not provide an excessive amount of annual salary support given the salary structure of IAS faculty. The salaries that will be charged for this work will be those regularly approved for the individuals involved by the governing body of the South Dakota School of Mines and Technology, namely the Regents of Education of the state of South Dakota. The rates for FY2004 (1 July 2003 through 30 June 2004) are based on current contractual agreements. The rates for faculty members and staff assume an increase of 5% per fiscal year thereafter. Rates for students are approved for the period of mid-May 2003 through mid-May 2004, and assume an increase of 5% per year thereafter. If increases exceed that amount, effort stated will need to correspond with salary.

Institute personnel earn vacation at the rate of 10 hours per month if they have 15 years or less of service, and 13.33 hours per month if their period of service exceeds 15 years. This vacation accrual is handled in the budget by including the appropriate accrual adjustment in the salary rate. This procedure is utilized for all sponsored Institute projects to insure that each one pays only its pro rata share of the vacation authorized.

C. FRINGE BENEFITS: Fringe benefits have been budgeted at 22% of Salaries and Wages for staff personnel and 8% for students. The benefits consist of contributions to Social Security, the Unemployment Insurance Program, the Workmen's Compensation Program, the Flexible Benefit Fee Program, a group insurance program and matching contributions to the State Employee Retirement Program. Only the actual costs of the fringe benefit programs are charged to the project.

E. TRAVEL: Funds for travel are requested for:

1. Domestic Travel

Attend scientific conference (one person each yr).

a. Airfare		Year1: \$900
b. Per diem		
Lodging 5 nights @ \$150/night		\$750
Meals 6 days @ \$33/day		\$198
c. Surface transportation		\$75

Travel to LLNL (one person each yr).

a. Airfare		Year1: \$900
b. Per diem		
Lodging 5 nights @ \$1050/night		\$750
Meals 6 days @ \$33/day		\$198
c. Surface transportation		\$75

Total Travel	\$3846
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G. OTHER DIRECT COSTS: Funds are requested for: Materials and Supplies (software, books, manuals, reproduction) (\$2,574); Funds are also requested for registration at scientific conference (\$400); long distance telephone calls and misc. services (\$218). This project also includes a subaward to Lawrence Livermore National Laboratory (\$37,547), the details of which follow in the subsequent budget.

I. INDIRECT COSTS: The latest on-campus indirect cost rate approved by the cognizant government audit agency for the South Dakota School of Mines and Technology is 44% of salaries and wages. This rate has been used in the budget calculations. The cognizant government audit agency for the institution is:

Director, Division of Cost Allocation
Regional Administrative Support Center
Department of Health and Human Services
Room 304, Federal Office Building
50 United Nations Plaza
San Francisco, CA 94102

SUMMARY PROPOSAL BUDGET YEAR 1

ORGANIZATION Lawrence Livermore National Laboratory				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR John A Taylor				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
	CAL	ACAD	SUMR				
1. John A Taylor	1.01	0.00	0.00	\$ 9,779			
2.							
3.							
4.							
5.							
6. (0) OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)	0.00	0.00	0.00	0			
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)	1.01	0.00	0.00	9,779			
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL ASSOCIATES	0.00	0.00	0.00	0			
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)	0.00	0.00	0.00	0			
3. (0) GRADUATE STUDENTS				0			
4. (0) UNDERGRADUATE STUDENTS				0			
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)				0			
6. (0) OTHER				0			
TOTAL SALARIES AND WAGES (A + B)				9,779			
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)				3,960			
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)				13,739			
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT				0			
E. TRAVEL 1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)				2,000			
2. FOREIGN				0			
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS \$ _____				0			
2. TRAVEL _____				0			
3. SUBSISTENCE _____				0			
4. OTHER _____				0			
TOTAL NUMBER OF PARTICIPANTS (0) TOTAL PARTICIPANT COSTS				0			
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES				0			
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION				0			
3. CONSULTANT SERVICES				0			
4. COMPUTER SERVICES				0			
5. SUBAWARDS				0			
6. OTHER				0			
TOTAL OTHER DIRECT COSTS				0			
H. TOTAL DIRECT COSTS (A THROUGH G)				15,739			
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE) 1-OPC (SALARY + FRINGE) [NOTE 1] (Rate: 15.9900, Base: 13739) (Cont. on Comments Page)							
TOTAL INDIRECT COSTS (F&A)				21,808			
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)				37,547			
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)				0			
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)				\$ 37,547			
M. COST SHARING PROPOSED LEVEL \$ 0 AGREED LEVEL IF DIFFERENT \$							
PI/PD NAME John A Taylor				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
				Date Checked	Date Of Rate Sheet	Initials - ORG	

SUMMARY PROPOSAL BUDGET COMMENTS - Year 1

**** I- Indirect Costs**

2-OFC (UNIT OCC SPACE- NO BASE \$) [NOTE 2] (Rate: 100.0000, Base 855)

3-PMC (TOTDIR+OPC+OFC) [NOTE 3] (Rate: 15.0000, Base 18791)

4-G&A (TOTDIR+OPC+OFC+PMC) [NOTE 4] (Rate: 46.5000, Base 21609)

5-HWMC (TOTDIR+OPC+OFC+PMC) [NOTE 5] (Rate: 1.4000, Base 21609)

6-IGPE/IGPP (TOTDIR+OPC+OFC+PMC+G&A+HWMC) [NOTE 6/7] (Rate: 1.5000, Base 31960)

7-LDRD (TOTDIR+OPC+OFC+PMC+G&A+HWMC+IGPE/IGPP) [NOTE 8] (Rate: 6.3800, Base 32439)

8-S&S (TOTDIR+OPC+OFC+PMC+G&A+HWMC+IGPE/IGPP+LDRD) [NOTE 9] (Rate: 8.8000, Base 34509)

SUMMARY PROPOSAL BUDGET Cumulative

ORGANIZATION Lawrence Livermore National Laboratory				FOR NSF USE ONLY			
				PROPOSAL NO.	DURATION (months)		
PRINCIPAL INVESTIGATOR / PROJECT DIRECTOR John A Taylor				AWARD NO.	Proposed	Granted	
A. SENIOR PERSONNEL: PI/PD, Co-PI's, Faculty and Other Senior Associates (List each separately with title, A.7. show number in brackets)				NSF Funded Person-months		Funds Requested By proposer	Funds granted by NSF (if different)
		CAL	ACAD	SUMR			
1. John A Taylor		1.01	0.00	0.00	\$ 9,779	\$	
2.							
3.							
4.							
5.							
6. () OTHERS (LIST INDIVIDUALLY ON BUDGET JUSTIFICATION PAGE)		0.00	0.00	0.00	0		
7. (1) TOTAL SENIOR PERSONNEL (1 - 6)		1.01	0.00	0.00	9,779		
B. OTHER PERSONNEL (SHOW NUMBERS IN BRACKETS)							
1. (0) POST DOCTORAL ASSOCIATES		0.00	0.00	0.00	0		
2. (0) OTHER PROFESSIONALS (TECHNICIAN, PROGRAMMER, ETC.)		0.00	0.00	0.00	0		
3. (0) GRADUATE STUDENTS					0		
4. (0) UNDERGRADUATE STUDENTS					0		
5. (0) SECRETARIAL - CLERICAL (IF CHARGED DIRECTLY)					0		
6. (0) OTHER					0		
TOTAL SALARIES AND WAGES (A + B)					9,779		
C. FRINGE BENEFITS (IF CHARGED AS DIRECT COSTS)					3,960		
TOTAL SALARIES, WAGES AND FRINGE BENEFITS (A + B + C)					13,739		
D. EQUIPMENT (LIST ITEM AND DOLLAR AMOUNT FOR EACH ITEM EXCEEDING \$5,000.)							
TOTAL EQUIPMENT					0		
E. TRAVEL					2,000		
1. DOMESTIC (INCL. CANADA, MEXICO AND U.S. POSSESSIONS)							
2. FOREIGN					0		
F. PARTICIPANT SUPPORT COSTS							
1. STIPENDS	\$		0				
2. TRAVEL			0				
3. SUBSISTENCE			0				
4. OTHER			0				
TOTAL NUMBER OF PARTICIPANTS (0)				TOTAL PARTICIPANT COSTS		0	
G. OTHER DIRECT COSTS							
1. MATERIALS AND SUPPLIES					0		
2. PUBLICATION COSTS/DOCUMENTATION/DISSEMINATION					0		
3. CONSULTANT SERVICES					0		
4. COMPUTER SERVICES					0		
5. SUBAWARDS					0		
6. OTHER					0		
TOTAL OTHER DIRECT COSTS					0		
H. TOTAL DIRECT COSTS (A THROUGH G)					15,739		
I. INDIRECT COSTS (F&A)(SPECIFY RATE AND BASE)							
TOTAL INDIRECT COSTS (F&A)					21,808		
J. TOTAL DIRECT AND INDIRECT COSTS (H + I)					37,547		
K. RESIDUAL FUNDS (IF FOR FURTHER SUPPORT OF CURRENT PROJECTS SEE GPG II.C.6.j.)					0		
L. AMOUNT OF THIS REQUEST (J) OR (J MINUS K)					\$ 37,547	\$	
M. COST SHARING PROPOSED LEVEL \$ 0				AGREED LEVEL IF DIFFERENT \$			
PI/PD NAME John A Taylor				FOR NSF USE ONLY			
ORG. REP. NAME*				INDIRECT COST RATE VERIFICATION			
		Date Checked	Date Of Rate Sheet	Initials - ORG			

C *ELECTRONIC SIGNATURES REQUIRED FOR REVISED BUDGET

LLNL BUDGET EXPLANATION

A. SENIOR PERSONNEL: Support of 8.38% annual FTE (approximately 1.01 months) of support are requested for Dr John A. Taylor.

C. FRINGE BENEFITS: Fringe Benefits are calculated at a rate of 40.5% of the base salary.

E. TRAVEL: Funds for travel are requested for:

1. Domestic Travel

Travel to SDSM&T (one person).

a. Airfare	Year1: \$1000
b. Per diem	
Lodging 5 nights @ \$150/night	\$750
Meals 6 days @ \$33/day	\$198
c. Surface transportation	\$52

Total Travel	\$2000
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I. INDIRECT COSTS: LLNL Indirect Costs are summarized as follows. Rates used for this proposal are forward pricing rates approved by Department of Energy (DOE)

Note 1: Organizational Personnel Charge (OPC)

This charge is calculated as a percentage of wage expense (salary plus fringe benefits). This rate is to recover indirect personnel management costs by each directorate. The FY2004 estimated rate for Energy and Environment personnel is 15.99%. The same rate is used for out years.

Note 2: Organizational Facility Charge (OFC)

Pays for the costs of managing and administering facilities assigned to directorates and is distributed on the basis of space allocated to each user.

Note 3: Program Management Charge (PMC)

This charge is calculated on a percentage of the same value added base as G&A. This rate is to recover the indirect program management costs. The FY2004 estimated rate is 15.00 %. The same rate is used for out years.

Note 4: General & Administrative G&A

This rate is distributed over a value added base. The value added base is determined by using total costs of the project less procurements, postdoctoral and students G&A, HWC, IGPE and LDRD. The rate for FY2004 is 46.5%. The same rate is used for out years.

Note 5: The Hazardous Waste Management Charge (HWMC)

covers non-DOE share of the costs incurred by the hazardous waste management activities. It is based on a percentage of the relational non-DOE-funded value added base. The FY2004 rate is 1.4%

Note 6: Institutional General Purpose Equipment (IGPE)

Institutional General Purpose Equipment funds capital equipment of general use or of an institutional nature that benefits multiple cost objectives and is required for general purpose site-wide needs. The FY2004 rate is .75%.

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Note 7: Institutional General Plant Project (IGPP)

Institutional General Plant Project funds are used for the construction of general plant projects (GPP) of a general institutional nature that benefit multiple site-wide activities and cost-objects. The FY2004 rate is .75%.

Note 8: Laboratory Directed Research & Development (LDRD)

The policy of LLNL and the DOE to foster the creation of new science and technology, to advance the forefront of science, and to find novel, high-leverage innovative approaches to scientific and technological problems in fields related to LLNL's defense and energy missions. To accomplish this, the LDRD program was established and is currently funded by a 6% assessment on all LLNL operating costs. The rate is 6.38% of total costs. The same rate is used for out years.

Note 9: Safeguards & Security (S&S)

Non DOE work for others is charged the S&S burden to cover their portion of security costs for the Laboratory. The FY2004 rate is 8.8%