

OFFICE OF RESEARCH AND DEVELOPMENT

REGION I

A N N U A L R E P O R T

FISCAL YEAR 1976

(June, 1975 - September, 1976)

Prepared by

U.S. Environmental Protection Agency
Office of Research and Development
John F. Kennedy Federal Building
Boston, Massachusetts 02203

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JANUARY, 1977

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FOREWORD

This is the third Annual Report from the Office of Research and Development, in Region I. The purpose of the report is to review and highlight events that are considered to be of interest and to present information on grants and contracts awarded during the past Fiscal Year.

If more information is desired about any grant or contract, as well as any items mentioned in the report, please feel free to call our office at (617)-223-3477.

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783-3549

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838-4543

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(Non-FTS) 8-904-932-5311

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426-2407

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Athens, Georgia
289-3134

ROBERT S. KERR
ENVIRONMENTAL RESEARCH LABORATORY
Director: William C. Gage
Ada, Oklahoma
743-2224

September 1976

INTRODUCTION

During the past year, many noteworthy events took place in the Environmental Protection Agency's Office of Research and Development.

The Region I - Office of Research and Development has had a number of staff changes. Dr. Helen M. McCammon, former Director, has transferred on a temporary two-year detail to the Energy Research and Development Administration, Germantown, Maryland. Richard R. Keppler now serves as Acting Director, formerly Representative for Energy Related Research on the OR&D staff. John B. Feldman, P.E. has recently joined the staff, from the Surveillance and Analysis Division, EPA - Region I. Marjorie A. Drucker, Representative for Air Pollution and Health Effects Research, has left to relocate to another area and agency.

an OR&D PUBLICATIONS SUMMARY is published periodically, providing information on recently published OR&D reports and how to obtain them. Copies of the SUMMARY may be obtained from our office upon request. A complete set of OR&D reports is available for reference in our office and in the EPA - Region I Library.

A report which may be helpful as an initial introduction to the grants and contracts system is entitled OR&D PROGRAM GUIDE, listing extramural projects to be funded in the fiscal year. (This replaces

EXPRO.) The PROGRAM GUIDE outlines procedures for application for grant and contract support and also lists specific program areas which OR&D is funding. Copies of the PROGRAM GUIDE may be obtained from our office of Headquarters. Additionally, we encourage the research community to get in touch with the Regional Office about specific details on current OR&D procedures and objectives. This information can often save time and effort for the applicant by highlighting recent changes that may have occurred in the OR&D program.

Also available is the HANDBOOK FOR PREPARING OFFICE OF RESEARCH AND DEVELOPMENT REPORTS, which contains specifications required by OR&D to ensure that the results and conclusions of its various Research, Development, and Demonstration Programs are documented in a uniform, cost-effective, and quality manner. It is specifically intended to assist those individuals responsible for preparing OR&D scientific and technical reports. This document supersedes all previous scientific and technical report preparation specifications that have been issued by EPA - OR&D or its predecessor organizations. All technical and scientific reports prepared by or for OR&D after the issuance of this document shall conform with the specifications contained herein.

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SUMMARY
RESEARCH AND DEMONSTRATION
GRANT AND CONTRACT AWARDS
REGION I
FISCAL YEAR 1976

<u>STATE</u>	<u>GRANTS</u>	<u>CONTRACTS</u>	<u>TOTAL AWARDS</u>
Connecticut	\$ 441,045	\$ 2,893,813	\$ 3,334,858
Maine	220,747	733,381	954,128
Massachusetts	2,772,145	7,462,633	10,234,778
New Hampshire	180,689	20,084	200,773
Rhode Island	1,450,092	23,954	1,474,046
Vermont	<u>142,894</u>	<u>41,438</u>	<u>184,332</u>
TOTAL	<u>\$ 5,207,612</u>	<u>\$ 11,175,303</u>	<u>\$16,382,915</u>

Dollar Amounts do not include Technical Assistance
from OR&D

Note: It should be noted that the Dollar Amounts cover an extended Fiscal Year and, therefore, cannot be compared with previous annual expenditures.

REGIONAL COMPARISON

OFFICE OF RESEARCH AND DEVELOPMENT AWARDS

FISCAL YEAR 1976 (6/75 - 9/76)

<u>REGION</u>	<u>GRANTS</u>	<u>CONTRACTS</u>	<u>*TOTAL</u>	<u>**TOTAL - PER CAPITA</u>
I	\$ 6,373,965	\$ 21,399,721	\$ 27,773,686	2.344
II	6,860,406	23,212,497	30,072,903	1.067
III	10,242,347	61,204,737	71,447,084	3.052
IV	10,977,916	27,219,967	38,197,883	1.199
V	25,328,615	27,929,802	53,258,417	1.209
VI	4,517,501	14,289,430	18,806,931	0.925
VII	2,776,156	6,833,558	9,609,714	0.855
VIII	6,909,857	6,020,905	12,930,762	2.318
IX	7,731,890	45,791,488	53,233,378	2.316
X	<u>2,795,187</u>	<u>4,646,276</u>	<u>7,441,495</u>	<u>1.142</u>
	<u>\$84,867,435</u>	<u>\$238,548,381</u>	<u>\$322,772,253</u>	<u>1.567</u>

* Includes Contract Services as well as Contract Awards

** Using most recent complete Census - dated 1970

Note: It will be noted from the above Comparison that Region I has been awarded 2.344 dollars per capita, and this is exceeded only by Region III at 3.052 dollars per capita. This ratio indicates the research activity in the Region.

G R A N T S

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>CONNECTICUT</u>			
University of Conn. Storrs, Conn.	"Development of A Selective Medium for <u>Candida Albicans</u> in Recreational Waters" (R802827)	6/1/74-9/30/77	\$ 10,545 (Increase)
Enfield, Town of Enfield, Conn.	"Leachate Treatment of Anaerobic Filter" (S803627)	4/15/75-4/14/78	200,000 (New)
Hafner Industries, Inc. New Haven, Conn.	"Pilot Plant Demonstration and Evaluation of PVC Wastes Reclaimed by Hafner Industries, Inc." (R804693)	11/1/76-10/31/77	85,000 (New)
Risdon Manufacturing Co. Waterbury, Conn.	"Nickel Recovery and Pollution Control by Electrodialysis" (R803742)	6/1/75-5/31/77	10,500 (Increase)
Seaboard Metal Finish- ing Co. West Haven, Conn.	"Dialysis Purification on Metal Finishing Rinse Water" (R804655)	9/25/76-9/24/77	25,000 (New)
SIAM Institute for Mathe- matics and Society (SIMS) New Canaan, Conn.	"SIMS Three Year Study: Statistics and Environmental Health" (R804932)	10/25/76-10/24/79	45,000 (New)
Yale University New Haven, Conn.	"Environmental Monitoring Using Molluscan Shell-growth & Life History Data" (R804909)	10/15/76-10/14/78	65,000 (New)
		TOTAL	<u>\$441,045</u>

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>TITLE</u>
<u>MAINE</u>			
Bangor - City of Dept. of Public Works Bangor, Maine	"Feasibility of Composting Raw Sewage Sludge by High Rate Suction Aeration Techniques" (S803828)	6/1/75-1/31/77	\$ 20,000 (Increase)
Maine Dept. of Envrnmtl. Protection Augusta, Maine	"Utilization of Juvenile Alewives to Control a Lake Water Quality Program" (S804272)		11,710 (New)
-7- Maine Dept. of Marine Resources Augusta, Maine	"Bioaccumulation of Trace Elements in Selected Marine Organisms" (R802656)	11/20/73-11/19/76	35,000 (Increase)
Maine Municipal Assoc. Augusta, Maine	"Septage Treatment/Management" (R804804)	9/15/76-3/14/78	100,000 (New)
University of Maine Orono, Maine	"Effect of Particulates on Ozone Dis- infection of Bacteria and Viruses in Water" (R804587)	9/15/76-9/14/78	54,037 (New)
		TOTAL	<u>\$220,747</u>

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS</u>			
Arthur D. Little, Inc. Cambridge, Mass.	"A New Process for Activated Carbon Regeneration and for Recovery of Hazardous Pesticide Wastes" (R804554)	6/7/76-6/6/77	\$149,464 (New)
Boston University Boston, Mass.	"Sublethal Effects of Oil on Behavior and Chemical Senses of Marine Animals" (R803833)	11/1/75-11/1/78	50,248 (New)
Boston - Metropolitan District Commission Boston, Mass.	"Charles River Lower Basin Destratifica- tion Project" (S804812)	10/9/76-5/5/78	296,700 (New)
Braintree, Town of Braintree, Mass.	"Norton P. Potter Station Unit No. 2" (S803757)	1/5/76-1/4/80	500,000 (New)
Grace, W. R. & Co. Dewey & Almy Chemical Div. Boston, Mass.	"Treatment of Wastewaters from Adhesives and Sealants Manufactured by Ultrafiltra- tion" (S804350)	3/1/76-2/28/77	75,000 (New)
Harvard University School of Public Health Cambridge, Mass.	"Physiological Response to Atmospheric Pollutants" (R802030)	9/1/74-8/31/77	61,457 (Continuation)
Harvard University Cambridge, Mass.	"Research on Relationships Between Land Use Transportation, and Urban Air Quality" (R802988)	6/1/76-5/1/78	110,716 (Continuation)

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Harvard University School of Public Health Cambridge, Mass.	"Identification and Detection of Water- borne Viruses by Immunoenzymatic Methods" (R803360)	4/1/76-9/30/77	\$ 99,874 (Continuation)
Harvard University Div. of Engineering and Applied Physics Cambridge, Mass.	"Organic N-Chloro Compounds in Chlorina- tion of Water Supplies, Their Formation and Significance" (R803631)	4/1/75-9/30/77	52,945 (Continuation)
Harvard University President and Fellows Cambridge, Mass.	"High Velocity Fabric Filtration" (R804700)	9/15/76-9/14/76	61,031 (New)
Harvard University Div. of Engineering and Applied Physics Cambridge, Mass.	"Mechanism of Die-Off of Viruses in Sea Water" (R804832)	7/1/76-6/30/78	53,000 (New)
JBF Scientific Corp. Wilmington, Mass.	"Proposal to Simplify the Use and Improve the Structure of the Koh-Chang Model for Dispersion" (R804944)	10/1/76-9/30/77	49,838 (New)
Marblehead, Town of Board of Health Marblehead, Mass.	"Demonstration of Multi-Material Source Separation" (S803758)	6/15/75-6/14/78	3,636 (Increase)

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Marlborough, City of Marlborough, Mass.	"Ozone Demonstration Study" (S804946)	10/1/76-3/31/78	\$103,129 (New)
Mass. Dept. of Environ- mental Quality Boston, Mass.	"Lake Restoration Techniques for Eutro- phication Control and Institutional Development" (S804727)	9/20/76-9/19/77	125,000 (New)
Mass. Institute of Tech- nology Civil Engineering Cambridge, Mass.	"Chemical Modeling of Metallic Waste Disposal" (R803738)	6/15/75-6/14/78	27,690 (Continuation)
Mass. Institute of Tech- nology Cambridge, Mass.	"Catalytic Desulfurization and Genitro- genation" (R804123)	8/1/75-7/31/78	46,700 (New)
Mass. Institute of Tech- nology Cambridge, Mass.	"No Emission from Fluidized Combustion" (R804978)	10/21/76-10/19/79	99,898 (New)
Mass., University of Amherst, Mass.	"Short Course on Application of Storm- water Management Models" (R803069)	6/3/76-8/31/77	8,631 (Increase)
Mass., University of Amherst, Mass.	"Low Wastewater Potato Starch/Protein Production Process" (R803712)	7/7/76-7/6/77	20,300 (Continuation)
New England Aquarium Boston, Mass.	"Development of a Bioassay for Assessing the Effect of Dredging" (R804967)	9/1/76-9/1/78	82,450 (New)

<u>GRANTS</u>			
<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
New England Medical Ctr. Boston, Mass.	"Relationship of Blood Lead Levels to Lead in Household Drinking Water" (R802794)	11/5/73-3/1/76	\$ 12,256 (Increase)
Northeastern University Boston, Mass.	"Characterization of Solids Behavior in, and Variability Testing of, Selected Con- trol Techniques for Combined Sewer Systems" (R804578)	7/1/76-6/30/77	168,164 (New)
Salem & Beverly Water Supply Board Beverly, Mass.	"The Affect of Turbidity on Bacterial Counts and Coliform Enumeration in Water Distribution Systems" (R804724)	7/1/76-6/30/78	27,640 (New)
Somerville, City of Dept. of Public Works Somerville, Mass.	"Demonstration of Multi-Material Source Separation in an Urban Area" (S803683)	6/15/75-6/14/78	4,370 (Increase)
Southeastern Mass. Univ. Dept. of Electrical Engin- eering North Dartmouth, Mass.	"The Development of an Interactive System to Study Sub-lethal Effects of Pollutants on the Behavior of Organisms" (R803244)	5/1/75-4/30/77	93,078 (Increase)
Wellesley, Town of Dept. of Public Works Wellesley, Mass.	"Integrated Iron and Nitrogen Control for Lake Management" (S804696)	9/20/76-1/19/79	308,740 (New)

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Woods Hole Oceanographic Institute Woods Hole, Mass.	"Biological Recovery Following and Oil Spill" (R801001)	10/15/71-4/30/76	\$ 9,922 (Increase)
Woods Hole Oceanographic Institute Woods Hole, Mass.	"Cape Cod Waste Water Renovation and Retrieval System (WHOI Proposal Serial #94)" (S802037)	6/11/74-12/31/76	72,010 (Increase)
Woods Hole Oceanographic Institute Woods Hole, Mass.	"Petroleum Contamination: Quantifica- tion and Passive Tagging in Organisms and Sediments" (R802724)		3,258 (Increase)
		TOTAL	<u>\$2,772,145</u>

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>NEW HAMPSHIRE</u>			
Lawrence, A. C. Leather Company Div. of Estech, Inc. Winchester, N.H.	"Demonstration of a Process to Meet Best Available Treatment Standards for Chrome Tannery Effluent" (S804504)	9/15/76-9/14/77	\$149,140 (New)
New Hampshire, Univ. of Durham, N.H.	"Virus Carriage Status in the Hard Shell Clam: The Precision, Sensitivity and Accuracy of Methods for its Detection" (R804882)	9/22/76-10/21/77	31,549 (New)
		TOTAL	<u>\$180,689</u>

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND</u>			
R.I. Solid Waste Mgmt. Corp. R.I. Statewide Plng. Program Providence, R.I.	"Energy Recovery Implementation Project" (S804069)	8/8/75-6/7/77	\$ 50,000 (New)
R.I., University of Dept. of Biophysics Kingston, R.I.	"Mammalian Cell Culture Assays of Toxic Substances" (R801379)	7/23/74-11/31/75	2,000 (Increase)
R.I., University of Graduate School of Oceanography Kingston, R.I.	"The Problem of Ocean Dumping - Stability and Resiliency in Experimental Ecosystems to Constant and Time-Varying Stresses" (R803143)	7/1/74-6/30/77	58,924 (Continuation)
R.I., University of Graduate School of Oceanography Kingston, R.I.	"Influence of Dredge Spoils and Sediment Pollution on Trace Metal Assimilation by Organisms" (R803243)	1/1/76-12/31/76	60,741 (Continuation)
R.I., University of Graduate School of Oceanography Kingston, R.I.	"Petroleum Hydrocarbons in Dredge Spoils" (R803415)	10/21/74-1/20/77	40,490 (Continuation)
R.I., University of Dept. of Chemistry Kingston, R.I.	"Preparation of Fluorescent Citrate and 'Suicide' Analogs" (R803728)	7/1/75-6/30/77	28,000 (Increase)
R.I., University of Dept. of Food & Chemistry Kingston, R.I.	"Nutritional Requirements of Marine Larval and Juvenile Fish" (R803818)	7/15/76-7/14/77	25,000 (Continuation)

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND (Cont.)</u>			
R.I., University of Graduate School of Oceanography Kingston, R.I.	"A Facility for the Experimental Analysis of Coastal Marine Ecosystems" (R803902)	6/22/75-6/30/77	\$975,955 (New)
R.I., University of Dept. of Microbiology Kingston, R.I.	"Development of a Method for Stabilizing Indicator Bacteria in Water Samples" (R803967)	12/22/75-12/21/77	14,500 (New)
R.I., University of Graduate School of Oceanography Kingston, R.I.	"A Standard Program for Environmental Impact Assessment: Phase I - Ichthyoplankton Sampling" (R804216)	12/15/75-6/14/77	64,982 (New)
R.I., University of Graduate School of Oceanography Kingston, R.I.	"Gaged Bacterial Culture as a Pollution Monitoring System" (R804217)	4/20/76-4/19/77	40,000 (New)
R.I., University of Graduate School of Oceanography Kingston, R.I.	"Diffusion Chamber Array for Aquatic Environmental Exposure" (R804886)	9/13/76-3/31/77	25,000 (New)
R.I., University of Microbiology, College of Arts and Sciences Kingston, R.I.	"Development of a Method for Stabilizing Indicator Bacteria in Water Samples" (R803967)	12/22/75-12/21/77	14,500 (Continuation)
R.I. Statewide Planning Program - Dept. of Admin. Providence, R.I.	"State of Rhode Island Residuals Recovery Implementation Grant" (S804809)	9/25/76-9/24/78	50,000 (New)
TOTAL			<u>\$1,450,092</u>

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>VERMONT</u>			
Vermont, University of State Agricultural College Detp. of Arts & Sciences Burlington, Vt.	"Feasibility Study for an Asbestos Aerosol Monitor" (R804562)	7/26/76-1/31/78	\$ 42,894 (New)
Vermont Yankee Nuclear Power Corp. Rutland, Vt.	"Vermont Yankee Horticulture Economic and Quality Control Study" (R804715)	10/1/76-9/30/77	100,000 (New)
		TOTAL	<u>\$142,894</u>

C O N T R A C T S

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT</u>			
Avco Corp. Lycoming Div. Stratford, Ct.	"Ambient Conditions on Aircraft Engine Emissions by Combustion" (68-03-2383)	3/19/76-1/18/77	\$202,359
Combustion Engineering, Inc. Windsor, Ct.	Mod. - Cost Overrun (68-02-1486)	4/20/76-12/31/76	77,493
Comsis Environmental Services Glastonbury, Ct.	"Open Space as an Air Resource Management Measure" (68-02-2350)	2/17/76-9/17/76	92,240
Conn., State of State Dept. of Health Hartford, Ct.	"Sampling and Analysis of Municipal Water Supplies Using Asbestos-Cem." (68-03-2444)	8/1/76-8/1/77	26,995
Debell & Richardson, Inc. Enfield, Ct.	Mod. - Exercise Option (68-02-2075)	3/15/76-7/28/76	137,770
Debell & Richardson, Inc. Enfield, Ct.	Mod. - Increment Funding (68-02-2062)	8/14/75-6/25/76	121,582
Industrial Gas Cleaning Inst. Stamford, Ct.	"Air Pollution Control Tech. and Costs - Selected Sources" (68-02-2532)	9/23/76-9/22/78	229,457
Sobotka and Co., Inc. Stamford, Ct.	"Economic Impact of EPA Regulations on Cost of Oil-Producing Industries and Petroleum Refinery Industry" (68-01-4132)	7/13/76-9/13/76	15,000

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT (Cont.)</u>			
Sobotka & Co., Inc. Stamford, Ct.	"Economic Analysis/Petroleum Ind." (68-01-4316)	9/29/76-8/29/77	\$ 24,554
The Research Corp. of New England Wethersfield, Ct.	"Comp. of Literature References, etc." (T.O. #12) (68-02-2069)	9/30/75-9/30/76	39,956
The Research Corp. of New England Wethersfield, Ct.	"Increase Level of Effort Stationary Source Air Assessment, Compliance Monitoring, and Enforcement Proceed- ings" (Mod. #7) (68-01-3173)	3/25/75-3/25/77	40,000
United Aircraft Corp. Hamilton Standard Div. Hartford, Ct.	"Machinery and Mechanical Products Manufacturing" (68-01-2914)	6/6/75-8/15/75	93,370
United Technologies Corp. United Tech. Res. Ctr. E. Hartford, Ct.	Mod. - Change Order (68-02-1873)	8/27/76-3/30/77	88,906
United Technologies Corp. Hamilton Standard Div. Hartford, Ct.	Mod. - Additional Work (68-02-2179)	9/10/76-9/10/77	212,000
United Technologies Corp. United Tech. Res. Ctr. E. Hartford, Ct.	"Inv. of NO _x Nitrate 7 Sulfate Produc- tion in Lab Flames" (68-02-2188)	9/27/76-9/27/78	90,000
United Technologies Corp. Hamilton Standard Div. Hartford, Ct.	"Point Source Water Pollution Control and Identification of Cont. and Treat- ment" (68-01-3280)	10/28/75-6/26/77	429,853

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT (Cont.)</u>			
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	Mod. - Addl. Scope of Work (T.O. #31) (68-02-1805)	5/10/76-5/10/77	\$ 7,759
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	Mod. - Cost Overrun (T.O. #12) (68-02-2069)	9/14/76-8/15/77	6,971
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	"Develop - Fugitive Emission Sampling Technique" (68-02-2133)	12/17/75-12/17/78	298,000
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	"Inst.-AODHS II - New Hampshire)" (T.O. #14) (68-02-2319)	12/16/75-2/14/77	17,834
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	"Installing AODHS II (Oklahoma)" (T.O. #16) (68-02-2344)	3/17/76-3/16/77	17,892
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	"Environmental Impact Statement/P&R General Reports Program 'Quick Look'" (T.O. #17) (68-02-2508)	7/27/76-7/26/77	17,375
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	"Stationary Source Air Enforcement Assessment" (68-01-3173)	12/4/75-3/25/77	183,764
Vast, Inc. Research Corp. of New England Wethersfield, Ct.	"Studies on Stationary Source Air Enforcement Proceedings" (68-01-4145)	9/30/76-9/30/77	148,972

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT (Cont.)</u>			
York Research Corp. Stamford, Ct.	Modifications - Cost Overrun Options (68-02-1401)	4/7/76-5/3/77	\$170,601
York Research Corp. Stamford, Ct.	"Studies on Stationary Source Air Enforcement Proceedings" (68-01-4138)	9/29/76-9/29/77	49,110
		<u>TOTAL</u>	<u>\$2,893,813</u>

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MAINE</u>			
Edward C. Jordan Co. Portland, Maine	"Point Source Water Pollution Control Monitoring (Sampling) Data Collection and Identification of Control Treatment Technologies" (68-01-3287)	3/15/76-6/27/77	\$733,381
		<u>TOTAL</u>	<u>\$733,381</u>

<u>CONTRACTOR</u>	<u>CONTRACTS</u> <u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS</u>			
Abcor Corp. Walden Research Div. Cambridge, Ma.	Mod. - Change Scope of Work (T.O. #5) (68-02-2035)	2/23/76-3/1/76	\$ 4,966
Abcor Corp. Walden Research Div. Wilmington, Ma.	Mod. - Cost Overrun (T.O. #8) (68-02-1377)	5/21/76-7/9/76	5,677
Abcor Corp. Walden Research Div. Cambridge, Ma.	"Main. of Needs Area Source Files" (T.O. #1) (68-02-2321)	6/11/76-1/20/77	32,900
Abcor Corp. Walden Research Div. Cambridge, Ma.	Mod. - Change Order (T.O. #9) (68-02-2330)	2/6/76-3/20/77	16,303
Abcor Corp. Walden Research Div. Cambridge, Ma.	"Installation - AODHS II - Connecticut" (T.O. #10) (68-02-2332)	2/6/76-1/5/77	11,860
Abcor Corp. Walden Research Div. Cambridge, Ma.	"Installation o AODHS II - Rhode Island" (T.O. #11) (68-02-2333)	1/28/76-12/27/76	13,820
Abcor Corp. Walden Research Div. Cambridge, Ma.	"Installation - Emission Inv. System - Indiana" (T.O. #12) (68-02-2337)	1/27/76-3/26/77	14,725

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Abcor Corp. Walden Research Div. Wilmington, Ma.	Mod. to Increase No. of Pollutant Parameters to be Analyzed (68-03-2341)	9/2/76-3/31/77	\$ 45,844
Abcor Corp. Walden Research Div. Cambridge, Ma.	Rev. and Apply Single Source Modeling Proc. (T.O. #13) (68-02-2357)	6/2/76-2/26/77	209,899
Abcor Corp. Walden Research Div. Wilmington, Ma.	"Municipal Sludge Conditioning by Acid/Heat Treatment" (68-03-2459)	9/29/76-9/28/77	112,894
Abcor Corp. Walden Research Div. Wilmington, Ma.	"Evaluation of Air Quality Impact of Energy Sources" (68-02-2506)	8/18/76-8/17/78	100,000
Abcor Corp. Walden Research Div. Wilmington, Ma.	"Method and Emission Inv. from Rail- roads, etc." (T.O. #2) (68-02-2518)	9/1/76-1/31/77	16,198
ABT Associates, Inc. Cambridge, Ma.	"Guidance for Urban Stormwater Manage- ment" (68-01-1945)	11/11/75-11/11/76	37,235
Amicon Corp. Lexington, Ma.	"Ultrafiltrative Dewatering of Spent Carbon" (68-01-0528)	2/24/76-2/24/77	4,143

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Anderson-Nichols Boston, Ma.	"Environmental Impact Statement - New Milford, Conn., Treatment Facility" (68-01-3424)	4/28/76-1/27/77	\$ 42,591
Anderson-Nichols Boston, Ma.	"Environmental Impact Statement - Martha's Vineyard" (68-01-3446)	9/30/76-6/30/77	107,788
Arthur D. Little, Inc. Cambridge, Ma.	Mod. - Exercise Option - 2000 Manhrs. (68-02-1332)	2/4/76-6/30/76	640,512
Arthur D. Little, Inc. Cambridge, Ma.	Mod. Exercise Option - 3000 Manhrs. (68-02-1349)	8/5/75-11/27/75	203,964
Arthur D. Little, Inc. Cambridge, Ma.	"Plastics and Synthetics Industry" (68-01-1500)	6/16/76-6/30/76	121,830
Arthur D. Little, Inc. Cambridge, Ma.	"Development of Phes." (68-01-1990)	6/24/76-4/26/77	25,000
Arthur D. Little, Inc. Cambridge, Ma.	"Economic Analysis of Eff. Guidelines for Clay and Gypsum Products" (68-01-1448)	4/12/76-5/30/76	7,989
Arthur D. Little, Inc. Cambridge, Ma.	"Determining the Stratospheric Pollution Load due to Aircraft Emissions" (68-03-2007)	4/20/76-8/31/76	30,898

CONTRACTSCONTRACTORCONTRACTPERIOD OF AWARDAMOUNTMASSACHUSETTS (Cont.)

Arthur D. Little, Inc. Cambridge, Ma.	"Sampling and Analysis Methods for Pom. and Other Org. Poll." (68-02-2150)	3/18/76-3/17/79	\$450,000
Arthur D. Little, Inc. Cambridge, Ma.	"Economic Impact of Coal Industry Guidelines" (Mod. To T.O. #25) (68-01-2326)	12/17/75-6/16/76	46,840
Arthur D. Little, Inc. Cambridge, Ma.	Mod. - Additional Work and Incremental Funding (68-03-2334)	9/10/76-9/16/78	197,500
Arthur D. Little, Inc. Cambridge, Ma.	"Direct Measurement of Sulfuric Acid on Lung" (68-03-2348)	10/15/75-9/15/76	52,421
Arthur D. Little, Inc. Cambridge, Ma.	"Service Accumulation Heavy Duty Cycle Development" (68-03-2372)	12/17/75-2/28/77	149,803
Arthur D. Little, Inc. Cambridge, Ma.	"EIS of Proposed On-shore Oil Industry Guidelines" (68-01-2359)	9/30/76-5/15/77	120,211
Arthur D. Little, Inc. Cambridge, Ma.	"Develop Sampling and Analysis - Arsenic and Selenium, etc" (68-02-2443)	9/28/76-9/28/77	40,000

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Arthur D. Little, Inc. Cambridge, Ma.	"Analysis of International Imp. of Env. Cont. in Nonferrous Metals" (68-01-2842)	6/5/75-8/28/75	\$ 34,960
Arthur D. Little, Inc. Cambridge, Ma.	"System for Exchange and Recycling Hazardous Waste" (68-01-3241)	8/20/76-10/22/76	4,475
Arthur D. Little, Inc. Cambridge, Ma.	"Economic Analysis of Effluent Guide- lines for Miscellaneous Chemical Ind." (68-01-3400)	9/7/76-9/14/77	78,285
Arthur D. Little, Inc. Cambridge, Ma.	"Structure Study for Organics - Phase III Economic Analysis" (68-01-3425)	6/30/76-11/30/76	76,376
Arthur D. Little, Inc. Cambridge, Ma.	"Potential Application of Phys., Chemi- cal, Biol. Treatment Tech." (68-01-3554)	11/3/75-8/6/76	242,212
Arthur D. Little, Inc. Cambridge, Ma.	"Analysis Emergency Use Decisions for Pesticides" (68-01-3593)	1/30/76-11/30/76	49,921
Arthur D. Little, Inc. Cambridge, Ma.	"Prev. and Response Expend. by Reg. Ind. - Hazardous Subs. Regs." (68-01-3595)	1/22/76-9/22/76	97,486

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<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Arthur D. Little, Inc. Cambridge, Ma.	"Economic Im. Analysis of Pretreat- ment Standards for Nonferrous Metal" (68-01-4155)	8/13/76-5/13/77	\$ 32,694
Arthur D. Little, Inc. Cambridge, Ma.	"Economic Analysis/Wood Preserving" (68-01-4156)	7/28/76-4/16/77	28,924
Arthur D. Little, Inc. Cambridge, Ma.	"Economic Analysis of Batea-Toxic Guidelines" (68-01-4194)	9/1/76-2/28/79	157,002
Avco Corp. Research & Technology Lab. Wilmington, Ma.	"Operational Characteristics Study" (68-03-2422)	6/11/76-5/11/77	125,000
Bionomics, Inc. Wareham, Ma.	"Chronic Toxicity of Lindane to Fresh- water Fishes" (68-01-0154)	1/27/76-1/27/77	1,835
Bionomics, Inc. Wareham, Ma.	"Bioassay and Bioaccumulation Tests of Waste Treatment Column Effluent" (68-03-2418)	6/1/76-2/1/77	44,240
Bolt, Beranek & Newman, Inc. Cambridge, Ma.	"Noise Control Approaches of Building Codes" (68-01-1982)	4/30/76-8/30/76	9,862
Bolt, Beranek, and Newman, Inc. Cambridge, Ma.	"Calculation of Day-Night Levels (L _{dn}) in Vicinity of Airports" (68-01-3822)	8/17/76-8/17/77	20,000

<u>CONTRACTS</u>			
<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Boston, City of Conservation Commission Boston, Ma.	"Municipal Environmental Noise Enforcement Data" (68-01-4153)	8/29/76-11/6/76	\$ 20,000
Cabot Corp. Billerica, Ma.	Mod. - Additional Work (68-02-2402)	9/29/76-3/20/77	168,900
Charles River Assoc., Inc. Cambridge, Ma.	"Alternatives to Gas Rationing in Los Angeles" (68-01-2235)	8/17/76-1/15/77	10,000
Curran Assoc., Inc. Northampton, Ma.	"Guidelines for Review of Channeli- zation EISs" (68-01-1963)	2/24/76-4/15/76	17,375
Development Sciences, Inc. East Sandwich, Ma.	"Rev. and Analysis of Bridgeport and Nashville Contracts" (68-01-3214)	3/3/76-5/21/76	9,960
Development Sciences, Inc. East Sandwich, Ma.	"Resource Recovery Plant Implementa- tion Workshops" (68-01-3422)	4/5/76-10/5/76	49,958
Development Sciences, Inc. East Sandwich, Ma.	"Development of Env. Management Per- formance Criteria" (68-01-3556)	11/24/75-5/23/76	53,900
Development Sciences, Inc. East Sandwich, Ma.	"Energy Requirements for Pollution Control" (68-01-4150)	8/4/76-12/4/76	19,862
Development Sciences, Inc. East Sandwich, Ma.	"Methods and Data Requirements for ITA Assessment" (68-01-4300)	9/15/76-5/15/77	69,982

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Energy Resources Co., Inc. Cambridge, Ma.	Mod. to Add Work (68-02-2340)	9/29/76-7/30/77	\$ 19,800
Energy Resources Co., Inc. Cambridge, Ma.	"Final Document - Hydrocarbon, SO _x & H ₂ S Emissions, etc." (68-02-2512)	8/20/76-11/19/76	49,937
Energy Resources Co., Inc. Cambridge, Ma.	"Wastewater Management Systems" (68-01-3511)	9/27/76-9/27/77	15,997
Energy Resources Co., Inc. Cambridge, Ma.	"Analysis of Fin. Feasibility of Primary Drinking Water Standard" (68-01-2865)	9/22/75-7/20/76	136,062
Energy Resources Co., Inc. Cambridge, Ma.	"Environmental Benefit Through Minimum Emission Dispatching" (68-01-3177)	7/21/76-8/31/76	9,239
Energy Resources Co., Inc. Cambridge, Ma.	"Analysis of State Solid Waste Management Program Data" (68-01-3583)	1/20/76-9/20/76	33,000
Energy Resources Co., Inc. Cambridge, Ma.	"Environmental Benefits of Effluent Standards for Off-Shore Oil and Gas Ext." (68-01-4177)	8/19/76-2/12/77	111,309
Energy Resources Co., Inc. Cambridge, Ma.	"Evaluation of Adm. Impact of Section 301(C) FWPCA" (68-01-4327)	9/27/76-9/27/77	51,715

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<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Factory Mutual Research Corp. Norwood, Ma.	"Dev./Demo. of Fail-Safe Devices for Hazardous Materials" (68-03-2054)	10/17/75-6/27/76	\$ 26,000
Factory Mutual Research Corp. Norwood, Ma.	Mod. to Add Additional Work (68-03-0317)	6/14/76-8/01/76	25,000
GCA Corp. Bedford, Ma.	Mod. - Cost Overrun (T.O. #6) (68-02-1057)	10/29/75-6/30/75	6,165
GCA Corp. Bedford, Ma.	Mod. - Exercise Option - 1,000 Manhrs. (68-02-1316)	1/28/76-6/30/76	85,044
GCA Corp. Bedford, Ma.	Mod. - Change Order (T.O. #9) (68-02-1429)	1/5/76-1/5/77	1,835
GCA Corp. Bedford, Ma.	Mod. - Amend. Scope of Work (68-02-1438)	8/16/76-2/4/77	152,926
GCA Corp. Bedford, Ma.	Mod. - Cost Overrun (T.O. #15) (68-02-1953)	11/10/75-10/31/76	2,728
GCA Corp. Bedford, Ma.	Mod. - Cost Overrun (T.O. #18) (68-02-1998)	9/28/76-9/30/77	59,044
GCA Corp. Bedford, Ma.	"Novel Device and Fabric Filter Control Technology Trans. Conferences" (68-02-2177)	8/20/76-3/20/78	50,000

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
GCA Corp. Bedford, Ma.	"Environmental Impact Statement/P&R Installation - Arizona" (68-02-2340)	1/12/76-2/11/77	\$ 27,221
GCA Corp. Bedford, Ma.	Mod. - Cost Overrun (T.O. #23) (68-02-2354)	5/18/76-11/30/76	38,360
GCA Corp. Bedford, Ma.	"Imp. Methods - Identification and Evaluation, Local Violations, etc." (T.O. #22) (68-02-2353)	4/21/76-11/30/76	75,000
GCA Corp. Bedford, Ma.	"Particulate Sty. - Philadelphia Metro., etc." (68-02-2345)	2/9/76-5/8/77	185,075
GCA Corp. Bedford, Ma.	"Regional Emission Inv. - Metro. Philadelphia" (T.O. #24) (68-02-2361)	3/16/76-1/13/77	54,755
GCA Corp. Bedford, Ma.	"Develop Air Quality and Emission Projections, Ohio, AOMAS" (T.O. #25) (68-02-2366)	4/22/76-12/22/76	36,300
GCA Corp. Bedford, Ma.	"Emission Density Zoning" (T.O. #26) (68-02-2367)	4/20/76-11/19/76	72,524
GCA Corp. Bedford, Ma.	"Develop Techniques - Relating Daily VMT to Oxidant, etc." (T.O. #27) (68-02-2381)	9/30/76-1/18/77	56,000

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
GCA Corp. Bedford, Ma.	"Evaluation - Alt. Man. Light-Duty Vehicle, etc." (T.O. #28) (68-02-2509)	7/29/76-1/14/77	\$ 50,000
GCA Corp. Bedford, Ma.	"Stationary Source Enforcement" (68-01-3155)	3/1/76-3/5/77	95,635
GCA Corp. Bedford, Ma.	"Studies on Stationary Source Air Enforcement Proceedings, etc." (68-01-4143)	3/29/76-3/29/77	146,470
GCA Corp. Bedford, Ma.	"Feasibility Study for State/Local Air Monitoring" (68-01-4354)	9/30/76-6/30/77	49,256
Harbridge House, Inc. Boston, Ma.	"EPA Project Officer Seminar" (68-01-4231)	9/28/76-11/19/76	13,908
Harvard University Office for Research Contracts Cambridge, Ma.	"Radiation Exposure Due to Building Materials" (68-01-3292)	1/16/76-10/27/76	1,882
Harvard University Office for Research Contracts Cambridge, Ma.	"Neutral Extraction of Dioxins" (68-01-1951)	12/17/75-12/17/76	49,244
JBF Scientific Corp. Burlington, Ma.	"Performance Evaluation of Existing Lagoons" (68-03-2062)	9/24/75-1/23/76	5,000

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Marine Research, Inc. Falmouth, Ma.	"Marine Life Study and Analyses for Benthic Infauna Samples" (68-01-3179)	4/21/76-8/20/76	\$ 14,796
Mason Research Institute Worcester, Ma.	"Subchronic Toxicities of Hexachloro- benzene in Dogs" (68-01-2936)	11/7/75-9/28/76	44,648
Mass. Health Research Boston, Ma.	"Determine Organic Content of Drinking Water" (68-03-0267)	6/18/76-11/27/76	81,599
Mass. Institute of Technology Cambridge, Ma.	"Integration of Air Quality Consideration into Transportation Decision Making" (68-01-1989)	4/15/76-4/15/77	109,146
Mass. Institute of Technology Cambridge, Ma.	"Review of OSHA Noise Regulations" (68-01-4133)	8/17/76-11/17/76	39,927
Meta Systems, Inc. Cambridge, Ma.	"Documentation of Several Aspects of the Study of Land Use/Environmental Quality Relationships in the Quinnipiac River" (68-01-2622)	1/27/76-9/10/76	101,377
Meta Systems, Inc. Cambridge, Ma.	"River Basin Water Quality Planning and Management" (68-01-4361)	9/30/76-11/26/76	13,624

CONTRACTSCONTRACTORCONTRACTPERIOD OF AWARDAMOUNTMASSACHUSETTS (Cont.)

Meta Systems, Inc. Cambridge, Ma.	"Water Quality Management Models" (68-01-3542)	7/31/75-12/30/75	\$ 24,363
Mitre Corp. Bedford, Ma.	"Applicant Manual for Residuals Management" (68-01-2976)	10/14/75-3/15/76	27,954
Municipal Services, Inc. Wayland, Ma.	"Sewage Sludge Utilization of Non- food Chain Crops" (68-01-4129)	7/27/76-11/26/76	9,900
New England Natural Resources Center Boston, Ma.	"Water Quality Planning and Manage- ment of Public Participation Program" (68-01-4113)	6/17/76-6/16/77	40,000
Nisbet, Ian C. T. Lincoln, Ma.	"Criteria Development for PCBs" (68-01-4154)	8/17/76-4/17/77	12,500
Process Research, Inc. Cambridge, Ma.	"Pretreatment Guidance" (68-01-3559)	11/25/75-6/25/76	39,193
Process Research, Inc. Cambridge, Ma.	"Toxic Handbook for State and Area- wide Water Quality Management Plan- ning" (68-01-4176)	9/7/76-1/7/77	47,592
Raytheon Co. Burlington, Ma.	"Glass Recovery Technology" (68-01-1966)	3/5/76-6/4/76	9,790

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Raytheon Co. Burlington, Ma.	"Interpret Cost Data for Refuse - Derived Fuel" (68-01-4380)	9/30/76-9/30/77	\$ 98,600
Resource Planning Assoc., Inc. Cambridge, Ma.	"Support for Energy Resource Develop- ment Group" (68-01-4100)	6/4/76-5/5/77	45,000
Sala Magnetics, Inc. Cambridge, Ma.	"Treatment of Combined Sewer Over- flows by High Radiant Magnet" (68-03-2218)	7/31/76-1/31/77	26,500
Temple, Barker & Sloane, Inc. Wellesley Hills, Ma.	"Finance and Operations Survey of U.S. Water Utility Companies" (68-01-1943)	10/23/75-2/23/76	39,868
Thermo Electron Corp. Waltham, Ma.	"Ammonia Nitrogen Oxides Analyzer" (68-03-1103)	10/27/75-4/16/76	12,500
Thermo Electron Corp. Waltham, Ma.	"Nitrosamine Analysis" (68-02-2312)	10/14/75-1/14/76	31,169
Thermo Electron Corp. Waltham, Ma.	"Analysis of Atmos. Nitrosamine Com- pounds" (68-02-2363)	3/19/76-7/27/76	37,500
Thermo Electron Corp. Waltham, Ma.	"Isolate and Purify Nitrosamines from Drinking Water" (68-03-2400)	3/22/76-7/22/76	50,000

CONTRACTSCONTRACTORCONTRACTPERIOD OF AWARDAMOUNTMASSACHUSETTS (Cont.)

Urban Systems Research &
Engineering, Inc.
Cambridge, Ma.

"Spatial Pollution Analysis & Compara-
tive Evaluation System"
(68-01-3299)

6/27/75-6/27/77

\$ 82,250

Urban Systems Research &
Engineering, Inc.
Cambridge, Ma.

"HUD Block Grant Environmental Reviews"
(68-01-3572)

12/23/75-9/30/76

23,750

Urban Systems Research &
Engineering, Inc.
Cambridge, Ma.

Data Research - Seas
(68-01-4358)

9/28/76-9/28/77

118,386

Urban Systems Research &
Engineering, Inc.
Cambridge, Ma.

"Economic Impacts of Waste Reduction
Procedures and Policies"
(68-01-4362)

9/30/76-11/30/76

25,000

Walden Research Corp.
Cambridge, Ma.

Mod. - Cost Overrun
(68-02-0238)

8/20/75-11/3/75

1,582

Walden Research Div. of
Abcor
Cambridge, Ma.

"Sty. - Sulfur Dioxide - Va. Power
Stations"
(68-02-2099)

9/9/75-2/4/76

49,668

Water Purification Assoc.
Cambridge, Ma.

Mod. - Additional Work
(68-03-2207)

9/27/76-5/10/78

125,000

TOTAL

\$7,462,633

CONTRACTS

CONTRACTOR

CONTRACT

PERIOD OF AWARD

AMOUNT

NEW HAMPSHIRE

State of New Hampshire -
Dept. of Agriculture
Concord, N.H.

"Technical Assistance - Pesticides"
(68-01-3146)

8/31/76-8/30/77

\$ 20,084

TOTAL

\$ 20,084

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND</u>			
Rhode Island, University of Graduate School of Oceanography Kingston, R.I.	Mod. to extend for additional 12 mos. (68-03-0316)	9/27/76-9/22/77	\$ 23,954
		<u>TOTAL</u>	<u>\$ 23,954</u>

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>VERMONT</u>			
Vermont State Dept. of Health Burlington, Vt.	"Demo. Disinfectant Capabilities for Small Comm. Water Supplies" (68-03-2182)	9/16/75-4/3/77	\$ 41,438
		<u>TOTAL</u>	<u>\$ 41,438</u>