



UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

Regarding Financial Qualifications and Decommissioning Funding for the NIST Test Reactor Application for License Renewal
October 21, 2008
Reference No. MD3410
August 25, 2008

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Subject: NRC Request for Additional Information (RAI's) dated August 25, 2008
Docket No. 50-184

Gentlemen,

Please find, as attached, our response to the NRC Request for Additional Information Regarding financial Qualifications and Decommissioning Funding for the National Institute of Standards and Technology Test Reactor Application for License Renewal (TAC No. MD3410) dated August 25, 2008.

If you have any questions concerning this submittal, please contact Dr. Wade J. Richards at 301-975-6210 or wade.richards@nist.gov.

Sincerely,

Wade J. Richards
Chief, Reactor Operations and Reactor Engineering
NIST Center for Neutron Research

I certify under penalty of perjury that the following is true and correct.

Executed on: Oct 21, 2008

by: Wade J. Richards

cc: William B. Kennedy
U.S. Nuclear Regulatory Commission
MS 012-G15
Washington, D.C. 20555

A020
NRR

RAI Regarding Financial Qualifications and Decommissioning Funding for the NIST Test Reactor Application for License Renewal (TAC No. MD3410)

August 25, 2008

1. State the organizational form of NIST and supply the information requested in 10CFR, 50.33 (d).

Response:

10CFR 50.33 (d) (3)

National Institute for Standards and Technology (NIST)

100 Bureau Drive

Gaithersburg, MD 20899

Dr. Patrick Gallagher, Deputy Director

Dr. Richard F. Kayser, Chief Scientist

NIST is a Federal Agency and is not owned, controlled or dominated by an alien, a foreign government or a foreign corporation.

2. Since NIST's financial statements are not included in the application, please provide a copy of the latest financial statements for the NRC staff's review.

Response:

NIST financial statements are at Attachment A.

3. Provide the projected operating costs for each of the fiscal year FY 2009 to FY 2013 as well as NIST's source(s) of funding to cover the operating costs for the above fiscal years. (The funding source documents are at Attachment B.)

Response:

FY 2009	10,626,000
FY 2010	10,626,000
FY 2011	10,626,000
FY 2012	10,626,000
FY 2013	10,626,000

4(a). Update the NBS decommissioning cost estimate in Table 17.1 by providing a current cost estimate in FY 2009 dollars as well as the basis for the cost estimate (if the Duratek, Inc. estimate is still the basis for the cost estimate, please so state). Also, update the NIST direct costs shown in Table 17.2 to FY 2009 dollars.

Response:

The projected FY 2009 cost for decommissioning is estimated using the Duratek formula, an algorithm for escalation based on NUREG-1307, Rev 10. (see Attachment C).

4(b). Provide a summary for total decommissioning costs by labor, waste disposal, other items (such as energy, equipment, and supplies), and a 25% contingency factor for the costs in both Tables 17.1 and 17.2.

Response:

The cost estimate done in the response to question 4(a) is the summary of the total decommissioning cost. The estimated cost at Attachment C includes the cost for labor, waste disposal, energy and other needs. A 25% contingency factor has been added to this estimate which makes the total decommissioning cost 50.7M.

Indirect = 43,726,689

Direct = 43,496,668

Total = 87,223,357

4(c). Explain the basis for not including a contingency factor into the direct costs identified in Table 17.2.

Response:

We feel that we know the NIST direct cost more accurately than the indirect costs.

4(d). Clarify whether decommissioning funding assurance will be provided for the total costs of decommissioning including both "external" and "NIST direct cost" or only the "external" costs. If NIST intends to provide decommissioning funding assurance only for the "external" costs, provide a justification for not including "NIST direct costs".

Response:

NIST intends to provide decommissioning funding assurance for both external and direct costs (see Letter of Intent as Attachment D).

4(e). The application identified a cost adjustment formula prepared by Duratek, Inc., confirm whether that formula will be the means of adjusting NIST's cost estimate and associated funding level periodically over the life of the facility. Also, provide a detailed numerical example, using the formula, showing how the 2009 cost estimate will be updated periodically.

Response:

The Duratek, Inc. formula is being used to provide a yearly estimate of the decommissioning cost to NIST. The FY 2009 decommissioning estimate can be found at Attachment C.

5. The applicant must state that it is a Federal Government organization and that the decommissioning funding obligations of the applicant are backed by the Federal Government, and also provide corroborating documentation to the statement. Further, the applicant must provide documentation verifying that the signatory of the statement of intent is authorized to execute said document that binds the applicant.

Response:

See NIST Letter of Intent at Attachment D.

5(a). An updated Statement of Intent (SOI), which includes the current (2009 dollars) cost estimate for decommissioning and the signatory's oath or affirmation attesting to the information.

Response:

See NIST Letter of Intent at Attachment D.

5(b). Documentation that corroborates the statement in the application that NIST is a Federal institution and a Federal Government licensee under 10CFR 50.75(e) (2)(iv).

Response:

See NIST Letter of Intent at Attachment D.

5(c). A statement as to whether the commissioning funding obligations for the NIST NBSR are backed by the Federal Government. The application must also present information that corroborates this statement.

Response:

See NIST Letter of Intent at Attachment D.

5(d). Provide documentation verifying that the signatory of the SOI is authorized to execute such a document that binds the applicant financially.

Response:

See NIST Letter of Intent at Attachment D.

Attachment A

NIST Financial Statements

United States Department of Commerce
 Balance Sheet
 13_ENTITIES.57_00 - NIST
 As of Quarter 4, PRECLOSE 2007
 (In Thousands)

18-Sep-08 - 2:00 PM

13_ENTITIES.57_
 00
 Quarter 4 - 2007

ASSETS

Intragovernmental:

Fund Balance with Treasury	768,272
Investments	0
Accounts Receivable	1,414
Loans Rec and Related Foreclosed Propert	0
Other	16,034
Total Intragovernmental	785,720

Cash	0
Investments	0
Accounts Receivable Net	7,405
Taxes Receivable Net	0
Loans Receivable and Related Foreclosed Property, Net	0
Inventory Materials and Supplies Net	24,840
General Property Plant and Equip Net	580,171
Other	53
TOTAL ASSETS	1,398,190

LIABILITIES

Intragovernmental:

Accounts Payable	1,269
Debt to Treasury	0
Other	
Resources Payable to Treasury	0
Unearned Revenue	142,421
Other	3,738
Total Intragovernmental	147,427

Accounts Payable	24,822
Loan Guarantee Liabilities	0
Federal Employee Benefits	8,985
Environmental and Disposal Liabilities	46,969
Other	
Accrued Payroll and Annual Leave	32,393
Accrued Grants	26,421
Capital Leases	164
Unearned Revenue	11,730
Other	1,268
TOTAL LIABILITIES	300,178

NET POSITION

Unexpended Appropriations-Earmarked Funds	0
Unexpended Appropriations-Other Funds	499,142
Cumulative Results of Operations-Earmarked Funds	0
Cumulative Results of Operations-Other Funds	598,870

TOTAL NET POSITION	1,098,012
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TOTAL LIABILITIES AND NET POSITION	1,398,190
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United States Department of Commerce
 Consolidated Statement of Net Cost
 For the Period Ended Quarter 4 - PRECLOSE 2007
 (In Thousands)

18-Sep-08 - 2:00 PM

**Consolidated
 Totals**
 (13_ENTITIES.57_00)

SG1 Total Gross Costs	-
SG1 Total Earned Revenue	-
SG1 Net Program Costs	-
<hr/>	
SG2 Total Gross Costs	838,249
SG2 Total Earned Revenue	(173,779)
SG2 Net Program Costs	664,470
<hr/>	
SG3 Total Gross Costs	-
SG3 Total Earned Revenue	-
SG3 Net Program Costs	-
<hr/>	
Total Gross Costs Not Assigned to Programs	-
Total Earned Revenue Not Attributed to Programs	-
Net Costs Not Assigned to Programs	-
<hr/>	
NET COST OF OPERATIONS	664,470

United States Department of Commerce
Consolidated Statement of Changes in Net Position
For the Period Ended Quarter 4 - PRECLOSE 2007
in Thousands

18-Sep-01

	FY 2007 NIST Consolidated Total	FY 2006 NIST Consolidated Total
Cumulative Results of Operations		
Beginning Balances	570,075	569,611
Adjustments:		
Changes in accounting principles	-	-
Corrections of errors	-	-
Beginning Balances, as Adjusted	570,075	569,611
Budgetary Financing Sources:		
Other Adjustments (Note 18)	-	-
Appropriations Used	659,275	690,802
Nonexchange Revenue	-	-
Donations and Forfeitures for Cash and Cash Equivalents	-	-
Transfers In/(Out) Without Reimbursement, Net	-	-
Other Budgetary Financing Sources (Uses), Net (Note 18)	-	-
Other Financing Sources (Nonexchange)		
Donations and Forfeitures of Property	15,019	-
Transfers In/(Out) Without Reimbursement, Net	-	-
Imputed Financing Sources From Costs Absorbed by Others	19,500	19,166
Downward Subsidy Reestimates Payable to Treasury	-	-
Loan Modification Savings Payable to Treasury	-	-
Other Financing Sources (Uses), Net	(529)	(282)
Total Financing Sources	693,265	709,686
Net Cost of Operations	(664,470)	(709,221)
Net Change	28,795	464
Total Cumulative Results of Operations	598,870	570,075
Unexpended Appropriations:		
Beginning Balance	478,062	422,627
Adjustments		
Changes in accounting principles	-	-
Corrections of errors	-	-
Beginning Balance, as adjusted	478,062	422,627
Budgetary Financing Sources:		
Appropriations Received	676,876	761,767
Appropriations Transferred In/(Out), Net	9,950	2,772
Other Adjustments (Note 18)	(6,471)	(18,303)
Appropriations Used	(659,275)	(690,802)
Total Budgetary Financing Sources	21,080	55,435
Total Unexpended Appropriations	499,142	478,062
Net Position	1,098,012	1,048,137

13_ENTITIES.57
00
NIST

BUDGETARY RESOURCES:

Unobligated Balance, Brought Forward, October 1	176,498
Recoveries of Prior-years Unpaid Obligations	14,792
Budget Authority	
Appropriations	676,876
Borrowing Authority	0
Contract Authority	0
Spending Authority From Offsetting Collections	
Earned	
Collected	171,476
Change in Receivables	981
Change in Unfilled Customer Orders	
Advances Received	3,489
Without Advances	1,823
Anticipated For Rest of Year, Without Advances	0
Previously Unavailable	0
Expenditure Transfers from Trust Funds	0
<hr/>	
Total Budget Authority	854,646
Nonexpenditure Transfers Net	9,950
Temporarily Not Available Pursuant to Public Law	0
Permanently Not Available	(7,000)
<hr/> TOTAL BUDGETARY RESOURCES <hr/>	<hr/> 1,047,973 <hr/>

STATUS OF BUDGETARY RESOURCES:

Obligations Incurred	
Direct	861,096
Reimbursable	0
<hr/>	
Total Obligations Incurred	861,096
Unobligated Balance	
Apportioned	35,932
Exempt From Apportionment	140,778
<hr/>	
Total Unobligated Balance	176,710
Unobligated Balance Not Available	10,166
<hr/> TOTAL STATUS OF BUDGETARY RESOURCES <hr/>	<hr/> 1,047,973 <hr/>

CHANGE IN UNPAID OBLIGATED BALANCE, NET:

Unpaid Obligated Balance, Net, Brought Forward, October 1	
Unpaid Obligations, Brought Forward	589,035
Less: Uncollected Customer Payments, Brought Forward	(29,154)
Total Unpaid Obligated Balance, Net, Brought Forward	559,880
Obligations Incurred	861,096
Less: Gross Outlays	(821,984)
Unpaid Obligated Balance Transferred, Net	
Actual Transfers Unpaid Obligations	0
Actual Transfers, Uncollected Customer Payments	0
<hr/>	
Total Unpaid Obligated Balance Transferred, Net	0
Less: Actual Recoveries of Prior-years Unpaid Obligations	(14,792)
Change in Uncollected Customer Payments	(2,804)
Unpaid Obligated Balance, Net, End of Period	
Unpaid Obligations	613,355
Less: Uncollected Customer Payments	(31,959)
<hr/> TOTAL UNPAID OBLIGATED BALANCE, NET, END OF PERIOD <hr/>	<hr/> 581,396 <hr/>

NET OUTLAYS:

Gross Outlays	821,984
Less: Offsetting Collections	(174,965)
Less: Distributed Offsetting Receipts	0
<hr/> NET OUTLAYS <hr/>	<hr/> 647,019 <hr/>

Attachment B

NIST Operating Cost Source Documentation



DEPARTMENT OF COMMERCE

The President's 2009 Budget will:

- Advance technological innovation through the President's American Competitiveness Initiative;
- Open new markets for U.S. exporters, protect intellectual property rights, obtain compliance with trade agreements, and enforce unfair trade laws;
- Support critical demographic and economic statistics, including the 2010 Decennial Census;
- Enhance understanding of the planet's weather and climate;
- Improve stewardship of ocean and coastal resources and wildlife; and
- Restrain spending in lower-priority areas.

Advancing U.S. Competitiveness through Technological Innovation, Free Trade, and Intellectual Property Protection

- *Supports the American Competitiveness Initiative.* Provides \$634 million for investments in quantum and neutron research, nanotechnology, and related scientific work at the National Institute of Standards and Technology, a 20-percent increase over the 2008 enacted level, excluding earmarks and unrequested grants.
- *Facilitates the transition to digital television broadcasts.* Ensures a smooth transition from analog to digital television broadcasts by February 18, 2009, through information and assistance efforts, thereby clearing valuable radio spectrum to enhance the capabilities of first responders and bring greater choice to media and telecommunications consumers.
- *Advances free trade.* Opens and expands new markets for U.S. goods and services,

helps develop and enforce free trade agreements with other nations, eliminates barriers to sales of U.S. products, and improves the competitiveness of U.S. firms. Disseminates advanced U.S. clean energy technologies throughout the Asia-Pacific region by hosting trade missions and other outreach events.

- *Protects intellectual property rights.* Combats global piracy and counterfeiting, and strengthens the United States Patent and Trademark Office to support efforts to safeguard the value of intellectual property through more efficient and higher quality patent and trademark examinations.

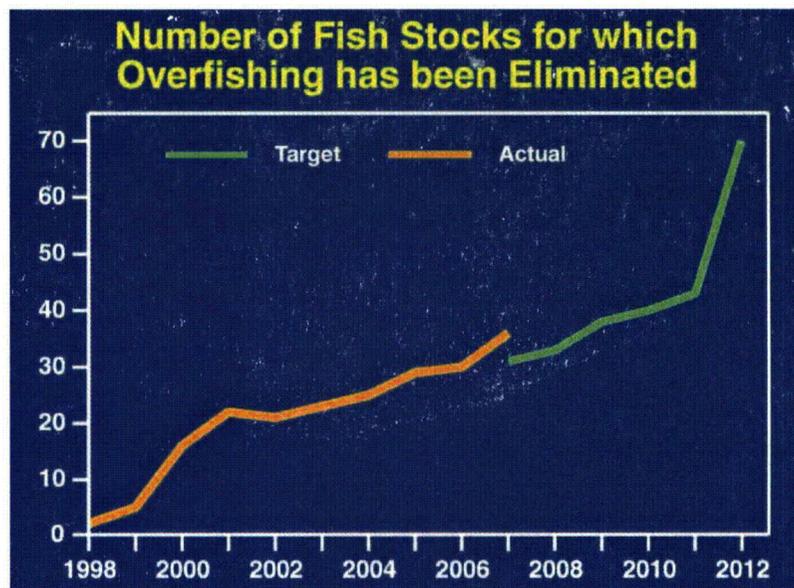
Improving Public and Private-Sector Decisions with Enhanced Data

- *Prepares for the 2010 Decennial Census.* Opens field offices and finalizes systems for the population count in spring 2010, which is called for in Article I of the Constitution.
- *Improves economic data.* Promotes more accurate data on the contributions of the health care sector and research and development to gross domestic product (GDP), and also significantly improves measurement of the service sector.

Enhancing the Ability to Observe, Protect, and Manage the Earth's Resources

- *Improves weather forecasting and global climate monitoring.* Provides \$981 million to develop and acquire vital weather satellites and climate sensors (an

increase of \$175 million over the 2008 request and \$220 million over the enacted level) and \$31 million over the 2008 request in new initiatives to improve forecasts of severe weather, fires, and droughts.



- *Protects oceans and manages natural resources.* Increases funding for last year's initiative supporting the Ocean Action Plan by \$31 million over the 2008 request, to \$154 million. These funds will enhance fisheries management and support the Magnuson-Stevens Act requirement of eliminating overfishing by 2011, as well as strengthen efforts to advance ocean observing networks, study ocean acidification, reduce harmful marine debris, support maritime commerce, and protect marine mammals.

Major Savings and Reforms

- Six programs representing \$375 million have been identified for termination or reduction, including:
 - Federal funding for Manufacturing Extension Partnership centers, which will become independent, as intended when the program began.
 - Economic Development Administration grants, which will be reduced and re-focused on economic adjustment assistance, to respond to sudden and severe economic events.
 - Public Telecommunications Facilities, Planning, and Construction grants, which in recent years have supported public broadcasters' transition to digital broadcasts—a transition that is now largely complete.

Since 2001, the Department of Commerce has:

- Vigorously contributed to the Administration's free-trade agenda, leading to the signing or completion of free trade agreements with 17 countries that feature increased intellectual property protections and expanded access for U.S. products and services. From 2001 to 2006, annual U.S. exports increased by \$440 billion (nearly 30 percent in constant dollars), which benefits businesses of all sizes and American workers.
- Enforced trade agreements by initiating 286 antidumping or countervailing duty investigations and applied anti-subsidy countervailing duty investigations on imports from emerging non-market economies for the first time in 23 years.
- Enhanced the quality and timeliness of key economic data; for example, making GDP information on a State-by-State basis available 12 months earlier.
- Supported sound management of fisheries and related ocean resources, including protecting over 7,000 species within the world's largest marine protected area—the Papahānaumokuākea Marine National Monument in Hawaii.
- Improved weather forecasting and climate science capabilities, such as increasing the lead time for winter storm warnings from 9 hours in 2000 to 19 hours in 2007.

Department of Commerce

(Dollar amounts in millions)

	2007 Actual	Estimate	
		2008	2009
Spending			
Discretionary Budget Authority:			
Departmental Management:			
Salaries and Expenses	49	44	61
Emergency Steel Guaranteed Loan Program	—	—	-49

Headquarters Renovation	—	4	7
National Intellectual Property Law Enforcement Coordination Council	—	—	1
Office of the Inspector General	23	22	25
Subtotal, Departmental Management	72	70	45
Economic Development Administration	281	274	133
Bureau of the Census	893	1,230	2,605
Economics and Statistics Administration	80	80	91
International Trade Administration	402	405	420
Bureau of Industry and Security	75	73	84
Minority Business Development Agency	30	29	29
National Oceanic and Atmospheric Administration (NOAA):			
Operations, Research, and Facilities	2,821	2,933	2,913
Procurement, Acquisition and Construction	1,085	971	1,239
Other accounts	-11	68	-42
Subtotal, NOAA	4,065	3,972	4,110
U.S. Patent and Trademark Office (PTO):			
Program level	1,779	1,916	2,075
Fees	-1,791	-1,916	-2,075
Subtotal, PTO	-12	—	—
Technology Administration	2	—	—
National Institute of Standards and Technology (NIST):			
Scientific and Technical Research and Services	439	446	539
Industrial Technology Services	177	136	4
Construction of Research Facilities	59	160	99
Subtotal, NIST	675	742	642
National Telecommunications and Information Administration	40	36	19
Discretionary offsetting receipts	-23	-4	-1
Total, Discretionary budget authority	6,410	6,907	8,177
<i>Memorandum: Budget authority from enacted supplementals</i>	170	—	—
Total, Discretionary outlays	6,418	7,145	8,072

Mandatory Outlays:			
Digital Television Fund programs:			
Public Safety Interoperable Communications grants	24	296	396
Digital Television Converter Box program	36	404	534
Other programs	—	152	102
All other	8	162	151
Mandatory offsetting receipts ¹	—	-852	-1,032
Total, Mandatory outlays	68	162	151
Total, Outlays	6,486	7,327	8,223
Credit activity			
Direct Loan Disbursements:			
Fisheries Finance Direct Loan Financing account	84	52	39
	Number of Programs		2009 Savings
Major Savings, Discretionary			
Terminations	4		-200
Reductions	2		-175

¹ Mandatory offsetting receipts include spectrum auction receipts that fund mandatory programs in the National Telecommunications and Information Administration created by the Deficit Reduction Act of 2005.

NTIS REVOLVING FUND—Continued

Object Classification (in millions of dollars)—Continued

Identification code 13-4295-0-3-376	2007 actual	2008 est.	2009 est.
23.3 Communications, utilities, and miscellaneous charges	1	2	2
24.0 Printing and reproduction		4	4
25.2 Other services	10	5	5
25.3 Other purchases of goods and services from Government accounts	1	2	2
25.7 Operation and maintenance of equipment	1	1	1
26.0 Supplies and materials		3	3
31.0 Equipment		2	2
99.0 Reimbursable obligations	28	41	42
99.9 Total new obligations	28	41	42

Employment Summary

Identification code 13-4295-0-3-376	2007 actual	2008 est.	2009 est.
Reimbursable:			
2001 Civilian full-time equivalent employment	131	150	150

NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Federal Funds

SCIENTIFIC AND TECHNICAL RESEARCH AND SERVICES

For necessary expenses of the National Institute of Standards and Technology, **[\$440,517,000]** \$535,000,000, to remain available until expended, of which not to exceed **[\$6,580,000]** \$12,300,000 may be transferred to the "Working Capital Fund": *Provided*, That not to exceed \$5,000 shall be for official reception and representation expenses. (15 U.S.C. 272, 273, 278b-j; p, 290b-f, 1454(d), 1454(e), 1511, 1512, 3711; Department of Commerce Appropriations Act, 2008.)

Program and Financing (in millions of dollars)

Identification code 13-0500-0-1-376	2007 actual	2008 est.	2009 est.
Obligations by program activity:			
00.01 Laboratories and technical programs	370	382	445
00.02 National research facilities	63	65	74
00.91 NIST laboratories	433	447	519
01.01 Baldrige national quality program	8	8	9
10.00 Total new obligations	441	455	528
Budgetary resources available for obligation:			
21.40 Budgetary resources available for obligation	5	9	
22.00 New budget authority (gross)	438	445	527
22.10 Resources available from recoveries of prior year obligations	2	1	1
22.22 Unobligated balance transferred from other accounts	5		
23.90 Total budgetary resources available for obligation	450	455	528
23.95 Total new obligations	-441	-455	-528
24.40 Unobligated balance carried forward, end of year	9		
New budget authority (gross), detail:			
Discretionary:			
40.00 New budget authority (gross), detail	434	441	535
41.00 Transferred to other accounts	-1	-1	-12
42.00 Transferred from other accounts	5	5	4
43.00 Appropriation (total discretionary)	438	445	527
Change in obligated balances:			
72.40 Change in obligated balances	106	131	115
73.10 Total new obligations	441	455	528
73.20 Total outlays (gross)	-414	-470	-511
73.45 Recoveries of prior year obligations	-2	-1	-1
74.40 Obligated balance, end of year	131	115	131
Outlays (gross), detail:			
86.90 Outlays (gross), detail	347	343	406

86.93 Outlays from discretionary balances	67	127	105
87.00 Total outlays (gross)	414	470	511

Net budget authority and outlays:

89.00 Budget authority	438	445	527
90.00 Outlays	414	470	511

The mission of the National Institute of Standards and Technology (NIST) is to develop and promote measurement, standards, and technology to enhance productivity, facilitate trade, and improve the quality of life. To carry out its mission, NIST has an intramural research program made up of laboratories and technical programs and national research facilities. NIST also manages the Baldrige National Quality Program.

As part of the President's 10-year American Competitiveness Initiative to significantly increase Federal funding for basic research in the physical sciences, NIST will target key investments that promote U.S. innovation and industrial competitiveness, including, among other things: expanding NIST's neutron facility to aid in characterizing novel materials in high-growth research fields; improving nanotechnology manufacturing capabilities; enhancing innovation in the biosciences through measurement and standards development related to complex life systems; increasing communications capabilities through research in optical technologies; and enhancing cyber security by developing infrastructure needed to respond to emerging online threats.

Object Classification (in millions of dollars)

Identification code 13-0500-0-1-376	2007 actual	2008 est.	2009 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	154	167	192
11.3 Other than full-time permanent	13	14	14
11.5 Other personnel compensation	6	6	6
11.9 Total personnel compensation	173	187	212
12.1 Civilian personnel benefits	45	49	58
21.0 Travel and transportation of persons	10	10	12
22.0 Transportation of things	1	1	3
23.2 Rental payments to others	2	1	2
23.3 Communications, utilities, and miscellaneous charges	24	25	35
24.0 Printing and reproduction	1	1	1
25.1 Advisory and assistance services	5	3	2
25.2 Other services	45	40	34
25.3 Other purchases of goods and services from Government accounts	24	24	30
25.5 Research and development contracts	2	2	12
25.7 Operation and maintenance of equipment	14	14	16
26.0 Supplies and materials	23	24	29
31.0 Equipment	36	37	42
41.0 Grants, subsidies, and contributions	36	37	40
99.9 Total new obligations	441	455	528

Employment Summary

Identification code 13-0500-0-1-376	2007 actual	2008 est.	2009 est.
Direct:			
1001 Civilian full-time equivalent employment	1,830	1,995	2,147

INDUSTRIAL TECHNOLOGY SERVICES

For necessary expenses of the Hollings Manufacturing Extension Partnership of the National Institute of Standards and Technology, **[\$89,640,000]** \$4,000,000, to remain available until expended.

[In addition, for necessary expenses of the Technology Innovation Program of the National Institute of Standards and Technology, \$65,200,000, to remain available until expended: *Provided*, That of the \$70,200,000 provided for in direct obligations under this heading, \$65,200,000 is appropriated from the general fund and \$5,000,000 is derived from recoveries of prior year obligations from the Advanced Technology Program.]

[(RESCISSION)]

[Of the unobligated balances available under this heading from prior year appropriations, \$18,800,000 are rescinded]. (*Department of Commerce Appropriations Act, 2008.*)

Program and Financing (in millions of dollars)

Identification code 13-0525-0-1-376	2007 actual	2008 est.	2009 est.
Obligations by program activity:			
00.01 Advanced technology program	93	70	6
00.02 Manufacturing extension partnership	107	91	4
01.00 Total direct program	200	161	10
10.00 Total new obligations	200	161	10
Budgetary resources available for obligation:			
21.40 Unobligated balance carried forward, start of year	30	20	
22.00 New budget authority (gross)	178	136	4
22.10 Resources available from recoveries of prior year obligations	12	5	6
23.90 Total budgetary resources available for obligation	220	161	10
23.95 Total new obligations	-200	-161	-10
24.40 Unobligated balance carried forward, end of year	20		
New budget authority (gross), detail:			
Discretionary:			
40.00 Appropriation	184	155	4
40.36 Unobligated balance permanently reduced	-7	-19	
43.00 Appropriation (total discretionary)	177	136	4
58.00 Spending authority from offsetting collections: Offsetting collections (cash)	1		
70.00 Total new budget authority (gross)	178	136	4
Change in obligated balances:			
72.40 Obligated balance, start of year	155	156	114
73.10 Total new obligations	200	161	10
73.20 Total outlays (gross)	-187	-198	-99
73.45 Recoveries of prior year obligations	-12	-5	-6
74.40 Obligated balance, end of year	156	114	19
Outlays (gross), detail:			
86.90 Outlays from new discretionary authority	82	62	2
86.93 Outlays from discretionary balances	105	136	97
87.00 Total outlays (gross)	187	198	99
Offsets:			
Against gross budget authority and outlays:			
88.40 Offsetting collections (cash) from: Non-Federal sources	-1		
Net budget authority and outlays:			
89.00 Budget authority	177	136	4
90.00 Outlays	186	198	99

The 2009 Budget phases out Federal funding for the Manufacturing Extension Partnership (MEP). MEP centers will become independent, as intended in the program's original authorization.

Object Classification (in millions of dollars)

Identification code 13-0525-0-1-376	2007 actual	2008 est.	2009 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	16	12	6
11.3 Other than full-time permanent	1		
11.5 Other personnel compensation	1	1	
11.9 Total personnel compensation	18	13	6
12.1 Civilian personnel benefits	5	3	2
13.0 Benefits for former personnel			1
21.0 Travel and transportation of persons	1	1	
23.3 Communications, utilities, and miscellaneous charges	3	3	1
25.1 Advisory and assistance services	6	4	
25.2 Other services	6	8	

25.3 Other purchases of goods and services from Government accounts	2	2	
25.5 Research and development contracts	1	1	
25.7 Operation and maintenance of equipment	1	1	
26.0 Supplies and materials	1	1	
31.0 Equipment	1	1	
41.0 Grants, subsidies, and contributions	155	123	
99.9 Total new obligations	200	161	10

Employment Summary

Identification code 13-0525-0-1-376	2007 actual	2008 est.	2009 est.
Direct:			
1001 Civilian full-time equivalent employment	192	133	47

CONSTRUCTION OF RESEARCH FACILITIES

For construction of new research facilities, including architectural and engineering design, and for renovation and maintenance of existing facilities [including agency recreational and welfare facilities], not otherwise provided for the National Institute of Standards and Technology, as authorized by 15 U.S.C. 278c-278e, [\$160,490,000] \$99,000,000, to remain available until expended[, of which \$30,080,000 is for a competitive construction grant program for research science buildings: *Provided*, That the Secretary of Commerce shall include in the budget justification materials that the Secretary submits to Congress in support of the Department of Commerce budget (as submitted with the budget of the President under section 1105(a) of title 31, United States Code) an estimate for each National Institute of Standards and Technology construction project having a total multi-year program cost of more than \$5,000,000 and simultaneously the budget justification materials shall include an estimate of the budgetary requirements for each such project for each of the five subsequent fiscal years: *Provided further*, That notwithstanding any other provision of law, of the amount made available for construction of research facilities, \$7,332,000 shall be for the University of Mississippi Medical Center Biotechnology Research Park; \$7,332,000 shall be for the Mississippi State University Research, Technology and Economic Development Park; \$1,598,000 shall be for the University of Southern Mississippi Innovation and Commercialization Park Infrastructure and Building Construction and Equipage; \$5,000,000 shall be for the Alabama State University Life Sciences Building; and \$30,000,000 shall be for laboratory and research space at the University of South Alabama Engineering and Science Center]. (*Department of Commerce Appropriations Act, 2008.*)

Program and Financing (in millions of dollars)

Identification code 13-0515-0-1-376	2007 actual	2008 est.	2009 est.
Obligations by program activity:			
00.01 Direct program activity	52	177	99
10.00 Total new obligations	52	177	99
Budgetary resources available for obligation:			
21.40 Unobligated balance carried forward, start of year	9	17	
22.00 New budget authority (gross)	59	160	99
22.10 Resources available from recoveries of prior year obligations	1		
23.90 Total budgetary resources available for obligation	69	177	99
23.95 Total new obligations	-52	-177	-99
24.40 Unobligated balance carried forward, end of year	17		
New budget authority (gross), detail:			
Discretionary:			
40.00 Appropriation	59	160	99
Change in obligated balances:			
72.40 Change in obligated balances	201	193	283
73.10 Total new obligations	52	177	99
73.20 Total outlays (gross)	-59	-87	-93
73.45 Recoveries of prior year obligations	-1		
74.40 Obligated balance, end of year	193	283	289
Outlays (gross), detail:			
86.90 Outlays (gross), detail	16	19	12

CONSTRUCTION OF RESEARCH FACILITIES—Continued

Program and Financing (in millions of dollars)—Continued

Identification code 13-0515-0-1-376	2007 actual	2008 est.	2009 est.
86.93 Outlays from discretionary balances	43	68	81
87.00 Total outlays (gross)	59	87	93
Net budget authority and outlays:			
89.00 Budget authority	59	160	99
90.00 Outlays	59	87	93

This appropriation supports the construction of new facilities and the renovation and maintenance of NIST's current buildings and laboratories to comply with scientific and engineering requirements and to keep pace with Federal, State, and local health and safety regulations. As part of the President's 10-year American Competitiveness Initiative, the 2009 Budget includes \$99 million to complete construction of a new building extension at the NIST labs in Boulder, Colorado, to expand its world-class joint research institute at the University of Colorado, and to strengthen maintenance, repairs, and safety at NIST's facilities.

Object Classification (in millions of dollars)

Identification code 13-0515-0-1-376	2007 actual	2008 est.	2009 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	4	5	5
11.5 Other personnel compensation			1
11.9 Total personnel compensation	4	5	6
12.1 Civilian personnel benefits	1	2	2
25.2 Other services	23	35	35
25.7 Operation and maintenance of equipment	1	1	1
26.0 Supplies and materials	4	4	4
32.0 Land and structures	17	48	38
41.0 Grants, subsidies, and contributions		82	13
99.0 Direct obligations	50	177	99
99.5 Below reporting threshold	2		
99.9 Total new obligations	52	177	99

Employment Summary

Identification code 13-0515-0-1-376	2007 actual	2008 est.	2009 est.
Direct:			
1001 Civilian full-time equivalent employment	50	54	60

WORKING CAPITAL FUND

Program and Financing (in millions of dollars)

Identification code 13-4650-0-4-376	2007 actual	2008 est.	2009 est.
Obligations by program activity:			
09.01 Laboratories and technical programs	162	169	151
09.02 National research facilities	4	4	6
09.09 NIST laboratories	166	173	157
09.10 Baldrige national quality program	2	3	4
09.11 Manufacturing extension partnership	1	1	
10.00 Total new obligations	169	177	161
Budgetary resources available for obligation:			
21.40 Unobligated balance carried forward, start of year	132	141	141
22.00 New budget authority (gross)	178	177	160
23.90 Total budgetary resources available for obligation	310	318	301
23.95 Total new obligations	-169	-177	-161
24.40 Unobligated balance carried forward, end of year	141	141	140

New budget authority (gross), detail:
Discretionary:

42.00 Transferred from other accounts	1	1	12
Spending authority from offsetting collections:			
58.00 Offsetting collections (cash)	174	176	148
58.10 Change in uncollected customer payments from Federal sources (unexpired)	3		
58.90 Spending authority from offsetting collections (total discretionary)	177	176	148
70.00 Total new budget authority (gross)	178	177	160
Change in obligated balances:			
72.40 Change in obligated balances	98	102	20
73.10 Total new obligations	169	177	161
73.20 Total outlays (gross)	-162	-259	-170
74.00 Change in uncollected customer payments from Federal sources (unexpired)	-3		
74.40 Obligated balance, end of year	102	20	11
Outlays (gross), detail:			
86.90 Outlays (gross), detail	117	137	120
86.93 Outlays from discretionary balances	45	122	50
87.00 Total outlays (gross)	162	259	170
Offsets:			
Against gross budget authority and outlays:			
Offsetting collections (cash) from:			
88.00 Offsets	-116	-128	-101
88.40 Non-Federal sources	-58	-48	-47
88.90 Total, offsetting collections (cash)	-174	-176	-148
Against gross budget authority only:			
88.95 Change in uncollected customer payments from Federal sources (unexpired)	-3		
Net budget authority and outlays:			
89.00 Budget authority	1	1	12
90.00 Outlays	-12	83	22

The Working Capital Fund finances research and technical services performed for other Government agencies and the public. These activities are funded through advances and reimbursements. The Fund also finances the acquisition of equipment, standard reference materials, and storeroom inventories until issued or sold.

Object Classification (in millions of dollars)

Identification code 13-4650-0-4-376	2007 actual	2008 est.	2009 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	57	65	70
11.3 Other than full-time permanent	5	5	5
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	63	71	76
12.1 Civilian personnel benefits	17	18	19
21.0 Travel and transportation of persons	3	3	1
22.0 Transportation of things	1	1	
23.2 Rental payments to others	1		
23.3 Communications, utilities, and miscellaneous charges	8	8	7
25.1 Advisory and assistance services	3	2	1
25.2 Other services	20	20	9
25.3 Other purchases of goods and services from Government accounts	19	19	10
25.7 Operation and maintenance of equipment	4	4	2
26.0 Supplies and materials	10	9	5
31.0 Equipment	15	17	29
41.0 Grants, subsidies, and contributions	5	5	2
99.0 Reimbursable obligations	169	177	161
99.9 Total new obligations	169	177	161

Employment Summary

Identification code 13-4650-0-4-376	2007 actual	2008 est.	2009 est.
Reimbursable:			
2001 Civilian full-time equivalent employment	681	746	779

Attachment C

FY 2009 Estimated Decommissioning Cost

September 22, 2008

ESTIMATION OF INDIRECT COST FOR DECOMMISSIONING THE N.I.S.T. REACTOR

COST ESCALATION ESTIMATE FOR THE YEAR 2009:

Prepared by: Mahesh Suthar

References:

1. Report prepared by DURATEK SERVICES INC., Oak Ridge, TN on "Decommissioning Cost Estimate for the N.I.S.T. Reactor, Rev. 0, March 2004"
2. U.S. Department of Labor, Bureau of Labor Statistics Data, 2008
3. U.S. Nuclear Regulatory Commission, NUREG – 1307, Rev. 12, February 27, 2007 "Report on Waste Burial Charges"

Referring to the report on "Decommissioning Cost Estimate for N.I.S.T. Reactor by Duratek, Table A –14,

$$\text{Estimated Cost (2009)} = (\text{2003 Cost}) \times [AL_{(2009)} + BE_{(2009)} + CB_{(2009)}] \dots\dots\dots(1)$$

Where A, B, and C are the fractions of the total 2003 dollar costs that are attributed to labor, energy and burial respectively, and sum to 1.0. The NIST values for these fractions are given below:

$$A = 0.618 \qquad B = 0.037 \qquad C = 0.345$$

The factors $L_{(2009)}$, $E_{(2009)}$ and $B_{(2009)}$ are defined by:

$L_{(2009)}$ = Labor Cost Adjustment, December 2003 to the re-estimate month of year 2009,

$E_{(2009)}$ = Energy Cost Adjustment, December 2003 to the re-estimate month of year 2009, and

$B_{(2009)}$ = LLW Burial/Disposition Cost Adjustment, December 2003 to the re-estimate month of year 2009, (i.e. burial/disposition cost in the new estimate month of year 2009 divided by the burial/disposition cost in December of 2003)

This report is an estimate for the year 2009 and the Labor Cost and Energy Cost data based on U.S. Department of Labor, Bureau of Labor Statistical Data available at this time are available up to Quarter 1 of 2008. Therefore, last five years data are plotted for each index in order to get better curve fitting and extrapolation of data for the year 2009. Refer to the curves for these estimates attached herewith.

Determination of Labor Cost Adjustment Factor L_x:

Referring to the attachment: 1, (print out of U.S. Department of Labor, Bureau of Labor Statistical Data, "Employment Cost Index" data):

Labor Cost Index for 4th quarter of 2003 = 92.9
 Estimated Labor Cost index for 1st quarter of 2009 = 112

Therefore, NIST L₍₂₀₀₈₎ = 112 /92.9 = 1.2056(i)

Determination of Energy Cost Adjustment Factor E_x:

Referring to the attachment 2, (print out of U.S. Department of labor, Bureau of Labor Statistical Data, "Producer Price Index – Commodities (Fuels and related products and Power)):

Electrical Power Cost Annual Index for 2003 = 145.8
 Estimated Electrical Power Cost index for first quarter of 2009 = 200
 #2 Diesel Fuel Cost Annual Index for 2003 = 100.5 and
 Estimated #2 Diesel Fuel Cost Index for the first quarter of 2009 = 433.33

Per Duratek Report, Energy Cost Adjustment Factor equation for NIST is

$$E_{(2009)} (NIST) = 0.58(\text{Electrical Power Cost Index Adjustment Factor for 2009}) + 0.42(\text{Fuel Cost Index Adjustment Factor for 2009})$$

$$= 0.58(200/145.8) + 0.42(433.33/100.5)$$

$$= 2.6065.....(ii)$$

Determination of Waste Burial Cost Adjustment Factor B_x:

Per Duratek Report, NIST equation for Waste Burial Cost Adjustment Factor for 2009 is:

$$B_{(2009)} (NIST) = D \times WP + E \times BARN + F \times ENV$$

Where (per Duratek Services Inc. report, for NIST)

D = 0.145, E = 0.467, and F = 0.388

$WP_{(2009)}$ = Adjustment Factor for Waste Processors at U.S. Ecology

$BARN_{(2009)}$ = Adjustment Factor for Barnwell South Carolina burial site

$ENV_{(2009)}$ = Adjustment Factor for Envirocare of Utah

Referring to U.S.N.R.C. NUREG 1307, Rev. 12, Table 2.1, values of B_x are given for years up to 2006. The value of B_x for the year 2009 can be obtained by plotting the graph of year v/s B_x values given in Table 2.1 and extrapolating the graph beyond year 2006. Attached such graphs provide the following values of B_x :

$$WP_{(2009)} = 3.814, \quad BARN_{(2009)} = 26.579, \quad ENV_{(2009)} = 11.212$$

The values of B_x for the year 2003 obtained by interpolation per Nureg-1307, Rev. 12, Table 2.1 are given below:

$$WP_{(2003)} = 4.797, \quad BARN_{(2003)} = 20.3345, \quad ENV_{(2003)} = 4.504$$

(Note: These values are different from the previous two years values. Those values were taken from Duratek calculations for the year 2003. Duratek used 2002 data for the year 2003 from the Nureg-1307, Rev. 10, Table 2.1 because 2003 data were not available in that table. Nureg-1307, Rev. 12 included data for the years 2002 and 2004. Data for the year 2003 were obtained by linear interpolation of 2002 and 2004 data in order to use real life data.)

The value of $B_{(2009)}$ (NIST) can now be obtained by solving the following equation:

$$B_{(2009)} \text{ (NIST)} = D \times WP + E \times BARN + F \times ENV, \text{ where}$$

$$WP = 3.814/4.797 = .7951, \quad BARN = 26.579/20.3345 = 1.3071 \text{ and}$$

$$ENV = 11.212/4.504 = 2.4893$$

$$B_{(2009)} \text{ (NIST)} = 0.145 \times 0.7951 + 0.467 \times 1.3071 + 0.388 \times 2.4893 \\ = 1.6916 \dots \dots \dots (iii)$$

The estimated escalated decommissioning cost for the year 2009 is obtained by solving equation (1) given above, i.e.

$$\text{Estimated Cost (2009)} = (\text{2003 Cost}) [AL_{(2009)} + BE_{(2009)} + CB_{(2009)}] \dots \dots \dots (1),$$

where 2003 Cost = \$30,224,476.00

Estimated escalated decommissioning cost for the year 2009,

$$= \$30,224,476.00 [0.618 \times 1.2056 + 0.037 \times 2.6065 + 0.345 \times 1.6916]$$

$$= \$43,726,689.84$$

Estimated 2008 Cost = \$43,726,689.84



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Data extracted on: May 12, 2008 (02:33 PM)

Employment Cost Index (NAICS)

Series Catalog:

Series ID : CIU201000000210I (B)

Not Seasonally Adjusted
 Compensation : Total compensation
 Sector : Private industry
 Periodicity : Index number
 Industry Occupation : Northeast

Data:

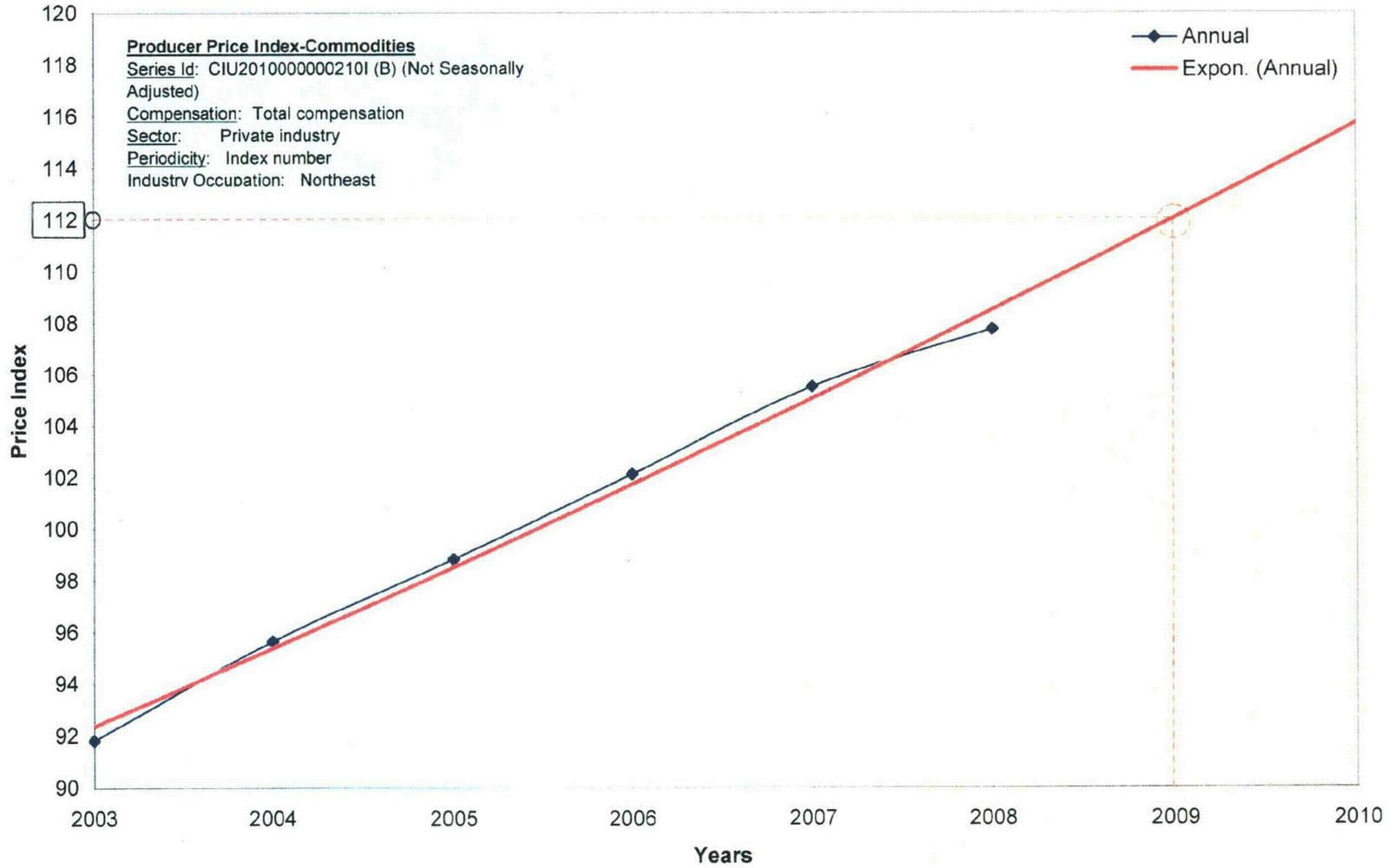
Year	Qtr1	Qtr2	Qtr3	Qtr4	Ann
1998	No data available for this year.				
1999	No data available for this year.				
2000	No data available for this year.				
2001	84.3	85.3	86.2	86.7	
2002	87.7	88.6	88.9	89.3	
2003	90.6	91.4	92.4	92.9	
2004	94.2	95.5	96.3	96.6	
2005	97.6	98.5	99.2	100.0	
2006	100.9	101.8	102.5	103.3	
2007	104.0	105.1	106.2	106.8	
2008	107.4				

B : Includes wages, salaries, and employer costs for employee benefits.

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Employment Cost Index (NAICS)





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Data extracted on: April 25, 2008 (10:40:13 AM)

Producer Price Index-Commodities

Series Id: WPU0543													
Not Seasonally Adjusted													
Group: Fuels and related products and power													
Item: Industrial electric power													
Base Date: 8200													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1998	127.4	127.2	126.7	126.4	129.2	133.8	134.8	135.2	135.2	130.4	127.6	126.6	130.0
1999	126.1	125.5	125.5	125.2	127.4	131.6	133.9	133.9	134.1	129.5	127.5	126.5	128.9
2000	126.8	126.7	126.7	126.8	128.6	133.6	136.2	137.4	137.8	134.1	130.9	132.7	131.5
2001	136.4	136.4	136.5	135.1	136.2	148.4	149.5	148.9	148.2	143.8	137.3	136.9	141.1
2002	136.3	135.4	135.7	135.4	137.9	143.6	144.9	145.0	145.8	140.0	139.5	139.6	139.9
2003	140.3	140.6	143.3	144.3	145.1	148.3	151.6	151.3	152.0	147.4	142.7	142.9	145.8
2004	143.1	143.1	143.1	143.1	144.2	152.4	152.2	154.0	154.0	145.8	144.9	146.2	147.2
2005	148.9	148.0	148.1	148.7	151.1	159.7	162.1	162.5	162.8	159.5	161.1	161.4	156.2
2006	167.0	168.6	167.4	169.6	170.8	181.2	181.9	180.2	181.0	171.2	167.2	167.8	172.8
2007	171.9	175.7	172.1	173.1	179.2	186.7	187.0	187.6	188.4	182.7	180.3	179.9 (P)	180.5 (P)
2008	181.8 (P)	180.1 (P)	183.9 (P)										

P : Preliminary. All indexes are subject to revision four months after original publication.

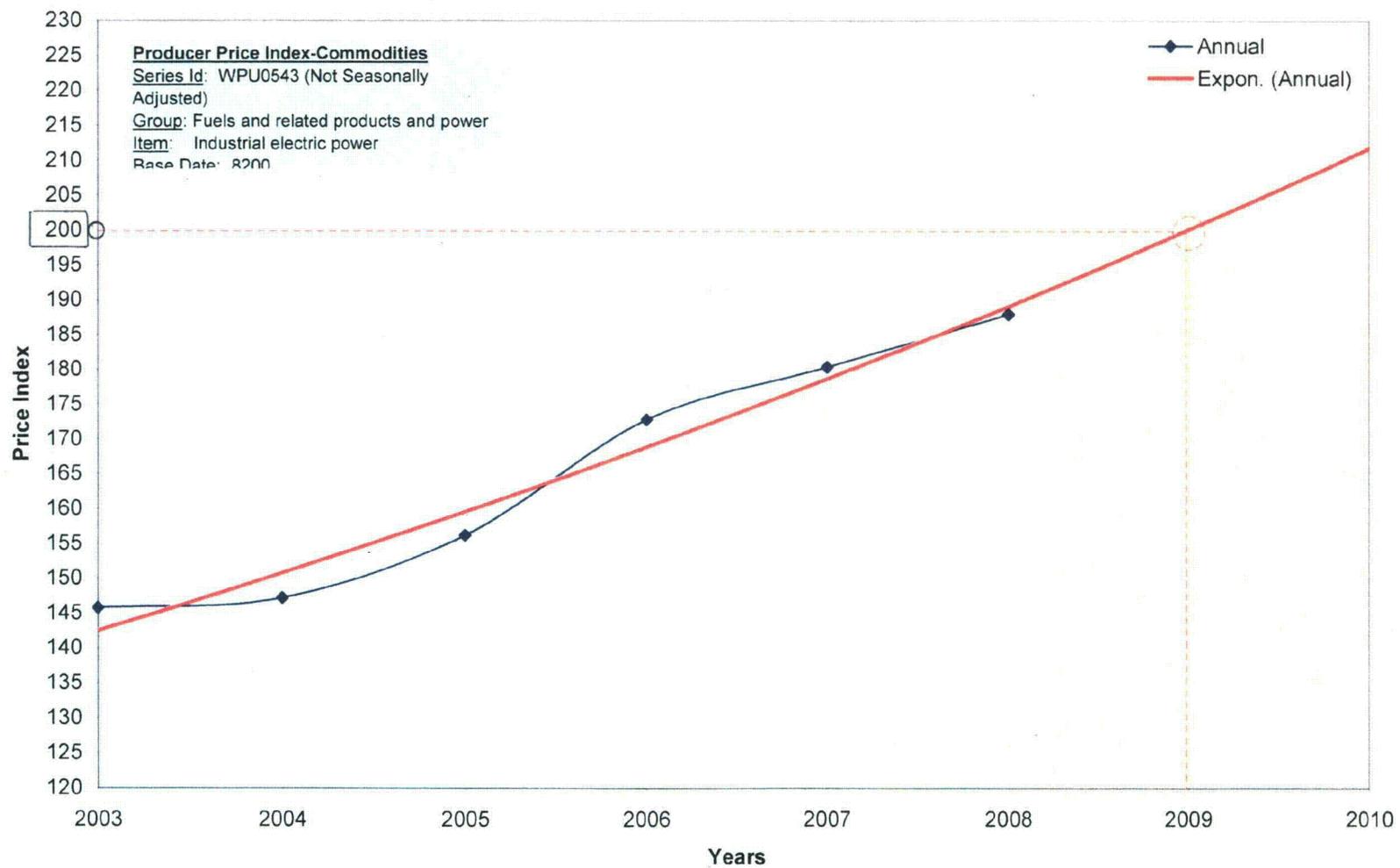
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Annual Price Index - Industrial electric Power





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include graphs **NEW!**

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Data extracted on: April 25, 2008 (10:37:17 AM)

Producer Price Index-Commodities

Series Id: WPU057303													
Not Seasonally Adjusted													
Group: Fuels and related products and power													
Item: #2 diesel fuel													
Base Date: 8200													
Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
1998	53.9	51.3	47.6	50.0	50.0	45.8	44.7	44.4	48.1	47.3	46.1	39.0	47.4
1999	40.2	38.1	43.2	53.1	53.0	53.5	59.8	65.6	68.8	67.5	71.9	72.7	57.3
2000	76.1	86.1	90.0	84.1	82.8	85.7	89.5	92.1	110.8	110.0	110.4	101.6	93.3
2001	96.7	92.4	83.5	86.4	93.1	90.2	81.6	82.0	91.6	75.9	71.3	56.2	83.4
2002	58.9	60.0	69.7	76.9	74.7	73.3	77.6	80.4	92.3	98.7	85.5	86.8	77.9
2003	97.6	123.8	129.4	102.3	87.9	89.8	92.7	96.6	91.1	101.1	95.9	98.1	100.5
2004	109.3	103.7	109.7	119.9	121.0	114.2	123.0	135.1	140.9	166.6	159.7	135.3	128.2
2005	141.1	149.5	173.3	175.4	170.8	187.2	189.8	200.6	212.6	264.1	206.2	198.5	189.1
2006	197.1	196.2	206.5	230.4	239.6	246.9	237.5	250.2	201.3	197.5	197.2	203.0	216.9
2007	180.9	193.5	220.2	238.0	226.5	227.6	243.5	231.2	246.2	249.6	296.7	271.9 (P)	235.5 (P)
2008	280.5 (P)	286.7 (P)	355.4 (P)										

P : Preliminary. All indexes are subject to revision four months after original publication.

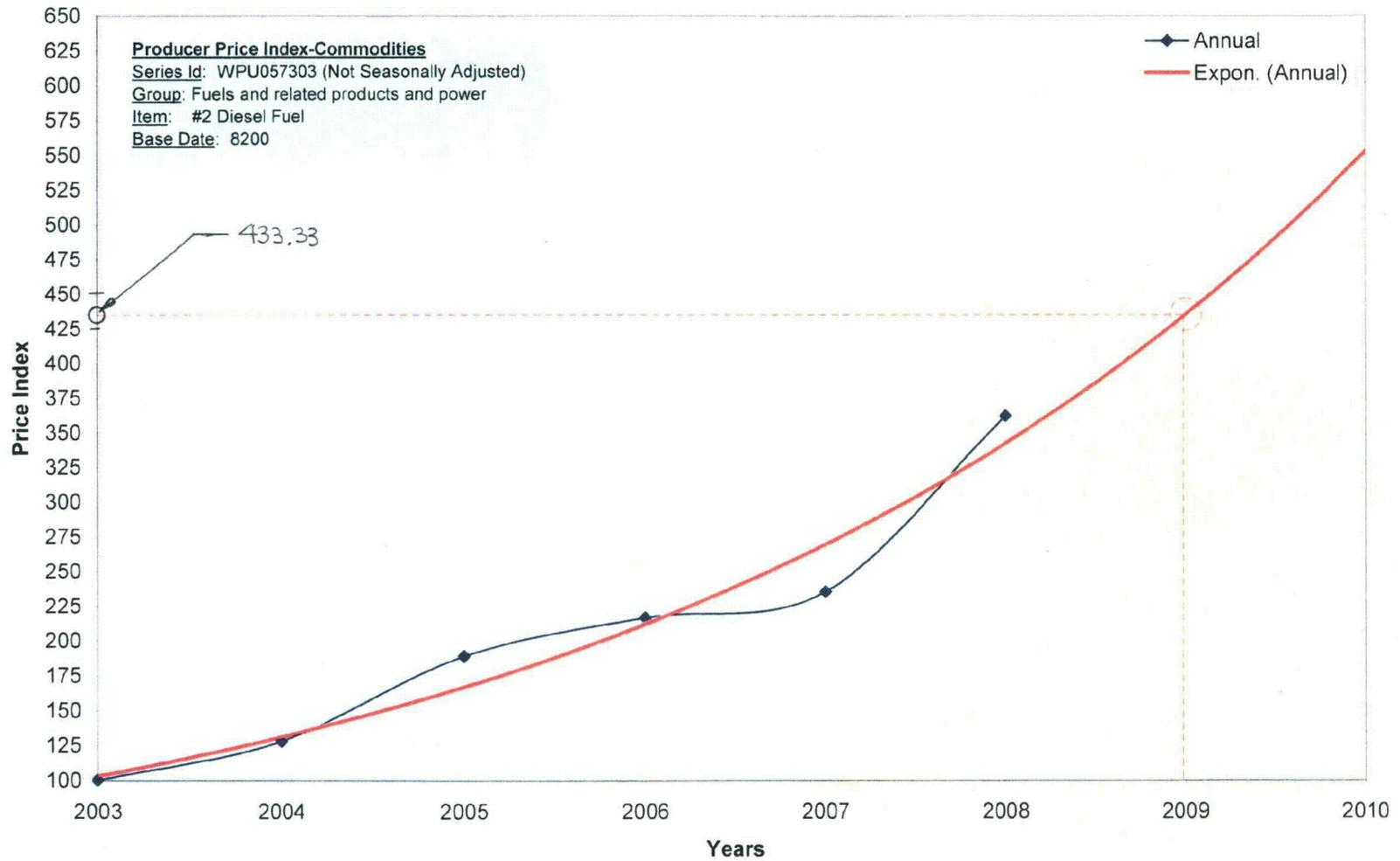
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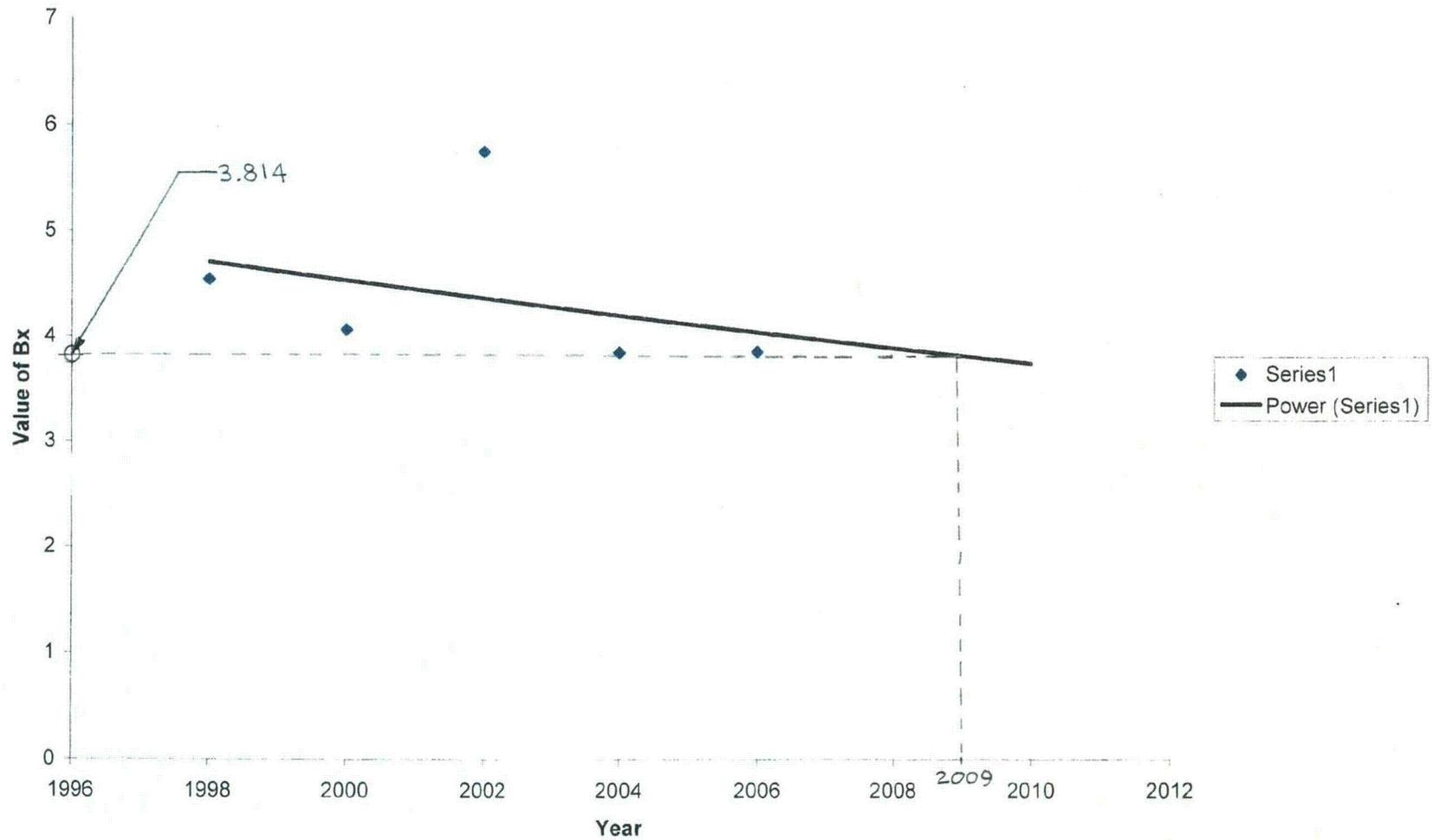
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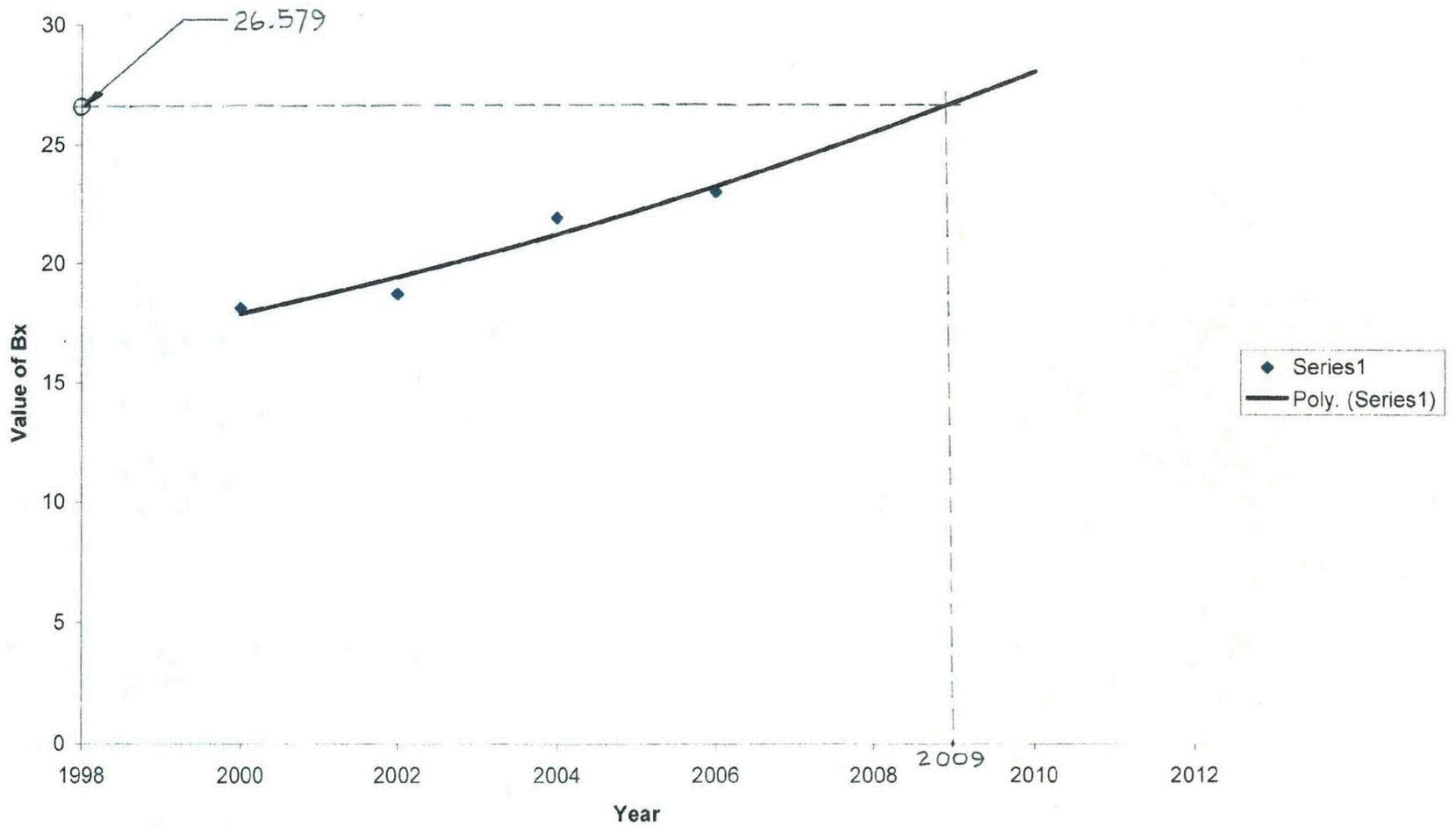
Annual Price Index - #2 Diesel Fuel



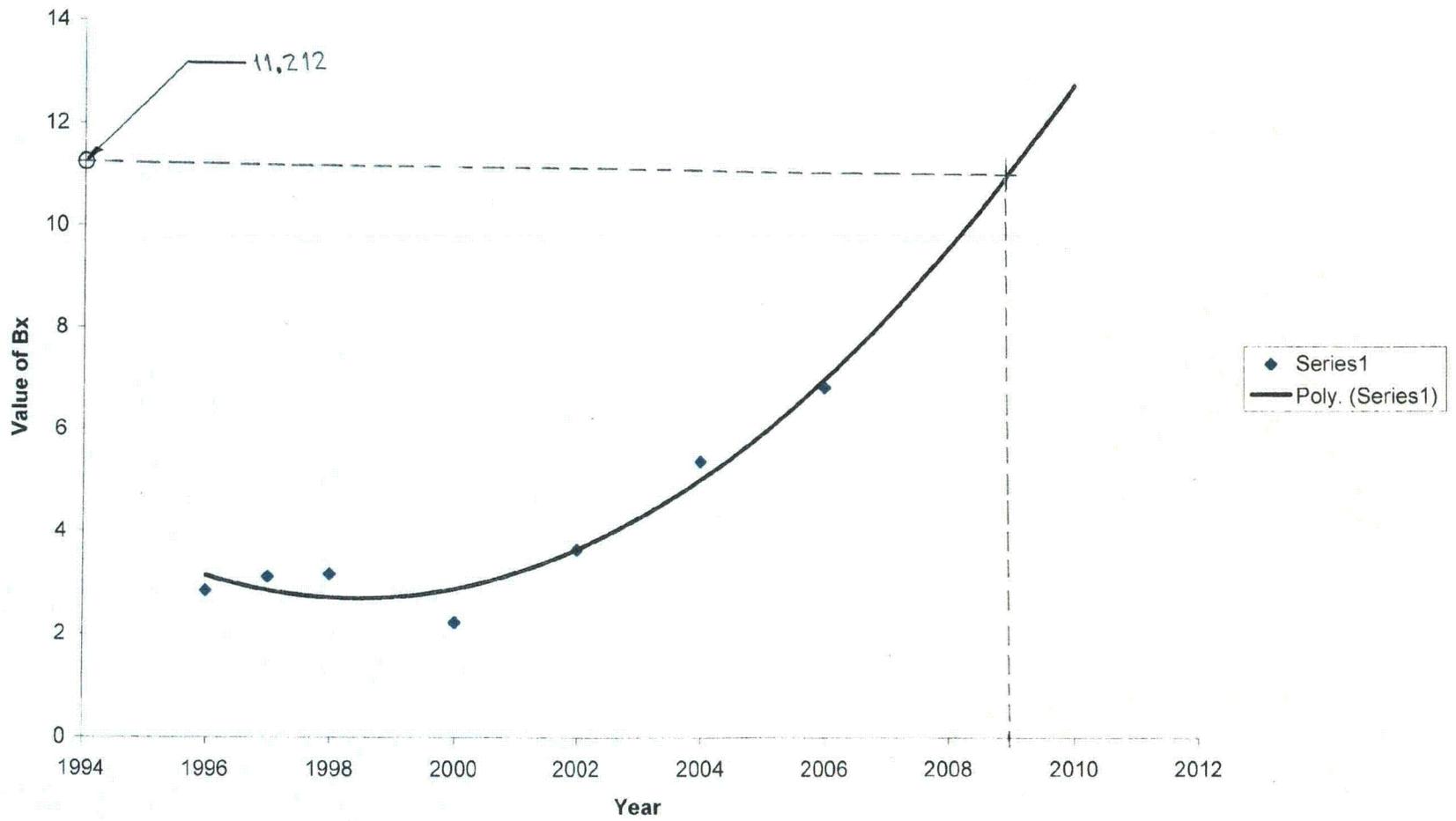
LLW Burial/ Disposition Cost Adjustment Index Values for Washington Site (U.S.Ecology),
DIRECT DISPOSAL-PWR (WITH VENDORS), Ref.: USNRC NUREG-1307, Rev. 12, Table: 2.1



LLW Burial/ Disposition Cost Adjustment Index Values (Bx) for South Carolina Site (Barnwell),
DIRECT DISPOSAL - PWR (Non - Atlantic Compact), Ref.: USNRC NUREG - 1307, Rev. 12,
Table: 2.1



LLW Burial/ Disposition Cost Adjustment Index Values (Bx) for Washington Site (U.S. Ecology),DIRECT DISPOSAL-PWR (Enviro Care OF uTAH), Ref.:USNRC NUREG-1307, Rev. 12, Table: 2.1



Direct Decommissioning Cost for the year 2009

September 22, 2008

Calculations of the NBSR Direct Decommissioning Cost for the year 2009

Prepared by: Mahesh Suthar

The following steps must be followed in calculating the direct decommissioning cost for the NBSR:

- The direct cost must be escalated from the base cost in 2003 dollars. The total direct cost for 2003 was shown to be \$25,900,000. (Ref.: NBSR 14, Chapter 17, table 17.2).
- The direct cost was broken down into five (5) categories (A through E) as shown in the attachment and in table 17.2 are as follows:

- A = Cost of Licensed Operators, Engineering and Management
- B = Cost of Health Physics efforts
- C = Cost of Security
- D = Cost of Utilities and
- E = Cost of spent fuel shipment

- The first three (3) items (A through C) are considered labor costs, therefore the same escalation factor (L_{2009}) = 1.2056, as used in the indirect cost, must be used.
- The last two (2) items (E and D) are considered energy and transportation costs, therefore the same escalation factor (E_{2009}) = 2.6065 as used in the indirect cost, must be used.
- It has also been assumed that labor is 90% of the total direct cost and energy and transportation is 10% of the total direct cost. Therefore, the calculation of the escalated direct cost was as follows:

$$\text{Estimated Direct Cost} = \{(L_{2009})(A+B+C) + (E_{2009})(D+E)\} \dots\dots\dots(i)$$

- Categories A, B, C, D and E are summed over the five (5) year decommissioning period as per NBSR 14, Chapter 17, table 17.2 are,

$$\begin{aligned} A &= 6,000,000+6,000,000+4,000,000+2,000,000+1,000,000 \\ &= \$ 19,000,000.00 \\ B &= 850,000+700,000+500,000+250,000+250,000 \\ &= \$ 2,550,000.00 \\ C &= 500,000+500,000+500,000+300,000 = \$ 1,800,000.00 \\ D &= 150,000+ 150,000+ 150,000+100,000 = \$ 550,000.00 \\ E &= 1,000,000+1,000,000 =\$ 2,000,000.00 \end{aligned}$$

Direct Decommissioning Cost for the year 2009

Therefore, using the equation (i) above, the estimated direct decommissioning cost for the year 2009 will be

$$\begin{aligned} &= \{1.2056 \times 23,350,000 + 2.6065 \times 2,550,000\} \\ &= \$ 34,797,335.00 \end{aligned}$$

The total difference between the year 2003 and year 2009 costs is then
 $= \$ 34,797,335.00 - \$ 25,900,000.00 = \$ 8,897,335.00$

The reactor is assumed to have a fifty-six (56) year life and we will be in the forty first (41st) year of its life in the year 2009. Therefore, the liability estimate would be understated by (41/56) (8,897,335), i.e. **\$ 6,514,120.27**

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Attachment D

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NIST Letter of Intent

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UNITED STATES DEPARTMENT OF COMMERCE
National Institute of Standards and Technology
Gaithersburg, Maryland 20899

OFFICE OF THE DIRECTOR

COPY

**U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555**

**Subject: Letter of Intent
Docket No. 50-184**

STATEMENT OF INTENT

As Deputy Director of the National Institute of Standards and Technology (NIST), a Federal Government organization, I exercise express authority and responsibility to request as necessary from the U.S. Congress through the Department of Commerce and the Office of Management and Budget, external and NIST direct cost funds for decommissioning activities associated with operations authorized by U.S. Nuclear Regulatory Commission License No. TR-5. This authority is established by 31 U.S.C. sections, 1105 and 1108, Department of Commerce Administrative Order 203-1, and NIST Administrative Manual Subchapter 8.03. Within this authority, I intend to request that funds be made available when necessary to decommission the NIST Center for Neutron Research Reactor under the TR-5 License located on the NIST campus at 100 Bureau Drive, Gaithersburg, Maryland. I would request and seek to obtain these funds as sufficiently in advance of decommissioning as possible to prevent delay of required activities. A copy of Department of Commerce Organizational Order 30-2B is enclosed as evidence that I am authorized to represent the National Institute of Standards and Technology in this transaction.

Sincerely,

Patrick Gallagher
Deputy Director

I certify under penalty of perjury that the following is true and correct.

Executed on: 10/10/08

by:

cc: William B. Kennedy
U.S. Nuclear Regulatory Commission
MS 012-G15
Washington, D.C. 20555

US Department of Commerce



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NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY

Number: DOO 30-2B

Effective Date: 2004-09-15

SECTION 1. PURPOSE.

.01 This Order prescribes the organization and assignment of functions within the National Institute of Standards and Technology (NIST). The scope of authority and functions are in Department Organization Order 30-2A.

.02 This revision establishes the position and functions of the Chief of Staff as a new organizational entity reporting to the NIST Director; abolishes the Director of Administration and Chief Financial Officer and transfers the functions, staff, and resources to the newly established positions of Chief Financial Officer, Chief Human Capital Officer and Chief Facilities Management Officer. In addition the reporting relationship of the Chief Information Officer (CIO) is changed from the NIST Director to the Deputy Director, the Deputy Director is designated as the Chief Operating Officer, and the functional descriptions of the Baldrige National Quality Program and the Director, Boulder Laboratories, are updated.

SECTION 2. ORGANIZATION.

The organization structure and line of authority of NIST, which is part of the Technology Administration, shall be as depicted in the attached organization chart (Exhibit 1).

SECTION 3. OFFICE OF THE DIRECTOR.

The Director shall determine the policies and priorities of NIST and direct the development and execution of its programs within the guidelines set by the Secretary of Commerce (Secretary).

The Deputy Director shall assist the Director in the direction of NIST and perform the functions of the Director in the latter's absence. The Deputy Director also oversees the vast international and academic affairs programs of NIST and serves as the principal representative with international treaty organizations and foreign governments and assists the Director in developing initiatives that will enhance NIST's effectiveness on a global basis in harmonizing standards, measurements, and databases, and implementing mutual recognition arrangements. The Deputy Director shall also serve as the Chief Operating Officer in managing and carrying out the administrative and technical infrastructure and support programs essential for daily operations throughout NIST, and shall establish and implement policies and plans, ensuring maximum responsiveness to the needs of the NIST technical programs. The Deputy Director shall oversee the development and delivery of cost effective and efficient administrative services and be supported by the Chief Financial Officer (CFO), the Chief Human Capital Officer (CHCO), the Chief Information Officer (CIO), and the Chief Facilities Management Officer (CFMO) and their subordinate units.

SECTION 4. FUNCTIONS REPORTING TO THE DIRECTOR.

.01 The Baldrige National Quality Program shall provide assistance to industry, education, and healthcare, and other public benefit organizations in the development of technology and procedures needed to improve U.S. quality and competitiveness and is responsible for managing the assigned responsibility in the Technology Competitiveness Act section of the Omnibus Trade and Competitiveness Act of 1988 (Public Law (P.L.) 100-418) and its amendments; manage the Malcolm Baldrige National Quality Award Program as stated in P.L. 100-107, in cooperation with senior U.S. business, education, healthcare, and quality leaders; perform research and outreach activities to assist private sector quality efforts, and serve as a mechanism by which U.S. companies, universities, and other organizations can work together to share and develop performance excellence best practices; coordinate quality-related developments and requirements with the NIST laboratories; serve as the NIST representative to national and international quality organizations; and serve as the NIST quality liaison to business, education, healthcare, government entities at the federal, state, and local level, other public benefit organizations, and to other targeted groups as identified and/or required by Congress or the Administration.

.02 The Chief of Staff shall support the Director in administering the policies, programs, and operations of NIST through assistance in increasing external awareness, appreciation of, support for, and use of NIST's research and services. The Chief of Staff will facilitate top-level decision-making and improved internal communication and provide coordination of action required of NIST as a result of executive policy decisions and actions and will serve as the Director's representative with the Technology Administration, Department, and other Federal agencies with broad authority to commit NIST to specific courses of action. The Chief of Staff shall have managerial responsibility for the congressional and legislative affairs program, strategic planning, program and policy analysis, strategic partnering, evaluation services, and the public and business affairs programs and will have oversight

responsibility for legal services and staff assigned to NIST through agreement with the Department's Office of General Counsel.

.03 The Director, Boulder Laboratories, shall act as the delegate and representative of the NIST Director in providing leadership, policy guidance, technical and managerial oversight, and coordination of NIST-wide technical and administrative operations in support of the scientific goals and research objectives of the Boulder Laboratories. The Boulder Laboratories Director shall be responsible for centralized support, coordination, and representation at NIST for site-specific Boulder activities, special functions, and events; and will serve as the overall site manager for the Boulder campus and be responsible for maintaining liaison with other federal agencies in Boulder and its vicinity and for ensuring productive and cooperative relationships with the Boulder community.

SECTION 5. FUNCTIONS REPORTING TO THE DEPUTY DIRECTOR.

.01 The Chief Financial Officer (CFO) shall direct and manage the overall budget, financial, acquisition and grants management activities relating to the programs and operations of NIST as well as client bureaus serviced by NIST. This includes the development of financial management policies and procedures; and development and maintenance of an integrated accounting and financial management system including financial reporting and financial internal controls which comply with all applicable Department of Commerce (DOC), Office of Management and Budget (OMB), Department of Treasury, and Federal Accounting Standards Advisory Board regulations, policies, and requirements. The CFO will ensure that financial information is reported timely, accurately, thoroughly and consistent with established requirements and formats; oversee budget formation, presentation, justification and execution; direct the preparation of annual financial plans; serve as the action official responsible on all internal and external audits investigations, reviews, and examinations related to financial management; coordinate financial report requirements as mandated in the CFO Act of 1990 (P.L. 101-576); promote programs to deter fraud, waste, and abuse of government resources; oversee implementation of Section IV of the Federal Managers Financial Integrity Act; and serve as liaison to the Technology Administration, DOC, and OMB on all financial matters and the development and deployment of an integrated financial management system. The CFO oversees the full range of acquisition and financial assistance programs, including contracts, grants, cooperative agreements, and other fellowship programs or activities in accordance with DOC policies and Federal procurement regulations.

.02 The Chief Human Capital Officer (CHCO) shall be responsible for planning, directing, and implementing people-related programs at NIST. The CHCO shall establish policies and procedures to govern the development, management, administration, and coordination of programs involving human resources including personnel management, leadership and employee development, management analysis, organizational design and development, civil rights and diversity, occupational health, and safety in support of the NIST mission.

.03 The Chief Information Officer (CIO) shall be responsible for planning, directing, and implementing the utilization of information technology (IT) resources, including capital planning and investment analyses, the IT operating plan and budget, as well as IT acquisition strategy and performance measures. The CIO will also be responsible for ensuring and providing appropriate supporting infrastructure, IT security, applied research, and assistance to NIST staff, collaborators, and clients in the conduct of NIST's scientific, engineering and administrative programs and in the dissemination of information. The CIO will have line authority and responsibility for centralized IT functions including telecommunications, networking, Web services, integrated information systems, knowledge systems, and other IT infrastructure support services. The CIO advises the NIST Director and Deputy Director on all aspects of IT management to ensure state-of-the-art computing and networking facilities that integrate and support an enterprise-wide heterogeneous information technology environment for NIST.

.04 The Chief Facilities Management Officer (CFMO) shall be responsible for managing and operating facilities and providing cost-effective and efficient administrative services and infrastructure programs essential for NIST's operations at all sites, ensuring maximum responsiveness to the needs of the NIST technical programs. Facility and administrative activities and services include space management, real property management, facilities planning, engineering design, building construction and renovation, building systems operation and maintenance, mail distribution, reproduction services, environmental services, transportation, conference services, visual communications, fire protection, security services, and personal property management.

SECTION 6. TECHNOLOGY SERVICES.

The Director of Technology Services shall provide U.S. industry and trade, government and the public, with measurements, standards, and information services which increase competitiveness and facilitate trade by promoting innovation, improving quality, reducing cost, promoting the use and adoption of U.S. standards, measurement practices and technology by important trading partners, and overcoming barriers to trade, which include: cooperating with other departments and agencies of the Federal Government and state and local governments in establishing uniform legal metrology practices, standards, codes, and specifications; developing, producing, and distributing Standard Reference Materials; providing Standard Reference Data; providing calibration and laboratory accreditation services; coordinating metric usage to the extent practical in Federal Government procurement, grants, and business-related activities; managing the Small Business Innovation Research Program (SBIR); providing information services in support of NIST; and collaborating with NIST's Laboratories in carrying out technology services responsibilities.

SECTION 7. ADVANCED TECHNOLOGY PROGRAM.

The Advanced Technology Program shall stimulate U.S. economic growth by developing high-risk and enabling technologies through programs proposed and cost-shared by industry; plan focused programs in economically important technology application areas; fund projects selected through focused program and general competitions; promote the formation of and aid United States joint research and development ventures through provisions of organizational and technical advice and through direct participation in joint ventures; administer an outreach program that cooperates with state and local government economic development authorities to evaluate the technology requirements of businesses and make businesses aware of Program opportunities; and carry out cooperative research activities with the private sector, federal agencies, and state agencies as may be permitted by law or as assigned to the Program by the Secretary.

SECTION 8. MANUFACTURING EXTENSION PARTNERSHIP PROGRAM.

The Manufacturing Extension Partnership Program shall develop and maintain, as a joint venture with state and local governments, a national system which provides technical assistance to manufacturers in adopting appropriate advanced technology and best manufacturing practices to strengthen the global competitiveness of smaller U.S. manufacturers; assist state governments in planning for the development of state-wide industrial extension services which deliver technical and business assistance to smaller manufacturers in coordination with other existing services available in public, private, and academic sectors; provide joint funding with state and local governments for the creation and maintenance of extension services which focus on and respond to the specific needs of smaller firms; develop and manage programs which respond to the specific needs of state- and local-based extension services and supports their integration as a national delivery system; create and maintain partnership across the Federal Government and within industry to develop and integrate new and existing resources which are complementary to the national delivery system and which allow these entities to utilize the national delivery system as a means of access to smaller manufacturing firms in support of their mission objectives; and

develop strategies and execute programs which explore innovative, alternative approaches for improving small manufacturers' competitiveness and which capitalize on opportunities for the national system and its component service entities to realize greater revenues from private-sector investment in its services.

SECTION 9. ELECTRONICS AND ELECTRICAL ENGINEERING LABORATORY.

The Electronics and Electrical Engineering Laboratory shall maintain, develop, and disseminate the national physical standards for electricity; provide a focus for research, development, and applications in the field of electrical, electronic, quantum electronic, and electromagnetic materials and engineering; maintain and develop competence in measurements and analytic methods, in fabrication processes, in performance evaluation, and in practical applications appropriate to a wide range of materials, devices, instruments, and systems; identify market and technological barriers to the effective application of electrical, electronic, quantum electronic, and electromagnetic technologies for the achievement of national goals; conduct responsive basic research to yield the requisite fundamental physical constants, practical data, measurement methods, theory, standards, technology, and technical services; and provide national reference standards and engineering measurement traceability and deliver the results for the benefit of the government, industry, the scientific community, and the consumer, either directly or through effective intermediaries.

SECTION 10. MANUFACTURING ENGINEERING LABORATORY.

The Manufacturing Engineering Laboratory shall provide competence and develop technical data, findings, and standards in production engineering, mechanical metrology, and automation and control technology; provide instrument design, fabrication, modification, and repair; and provide industrial and mechanical engineering in support of a program to develop standards, interfaces, recommended practices, and associated technology to be made available to the manufacturing industries.

SECTION 11. CHEMICAL SCIENCE AND TECHNOLOGY LABORATORY.

The Chemical Science and Technology Laboratory shall provide the national system of chemical measurement; coordinate the system with measurement systems of other nations and furnish essential services leading to accurate and uniform chemical measurement throughout the Nation's scientific community, industry, and commerce; provide advisory and research services to other government agencies; conduct basic and applied research in analytical chemistry, biotechnology, chemical engineering, and physical chemistry; develop and certify Standard Reference Materials; produce and evaluate Standard Reference Data; provide calibration services; and conduct interdisciplinary research efforts with other NIST laboratories in the areas of analytical chemistry, biotechnology, chemical engineering, and physical chemistry; conduct fundamental investigation of the phenomena on which measurement of the composition and behavior of chemical and biochemical systems is based; provide benchmark experimental data, new theory and models to explain the behavior and predict the properties of chemicals in chemical and biochemical processes and systems; acquire and disseminate thermophysical, thermodynamic, kinetic, and thermal data; provide calibration services for temperature, pressure and vacuum, flow, volume, liquid density, and humidity; develop new laboratory and process measurement techniques, including in situ real-time process measurement methods; develop and improve measurement capability and quantitative understanding of basic physical processes that underlie measurement science, including methods for analytical chemistry, biological chemistry, chemical kinetics, thermodynamics, and surface science, and thereby improve the comparability among laboratories throughout the United States, measurement compatibility with other nations, and measurement reliability in U.S. industry and commerce; and use the techniques to assist in the solution of problems of national impact, e.g., in improving the accuracy of clinical analytical chemistry, air and water pollution analysis, and chemical engineering metrology, and in providing advisory services to government agencies, scientific organizations, and industry.

SECTION 12. PHYSICS LABORATORY.

The Physics Laboratory shall conduct long-term research in measurement science, develop new physical standards, measurement methods and reference data, and promulgate these standards, methods and data by providing measurement services, conducting workshops, publishing research results and collaborating with industry, universities, and other government agencies; establish spectroscopic methods and standards for infra-red, visible, ultra-violet, x-ray and gamma-ray radiation; investigate the structure and dynamics of atoms and molecules, singly and in aggregate; develop and disseminate national standards for time and frequency and for the measurement of optical and ionizing radiation by means of calibrations, measurement quality assurance, and standard reference materials; generate, evaluate, and compile atomic, molecular, optical, and ionizing radiation data in response to national needs; develop and operate major radiation sources as user facilities and maintain appropriate collaborations with other laboratories in NIST, the Nation, and throughout the world; and support the research community and industry in such areas as communication, defense, energy, environment, space, health, lighting, microelectronics, radiation, and transportation.

SECTION 13. MATERIALS SCIENCE AND ENGINEERING LABORATORY.

The Materials Science and Engineering Laboratory shall develop and maintain the scientific competences and experimental facilities necessary to provide the Nation with a central basis for uniform physical measurements, measurement methodology, and measurement services fundamental to the processing, characterization, properties and performance of materials, and to other essential areas in materials science; provide government, industry, universities, and consumers with standards, measurement methods, data, and quantitative understanding concerning metals, polymers, ceramics, composites, optical materials, and nonequilibrium materials; characterize the structure of materials, chemical reactions, and physical properties which lead to the safest, most efficient uses of materials, improve materials technologies, provide the bases for advanced material technologies in basic and high-technology industries; obtain accurate experimental data on behavior and properties of materials under service conditions to assure effective use of raw and manufactured materials, provide technical information such as reference data, materials measurement methods, and standards to processors, designers, and users for selection of cost-effective combinations of materials, processes, designs, and service conditions; use the unique NIST reactor and cold neutron research facilities to develop neutron measurement methodology, develop sophisticated structure characterization techniques, reference data, and standards; participate in collaborative efforts with other NIST organizational units in the dissemination of generic technical information from the divisions to private and public sector scientific organizations through special cooperative institutional arrangements and through conventional distribution mechanisms.

SECTION 14. BUILDING AND FIRE RESEARCH LABORATORY.

The Building and Fire Research Laboratory shall provide the national laboratory concerned with increasing the usefulness, safety and economy of buildings, improving the productivity and international competitiveness of the construction industry, and reducing the human and economic costs of unwanted fires; perform and support laboratory, field, and analytical research on the performance of construction materials, components, systems and practices, and the fundamental processes underlying initiation, propagation, and suppression of fires; produce technologies to predict, measure, and

test the performance of construction and fire prevention and control materials, components, systems, and practices, and to assist the construction and fire safety communities in achieving the benefits of advanced computation and automation; provide research results which are widely used and adopted by governmental and private sector organizations with standards and codes responsibilities, but does not promulgate building or fire safety standards or regulations; and conduct fire research mandated by the Federal Fire Prevention and Control Act of 1974, research for the improvement of seismic design and construction practices as assigned by the Earthquake Hazards Reduction Act of 1977, as amended, and structural failure investigations mandated by the NIST Authorizing Act for FY 1986.

SECTION 15. INFORMATION TECHNOLOGY LABORATORY.

The Information Technology Laboratory shall develop and demonstrate evaluation techniques, testing methods, and standards to enable U.S. industry to develop usable, reliable, interoperable products for information technology; and provide leadership and collaborative research to NIST programs in the areas of mathematics, statistics, and information technology use and services to enable NIST to maintain its status as a world-class institution.

SECTION 16. EFFECT ON OTHER ORDERS.

This Order supersedes Department Organization Order 30-2B, dated March 12, 2003.

Director, National Institute of Standards and Technology

Under Secretary for Technology

Approved:

Chief Financial Officer and Assistant
Secretary for Administration

Office of Management and Organization, US Department of Commerce,
1401 Constitution Avenue NW, Washington, DC 20230
Page Last Updated: December 20, 2005

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