

OFFICE OF RESEARCH AND DEVELOPMENT  
REGION I

A N N U A L   R E P O R T

FISCAL YEAR 1977  
(October, 1976 - September, 1977)

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, 1978

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# ORD/HDQTRS. ORGANIZATION CHART

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Office of Research and Development

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Executive Director: Dr. Elizabeth Anderson  
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(202) 245-3018

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Research Triangle Park, N.C.  
Director: Dr. Thomas Hauser  
(919) 541-2108, (FTS) 629-2108

ENVIRONMENTAL MONITORING & SUPPORT LABORATORY  
Cincinnati, OH  
Director: Dwight G. Ballinger  
(513) 684-7301

ENVIRONMENTAL MONITORING & SUPPORT LABORATORY  
Las Vegas, NV  
Director: George Morgan  
(202) 738-2369, (FTS) 985-2369

ENVIRONMENTAL RESEARCH INFORMATION CENTER  
Cincinnati, OH  
Director: Robert Crowe  
(513) 684-7391

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(919) 541-2281, (FTS) 629-2281

HEALTH EFFECTS RESEARCH LABORATORY  
Cincinnati, OH  
Director: Dr. R. John Garner  
(513) 684-7401

ENVIRONMENTAL RESEARCH LABORATORY  
Corvallis, OR  
Director: Dr. A. F. Bartsch  
(503) 757-4601, (FTS) 420-4601

ENVIRONMENTAL RESEARCH LABORATORY  
Duluth, MN  
Director: Dr. Donald Mount  
(612) 727-6692, (FTS) 783-9549

ENVIRONMENTAL RESEARCH LABORATORY  
Marragawett, RI  
Director: Dr. Eric D. Schneider  
(401) 789-1071, (FTS) 838-4843

ENVIRONMENTAL RESEARCH LABORATORY  
Gulf Breeze, FL  
Director: Dr. Thomas W. Duke  
(904) 932-5311, (FTS) 686-8011

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Director: Dr. Morris F. Cramer  
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Dr. John Burchard Dr. David G. Stephen  
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Dr. Paul A. Kenline, Director Dr. Robert Carr, Director  
(919) 541-2613 (513) 684-7956

Revised February 1978

\*ACTING

## 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 several staff changes. Dr. Helen M. McCammon, former Director, who was on a temporary two-year detail to the Energy Research and Development Administration, Germantown, Maryland, joined the ERDA staff on a permanent basis. Richard R. Keppler continues to serve as Acting Director of ORD. Richard C. Boynton, P.E., has recently joined the staff from the Enforcement Division, EPA - Region I, replacing John B. Feldman, P.E., who transferred to the U.S. Dept. of Labor - Occupational Safety and Health Administration.

The ORD PUBLICATIONS SUMMARY, which was published quarterly and provided information on recently published ORD reports and how to obtain them, has now been replaced by the EPA PUBLICATIONS BIBLIOGRAPHY QUARTERLY ABSTRACT BULLETIN. The BULLETIN lists all recently published EPA reports, including those for ORD. Copies of the BULLETIN are available from our office upon request. A complete set of ORD 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 ORD 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 ORD is funding. Copies of the PROGRAM GUIDE may be obtained from our office or Headquarters. Additionally, we encourage the research community to get in touch with the Regional Office about specific details on current ORD procedures and objectives. This information can often save time and effort for the applicant by highlighting recent changes that may have occurred in the ORD program.

Also available is the HANDBOOK FOR PREPARING OFFICE OF RESEARCH AND DEVELOPMENT REPORTS, which contains specifications required by ORD 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 ORD scientific and technical reports. This document supersedes all previous scientific and technical report preparation specifications that have been issued by EPA - ORD or its predecessor organizations. All technical and scientific reports prepared by or for ORD after the issuance of this document shall conform with the specifications contained herein.

SUMMARY  
RESEARCH AND DEMONSTRATION  
GRANT AND CONTRACT AWARDS  
REGION I  
FISCAL YEAR 1977

<u>STATE</u>	<u>GRANTS</u>	<u>CONTRACTS</u>	<u>TOTAL AWARDS</u>
Connecticut	\$ 349,000	\$ 4,491,210	\$ 4,840,210
Maine	548,045	265,000	813,045
Massachusetts	4,051,102	14,962,242	19,013,344
3 New Hampshire	540,354	---	540,354
Rhode Island	1,517,934	148,743	1,666,677
Vermont	<u>106,716</u>	<u>19,414</u>	<u>126,130</u>
TOTAL	<u>\$ 7,113,151</u>	<u>\$19,886,609</u>	<u>\$26,999,760</u>

REGIONAL COMPARISON  
OFFICE OF RESEARCH AND DEVELOPMENT AWARDS

FISCAL YEAR 1977 (10/76 - 9/77)

<u>REGION</u>	<u>GRANTS</u>	<u>CONTRACTS</u>	<u>*TOTAL</u>	<u>**TOTAL - PER CAPITA</u>
I	\$ 7,113,151	\$19,886,609	\$26,999,760	2.217
II	3,355,134	4,414,496	7,769,630	.271
III	4,653,496	12,067,236	16,720,732	.698
IV	9,723,708	9,680,819	19,404,527	.555
V	17,260,321	9,051,597	26,311,918	.587
4. VI	3,806,278	8,191,585	11,997,863	.542
VII	2,682,509	1,443,542	4,126,051	.360
VIII	4,385,085	1,965,275	6,350,360	1.023
IX	9,630,037	29,128,486	38,758,523	1.556
X	<u>4,408,200</u>	<u>1,023,108</u>	<u>5,431,308</u>	.769
TOTAL - U.S.	<u>\$67,017,919</u>	<u>\$96,852,753</u>	<u>\$163,870,672</u>	.758

\*Includes Contract Services as well as Contract Awards

\*\*Using most recent complete Census - dated 1976

Note: It will be noted from the above comparison that Region I has been awarded 2.217 dollars per capita, and this is unmatched by any other Region. It is felt that this ratio indicates research activities in the Region. The total dollars allocated to Region I is second only to that of Region IX, which, of course, has a larger area and greater population.

5.

G R A N T S

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>CONNECTICUT</u>			
Connecticut, Univ. of Storrs, Conn.	"Genetic Variations and Resistance to carcinogens in natural waters" (R805195)	06/19/77-06/18/80	\$ 40,000 (New)
Enfield, Town of Enfield, Conn.	"Leachate Treatment by Anaerobic Filter" (R803627)	04/15/75-04/14/78	34,000 (Increase)
Hafner Industries, Inc. Process Development Div. New Haven, Conn.	"Pilot Plant Demonstration and Evaluation of PVC Wastes Reclaimed by Hafner Process" (S804693)	11/01/76-10/31/77	85,000 (New)
Seaboard Metal Finishing Co., Inc. West Haven, Conn.	"Dialysis Purification of Metal Finishing Rinse Water" (R804655)	09/25/76-09/24/77	25,000 (New)
SIAM Institute for Mathematics and Society (SIMS) New Canaan, Conn.	"SIMS Three-Year Study: Statistics and Environmental Health" (R804932)	10/25/76-10/24/79	100,000 (New)
Yale University New Haven, Conn.	"Environmental Monitoring Using Molluscan Shell-growth and Life History Data" (R804909)	10/15/76-10/14/78	65,000 (New)
TOTAL			<u>\$ 349,000</u>

<u>GRANTEE</u>	<u>GRANTS</u> <u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MAINE</u>			
Bangor, City of Bangor, Maine	"Feasibility of Composting Raw Sewage Sludge by High Rate Suction Aeration Techniques" (S803828)	06/01/75-05/31/78	\$ 40,570 (Increase)
Cobbossee Watershed District Winthrop, Maine	"Cobbossee Watershed Lake Restoration Project" (S805454)	08/22/77-08/21/79	278,020 (New)
Maine Dept. of Marine Resources Augusta, Maine	"Relationship Between Hydrocarbon Con- tamination and Tumors in <u>Mya arenaria</u> " (R804745)	09/20/77-09/19/79	100,000 (New)
Maine Municipal Assoc. Augusta, Maine	"Septage Treatment/Management" (R804804)	09/15/76-03/14/78	45,900 (Increase)
Maine, University of Orono, Maine	"Effect of Particulates on Ozone Dis- infection of Bacteria and Viruses in Water" (R804587)	08/20/76-08/19/78	58,555 (Continuation)
Maine, University of Orono, Maine	"Critical Review of Virus Removal by Coagulation and pH" (R805399)	06/15/77-06/14/78	15,000 (New)
TOTAL			<u>\$548,045</u>

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099	EPA 601-R-77-022				
049	EHAD				
245 0 0	Office of Research and Development Region I, annual report : #b fiscal year 1977 (October, 1976 - September, 1977) / #c prepared by U.S. Environmental Protection Agency, Office of Research and Development.				
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<u>GRANTS</u>			
<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS</u>			
Boston University Boston, Mass.	"Sublethal Effects of Oil on Behavior and Chemical Senses of Marine Animals" (R803833)	11/1/75-10/31/78	\$ 60,000 (Continuation)
Cobboossee Watershed District Winthrop, Maine	"Cobboossee Watershed Lakes Restoration Project" (S805454)	8/22/77-3/31/80	278,020 (New)
Grace, W. R. and Company Dewey and Almy Chemical Div. Lexington, Mass.	"Treatment of Wastewaters from Adhesives and Sealants Manufacture by Ultrafiltration" (S804350)	3/1/76-12/31/77	19,125 (Increase)
Harvard University Physiology - School of Public Health Cambridge, Mass.	"Physiological Response to Atmospheric Pollutants" (R802030)	9/1/75-8/31/76	57,927 (Continuation)
Harvard University School of Public Health Cambridge, Mass.	"Identification and Detection of Water-Borne Viruses by Immunoenzymatic Methods" (R803360)	10/1/77-9/30/78	50,000 (Continuation)
Harvard University Cambridge, Mass.	"Organic N-Chloro Compounds in Chlorination of Water Supplies - Their Formation and Significance" (R803631)	4/1/75-3/31/78	18,141 (Increase)
Harvard University President and Fellows Cambridge, Mass.	"High Velocity Fabric Filtration" (R804700)	8/19/77-8/18/78	41,119 (Continuation)

<u>GRANTEE</u>	<u>GRANTS</u> <u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Harvard University Laboratory of Applied Microbiology Cambridge, Mass.	"Mechanism of Die-Off of Viruses in Sea Water" (R804832)	11/1/76-10/31/78	\$ 53,000 (New)
Harvard University School of Public Health Cambridge, Mass.	"Effect of SO <sub>2</sub> and Sulfates on Respiratory Defense Mechanisms" (R805091)	2/20/77-2/19/78	67,947 (New)
Harvard University School of Public Health Boston, Mass.	"Control of Technologies for Open Sources of Particulate Emission" (R805294)	6/27/77-10/26/78	38,247 (New)
Harvard University President and Fellows Cambridge, Mass.	"Economic Incentives for Environmental Protection" (R805446)	7/11/77-7/10/79	250,000 (New)
Harvard University Cambridge, Mass.	"Use of Models in Environmental Decision- Making Concerning Air Quality" (R805558)	11/1/77-10/31/79	107,466 (New)
Harvard University John F. Kennedy School of Government President and Fellows Cambridge, Mass.	"State-of-the-Art Review - Exposure Assessments" (R805647)	10/20/77-4/19/78	13,804 (New)
JBF Scientific Corp. Research Division Wilmington, Mass.	"To Simplify the Use and Improve the Structure of the KOH-CHANG Model for Dispersion of Dredge Materials" (R804994)	10/1/76-9/30/77	49,838 (New)

		<u>GRANTS</u>		
<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>	
<u>MASSACHUSETTS (Cont.)</u>				
Little, Arthur D., Inc. Cambridge, Mass.	"A New Process for Activated Carbon Regeneration and for Recovery of Hazardous Pesticide Wastes" (R804554)	1/31/77-1/30/78	\$149,464 (New)	
Lowell, University of Lowell, Mass.	"New Amine Carbamate Gelation Tech- niques for Use in Oil Spill Recovery Operations" (R804628)	5/20/77-5/19/78	28,964 (New)	
Lowell, University of Lowell, Mass.	"Monitoring Septage Addition to Waste- water Treatment Plants" (R805406)	8/25/77-11/24/78	143,629 (New)	
Marlborough, City of Marlborough, Mass.	"Ozone Demonstration Study - Electron Beam Accelerator" (S804946)	11/1/76-6/30/79	165,629 (New)	
Mass. Institute of Technology Chemical Engineering Cambridge, Mass.	"Combustion Research on Coal Nitrogen and Particulate Organic Matter" (R803242)	8/1/74-7/31/77	179,986 (Continuation)	
Mass. Institute of Technology Civil Engineering Cambridge, Mass.	"Chemical Modeling of Metallic Waste Disposal" (R803738)	5/15/77-5/14/78	30,610 (Continuation)	
Mass. Institute of Technology Civil Engineering Cambridge, Mass.	"Catalytic Desulfurization and Denitro- genation" (R804123)	8/1/77-7/31/78	70,360 (Continuation)	
Mass. Institute of Technology Cambridge, Mass.	"Long Distance Transport of Air Pollutants" (R804891)	11/1/77-10/31/78	53,157 (New)	

		<u>GRANTS</u>		
	<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
	<u>MASSACHUSETTS (Cont.)</u>			
	Mass. Institute of Technology Cambridge, Mass.	"No Emission from Fluidized Combustion" (R804978)	8/20/77-8/19/78	\$150,000 (Continuation)
	Mass. Institute of Technology Dept. of Material Science and Engineering Cambridge, Mass.	"Treatment of Gaseous Emissions from Steelplants Containing Small Concentra- tion of Hydrocarbon Vapors" (R805311)	5/1/77-4/30/78	10,000 (New)
	Mass. Institute of Technology Cambridge, Mass.	"Kinetics of Evolution of Sulfur-Bear- ing Gases from Blast Furnace Slags" (R805338)	7/15/77-7/14/78	12,100 (New)
11.	Mass. Institute of Technology Cambridge, Mass.	"Reduction of Pollutant Formation in Coal Particle and Liquid Fuel Spray Flames" (R805552)	10/5/77-10/4/78	200,789 (New)
	Mass. Dept. of Environmental Quality Engineering Boston, Mass.	"Lake Restoration Techniques for Eutrophication Control and Institu- tional Development" (S804727)	9/20/76-9/19/77	125,000 (New)
	Mass. General Hospital Boston, Mass.	"Follow-up Studies of Melanoma Patients for Exposure Habits, Skin Types, etc." (R805540)	7/1/77-6/30/78	43,436 (New)
	Mass., University of Amherst, Mass.	"Short Course on Application of Storm- water Management Models" (R803069)	6/3/74-8/31/77	12,458 (Increase)

<u>GRANTEE</u>	<u>GRANTS</u> <u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Mass., University of Dept. of Food and Agricultural Engineering Amherst, Mass.	"Low Wastewater Potato Starch/Protein Production Process" (R803712)	7/7/77-7/6/78	\$ 21,300 (Continuation)
Mass., University of College of Food and Environ- mental Sciences Amherst, Mass.	"Coprostanol as an Indicator of Fecal Pollution in Sea Water" (R804970)	11/1/76-10/31/77	29,709 (New)
Mass., University of Div. of Public Health Amherst, Mass.	"International Conference on the Effects of Pollutants on High Risk Groups" (R805244)	10/1/77-9/30/78	24,145 (New)
Mass., University of School of Health Sciences Amherst, Mass.	"Effect of Chlorine Dioxide and Chlorine Dioxide plus Nitrite on Mice with Low Glucose-6-Phosphate Dehydrogenase Activity" (R805557)	10/25/77-10/24/78	52,479 (New)
Mass., University of Amherst, Mass.	"Human Health Effects on Elevated Drink- ing Water Sodium Levels" (R805612)	3/15/78-3/14/83	112,339 (New)
Mass., University of Water Resources Research Ctr. Amherst, Mass.	"Evaluation of Natural Inhibiting Factors in an Aggressive Drinking Water Supply" (R805638)	10/19/77-6/8/79	31,386 (New)

		<u>GRANTS</u>		
	<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
	<u>MASSACHUSETTS (Cont.)</u>			
	Mass., University of Medical School North Worcester, Mass.	"Detection of Viral Gastroenteritis Agents" (R805169)	5/6/77-5/5/78	\$ 48,525 (New)
	Metropolitan District Commission Div. of Environmental Quality Boston, Mass.	"Charles River Lower Basin Destratifi- cation Project" (S804812)	10/9/76-5/5/78	296,700 (New)
	Metropolitan District Commission Division of Environmental Quality Boston, Mass.	"Lower Mystic Lake Salt Water Removal" (S805029)	12/5/77-9/4/79	320,000 (New)
	Meta Systems Cambridge, Mass.	"Water Quality Impact and Socio- Economic Aspects of Reducing Non- point Source Pollution from Agriculture and Silviculture" (R805036)	8/1/77-4/30/78	61,886 (New)
	Meta Systems, Inc. Cambridge, Mass.	"New Residential Developments and the Quantity and Quality of Runoff" (R805238)	7/11/77-1/31/79	52,117 (New)
	MITRE Corp. Bedford, Mass.	"Neutralization/Precipitation Manual of Practice" (R805623)	10/24/77-10/23/78	89,931 (New)
	New England Aquarium Boston, Mass.	"Development of Biological Bioassay for Evaluating Dredging Activities" (R804967)	11/1/76-10/31/78	82,450 (New)
	New England Aquarium Boston, Mass.	"Ocean Disposal Test Program for Treated FGD Materials" (R805654)	12/8/77-12/7/79	29,960 (New)

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		<u>GRANTS</u>		
<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>	
<u>MASSACHUSETTS (Cont.)</u>				
New England Fisheries Steering Committee, Inc. New Bedford, Mass.	"Electrochemical Coagulation Study for Fish Processing Waste Water" (R805493)	9/26/77-9/25/78	\$113,545 (New)	
Reed & Barton Silversmiths Taunton, Mass.	"Joint Treatment of Multi-Company Plating Wastes" (S805181)	1/1/77-4/1/77	30,000 (New)	
Salem and Beverly Water Supply Board Beverly, Mass.	"The Effect of Turbidity on Bacterial Counts and Coliform Enumeration in Water Distribution Systems" (R804724)	11/1/76-10/31/78	30,000 (New)	
Wheaton College Dept. of Biology Norton, Mass.	"Skeletal Variants as an Indicator of Biological Effects on Environ- mental Contaminants" (R805420)	10/1/77-9/30/80	44,414 (New)	
Woods Hole Oceanographic Institution Woods Hole, Mass.	"Cape Cod Wastewater Renovation and Retrieval System" (R802037)	5/1/77-4/30/78	100,000 (Increase)	
			TOTAL	<u><u>4,051,102</u></u>

GRANTS

GRANTEE

TITLE

GRANT PERIOD

AMOUNT

NEW HAMPSHIRE

Manchester Water Works  
Manchester, N.H.

"Proposal for Investigation of Fluid  
Bed Carbon Regeneration System at  
Manchester, N.H."  
(R805371)

10/01/77-12/31/78

\$504,540  
(New)

New Hampshire, Univ. of  
Durham, N.H.

"The Virus Carriage Status in Hard  
Shell Clam: The Precision, Sensitivity,  
and Accuracy of Methods for its Detec-  
tion"  
(R804882)

09/22/76-09/21/78

35,814  
(New)

TOTAL

\$540,354

<u>GRANTEE</u>	<u>GRANTS</u> <u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND</u>			
Raytheon Company Oceanographic and Environ- mental Services Portsmouth, R.I.	"Development of Dynamic Two-Layer Model for Stratified Estuaries" (R805170)	04/17/77-12/17/77	\$ 94,602 (New)
Rhode Island Statewide Planning Program - Dept. of Admin. Providence, R.I.	"State of Rhode Island Residuals Recovery Implementation Grant" (R804809)	09/25/76-09/24/78	50,000 (New)
Rhode Island, Univ. of Kingston, R.I.	"The Problem of Ocean Dumping-- Stability and Resiliency in Experimen- tal Ecosystems Exposed to Constant and Time-Varying Stresses" (R803143)	07/01/74-09/30/77	1,066 (Increase)
Rhode Island, Univ. of Graduate School of Oceanography Kingston, R.I.	"Influence of Dredge Spoils and Sediments Pollution on Trace Metal Assimilation by Organisms" (R803243)	01/01/76-12/31/76	16,626 (Increase)
Rhode Island, Univ. of Microbiology and Biophysics Kingston, R.I.	"Role of Polyamines in Adaptation of Coliforms to the GI Tract" (R803255)	07/22/74-07/21/76	20,495 (Continuation)
Rhode Island, Univ. of Kingston, R.I.	"Nutritional Requirements of Marine Larval and Juvenile Fish" (R803818)	07/15/75-07/14/78	25,000 (Continuation)

<u>GRANTEE</u>	<u>GRANTS</u> <u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND (Cont.)</u>			
Rhode Island, Univ. of Graduate School of Oceanography Kingston, R.I.	"A Facility for the Experimental Analysis of Coastal Marine Eco- systems" (R803902)	07/22/75-06/30/78	\$980,000 (Continuation)
Rhode Island, Univ. of Dept. of Microbiology Kingston, R.I.	"Development of a Method for Stabiliz- ing Indicator Bacteria in Water Samples" (R803967)	12/22/75-03/31/78	15,166 (Continuation)
Rhode Island, Univ. of Kingston, R.I.	"A Standard Program for Environmental Impact Assessment: Phase I: - Ichthyoplankton Sampling" (R804216)	12/15/75-06/14/77	75,512 (Continuation)
Rhode Island, Univ. of Graduate School of Oceanography Kingston, R.I.	"Diffusion Changer Array for Aquatic Environmental Exposure" (R804886)	09/13/76-03/31/78	30,900 (Continuation)
Rhode Island, Univ. of Graduate School of Oceanography Kingston, R.I.	"Contaminant Flux from Marine Sediments and Dredge Spoil Deposits" (R805129)	05/01/77-04/30/80	68,218 (New)
Rhode Island, Univ. of Graduate School of Oceanography Kingston, R.I.	"Development and Application of Laboratory Microcosms for Perturbation Experiments of Coastal Marine Ecosystems" (R805463)	10/17/77-10/16/79	75,449 (New)

GRANTS

<u>GRANTEE</u>	<u>TITLE</u>	<u>GRANT PERIOD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND (Cont.)</u>			
Rhode Island, Univ. of Graduate School of Oceanography Kingston, R.I.	"Chemical Studies Directed Towards Ecological Damage Assessment of Petroleum Discharges into the Marine Environment" (R805477)	09/26/77-09/25/80	\$ 64,900 (New)
		TOTAL	<u>\$1,517,934</u>

GRANTS

GRANTEE

TITLE

GRANT PERIOD

AMOUNT

VERMONT

Castleton, Town of  
Castleton, Vt.

"Lake Bomoseen Water Quality Improve-  
ment Project"  
(S805245)

05/24/77-10/31/79

\$ 76,640  
(New)

Vermont, Univ. of and  
State Agricultural  
College - Dept. of  
Airts and Sciences  
Burlington, Vt.

"Feasibility Study for an Asbestos  
Aerosol Monitor"  
(R804562)

07/26/77-01/31/78

30,076  
(Continuation)

TOTAL

\$106,716

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>			
Center for the Environment and Man, Inc. Hartford, Ct.	Hydrodynamic Air Quality Model (68-02-2740)	08/11/77-05/11/78	\$ 35,171
Comsis Environmental Services Glastonbury, Ct.	Transportation - Air Quality Planning and Process (68-01-4355)	02/15/77-07/16/77	45,236
Comsis Environmental Services Glastonbury, Ct.	Municipal Solid Waste Disposal in Saline Environment of Estuaries and Coastal Marshes (68-03-2517)	01/27/77-09/27/77	51,639
Management Dynamics Stamford, Ct.	"Development of a Structural System for Use in 308 Letters" (68-01-3909)	09/23/77-02-23/78	9,900
Research Corp. of New England Wethersfield, Ct.	Assessment of the Environmental Effects of Pharmaceuticals (68-03-2510)	01/10/77-01/10/78	180,932
Research Corp. of New England Wethersfield, Ct.	Non-personal, Quick Reaction, Engineer- ing and Technical Services (68-02-2615)	04/26/77-04/25/79	34,350
Research Corp. of New England Wethersfield, Ct.	Environmental Impact Statement/P&R Area Source "Quick Look" (68-02-2661)	09/26/77-09/26/78	13,956

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT (Cont.)</u>			
Research Corp. of New England Wethersfield, Ct.	Development - Methodology - Improve Char. of Human Exposure (68-02-2743)	08/26/77-05/26/80	\$217,600
Research Corp. of New England Wethersfield, Ct.	Stack Sampling Services (68-02-2820)	09/30/77-09/29/78	31,968
Research Corp. of New England Wethersfield, Ct.	"Operation and Maintenance of P.C.S." (68-01-3818)	07/12/76-09/30/77	80,000
Research Corp. of New England Wethersfield, Ct.	"Studies of Stationary Source Air Enforcement Proceedings and Com- pliance Monitoring" (68-01-4145)	09/30/76-09/30/78	402,260
Research Corp. of New England Wethersfield, Ct.	Collect and Analyze Various Pollu- tants (68-01-4447)	03/04/77-03/04/78	To be specified on individual Task Orders
Research Corp. of New England Wethersfield, Ct.	"A Feasibility Study for Noise Emission Data Base" (68-01-4656)	06/27/77-12/17/77	27,275
Sobotka and Co., Inc. Stamford, Ct.	"Analysis of Costs and Economic Impacts of Limiting the Use of Manganese in Untreated Gas" (68-01-3866)	08/22/77-12/6/77	31,360

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT (Cont.)</u>			
Sobotka and Co., Inc. Stamford, Ct.	Analysis of Petroleum (68-01-3968)	09/29/77-08/29/78	\$ 28,200
Sobotka and Co., Inc. Stamford, Ct.	"Economic Analysis Pretreatment Standards for the Petroleum Refin- ing Industry" (68-01-4316)	09/29/76-08/29/77	24,554
Sobotka and Co., Inc. Stamford, Ct.	"Economic Impact of Alternative New Source Policies of the Petroleum Refining and Petrochemical Industries" (68-01-4603)	04/26/77-09/77	49,500
United Technologies Corp. Pratt & Whitney Aircraft East Hartford, Ct.	Sty. - Composition of Aircraft Part. Emissions (68-02-2458)	11/05/76-01/04/78	172,004
United Technologies Corp. Hamilton Standard Div. Windsor Locks, Ct.	"Point Source Water Pollution Control Monitoring, Data Collection, and Iden- tification of Control & Treatment Technologies" (68-01-3280)	06/26/75-03/31/78	1,604,091
United Technologies Corp. Hamilton Standard Div. Windsor Locks, Ct.	"Technical Analysis of Treatment Alterna- tives for Revised Effluent Limitation Guidelines for the Photographic Point Source Category" (68-01-3987)	09/29/77-10/29/78	203,754

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>CONNECTICUT (Cont.)</u>			
United Technologies Corp. Hamilton Standard Div. Windsor Locks, Ct.	"Technical Analysis of Treatment Alternatives for Revised Effluent Limitation Guidelines for Electro- plating and the Machinery and Mechanical Products Manufacturing Point Source Categories" (68-01-4668)	07/14/77-08/14/78	\$ 702,154
York Research Corp. Stamford, Ct.	Stack Sampling Services (68-02-2819)	09/30/77-09/29/78	96,618
24 York Research Corp. Stamford, Ct.	"Level of Effort (LOE) for Stationary Source Air Enforcement Assessment, Compliance Monitoring and Enforce- ment Proceedings" (68-01-3161)	03/17/75-03/17/78	123,521
York Research Corp. Stamford, Ct.	"Studies on Stationary Source Air Enforcement Proceedings and Com- pliance Monitoring" (68-01-4138)	09/29/76-09/29/68	325,167
		<u>TOTAL</u>	<u>\$4,491,210</u>

CONTRACTS

CONTRACTOR

CONTRACT

PERIOD OF AWARD

AMOUNT

MAINE

Jordan, E. C. Co., Inc.  
Portland, Maine

"Point Source Water Pollution Control  
Monitoring (Sampling), Data Collection  
and Identification of Control and Treat-  
ment Technologies"  
(68-01-3287)

07/08/77-08/08/78

\$ 150,000

Wright, Pierce, Barnes  
and Wyman  
Topsham, Maine

Integrated Energy Systems Monitoring  
(68-03-2587)

08/11/77-03/02/80

115,00

TOTAL

\$ 265,000

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS</u>			
Abcor Corp. Walden Research Div. Wilmington, Mass.	Installation - AQDHS II & EIA/P&R - Massachusetts (T.O. #1) (68-02-2590)	04/19/77-04/18/78	\$ 23,800
Abcor Corp. Walden Research Div. Wilmington, Mass.	Growth Effects of Major Land Use Products (68-02-2594)	05/16/77-05/15/78	95,000
Abcor Corp. Walden Research Div. Wilmington, Mass.	Area Source Emissions Inv. - New Hampshire (T.O. #2) (68-02-2598)	04/27/77-07/26/77	8,925
Abcor Corp. Walden Research Div. Wilmington, Mass.	Codification of State Implementa- tion Plans - Reg. III (68-02-2599)	05/09/77-10/23/77	63,330
Abcor Corp. Walden Research Div. Wilmington, Mass.	Needs Area Source Update to 1975 (T.O. #3) (68-02-2805)	06/03/77-11/02/77	19,000
Anderson-Nichols Boston, Mass.	"Draft and Final EIS for New Mil- ford, Conn., Reg. Wastewater Treat- ment Facility" (68-01-3424)	09/26/77-04/26/79	41,471
Anderson-Nichols Boston, Mass.	EIS Prep. Region I and NEPA Related Studies (68-01-4617)	09/16/77-09/16/78	4,000

CONTRACTS

CONTRACTOR

CONTRACT

PERIOD OF AWARD

AMOUNT

MASSACHUSETTS (Cont.)

Arthur D. Little, Inc. Cambridge, Mass.	"Analysis of the Economic Impact of Effluent Guidelines for the Clay & Gypsum Products Industry and Concrete Industry" (68-01-1541)	05/18/77-08/31/77	\$120,211
Arthur D. Little, Inc. Cambridge, Mass.	Decision Analysis Supp. System for Dredge Spoil (68-03-2546)	05/23/77-12/23/77	50,000
Arthur D. Little, Inc. Cambridge, Mass.	Verification of Land Cultivation/Refuse Farming (68-03-2602)	09/20/77-02/20/78	60,000
Arthur D. Little, Inc. Cambridge, Mass.	Disposal/Utilization - Flue Gas Clean- ing By-Products... (68-02-2654)	09/26/77-09/26/80	790,000
Arthur D. Little, Inc. Cambridge, Mass.	Air Pollution Emission Control Develop- ment - Sta. Internal Combustion Engine (68-02-2664)	09/28/77-09/28/80	945,076
Arthur D. Little, Inc. Cambridge, Mass.	Develop Standards for Chemical Valence... (68-02-2750)	09/22/77-09/21/78	34,601
Arthur D. Little, Inc. Cambridge, Mass.	"Economic Impact of the Environmental Protection Agency's Regs. on Non-ferrous Metals Industry" (68-01-2842)	02/28/75-04/01/77	118,319

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Arthur D. Little, Inc. Cambridge, Mass.	Benzene Reduction in Motor Gasoline ..... (68-02-2859)	09/20/77-09/20/79	\$ 60,000
Arthur D. Little, Inc. Cambridge, Mass.	"Production, Consumption, Environmental Distribution and Related Impact of Selected Toxic Pollutants" (68-01-3857)	09/06/77-06/06/78	187,152
Arthur D. Little, Inc. Cambridge, Mass.	"Economic Impact Analysis of the BATEA Toxic Effluent Limitation Guidelines for the Timber Processing Industry" (68-01-4194)	09/01/76-02/01/79	157,002
Arthur D. Little, Inc. Cambridge, Mass.	"Energy Penalty Studies for Pulp, Paper, and Non-ferrous Metals Industries and Supplementary Analysis of Selected Industrial Categories" (68-01-4381)	09/30/76-09/30/77	281,691
Arthur D. Little, Inc. Cambridge, Mass.	"Best Available Technology Economically Achievable - Economic Impact Analysis for Specialty Chemical Group" (68-01-4622)	05/25/77-08/25/77	286,144
Arthur D. Little, Inc. Cambridge, Mass.	"New Source Performance Standards and Pretreatment Standards for Six Indus- trial Point Source Categories" (68-01-4466)	03/16/77-01/16/79	1,209,571

CONTRACTS

CONTRACTOR

CONTRACT

PERIOD OF AWARD

AMOUNT

MASSACHUSETTS (Cont.)

Arthur D. Little, Inc. Cambridge, Mass.	EIA for Inorganic Chemicals Industry (68-01-4409)	01/04/77-09/18/77	\$ 38,479
Arthur D. Little, Inc. Cambridge, Mass.	"Technical Support for Radiation Standards for Radioactive Waste Management" (68-01-4470)	03/28/77-03/28/78	943,985
Arthur D. Little, Inc. Cambridge, Mass.	"A Study of the Economic Effects of Environmental Regs. on the Pollution Control Equipment Industry" (68-01-4660)	06/22/77-04/22/78	127,597
Arthur D. Little, Inc. Cambridge, Mass.	Economic Impact Analysis for Sub- title C of Resource Conservation and Recovery Act of 1976 (68-01-4671)	07/19/77-07/18/78	109,393
Arthur D. Little, Inc. Cambridge, Mass.	EA of Selected Industries..... (68-01-4698)	08/23/77-08/23/78	165,000
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	Mod. and Improvement of Proto- type Optical, ..... (68-02-2786)	09/28/77-03/27/78	25,364
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	"Environmental Assessment of Com- munity Noise Control Strategies" (68-01-3869)	09/23/77-11/23/78	99,200

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	"Calculation of Day/Night Sound Levels (Ldn) Resulting from Railroad Yard Operations" (68-01-3906)	07/22/77-01/22/78	\$ 54,868
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	"Update of Economic Analysis of Noise Control Regulations - Effects on Lt. Truck Industry" (68-01-3941)	09/20/77-03/20/79	134,000
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	"Tire Technology/Health and Welfare Assessment to Assist in the Back- ground for a Tire Noise Emission Reg. or Tire Labeling Requirement" (68-01-3950)	09/30/77-04/30/80	273,648
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	Identification and Characterization of Consumer Prod. Noise Sources (68-01-3988)	09/28/77-09/28/78	213,261
Bolt, Beranek, & Newman, Inc. Cambridge, Mass.	"Development of a Model Building Code for Implementation of Noise Control Performance Specifications in Building Structures" (68-01-4390)	12/09/76-12/09/77	89,849
Bolt, Beranek & Newman, Inc. Cambridge, Mass.	Interstate Carrier Waiver (68-01-4467)	03/17/77-03/23/78	92,795

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Cambridge Collaborative, Inc. Cambridge, Mass.	Technical Assessment of Chain Saws (68-01-3842)	07/22/77-01/21/79	\$ 51,222
Cambridge Collaborative, Inc. Cambridge, Mass.	"Noise Analysis: Guide Mass Transit Vehicles and Equipment" (68-01-3951)	09/30/77-09/30/79	130,713
Cambridge Collaborative, Inc. Cambridge, Mass.	Technical Assessment - Motorboat Noise (68-01-3960)	09/22/77-06/22/78	67,525
Cambridge Collaborative, Inc. Cambridge, Mass.	Assessment & Impact of Noise Regula- tions/Powered Lawn Mowers" (68-01-4399)	11/10/76-11/11/78	63,819
Cambridge Collaborative, Inc. Cambridge, Mass.	Assessment of Noise Regulations - Air Conditioners (Phase I & II) (68-01-4411)	12/10/76-05/10/78	83,019
CLV Industries, Inc. Cambridge, Mass.	Standards on EPA Design, Installation, and Operation of Fume Hoods" (68-01-4661)	06/20/77-10/20/77	14,750
Curran Assoc., Inc. Northampton, Mass.	Review of EIS of Drinking Water (68-01-4476)	02/16/77-08/16/77	43,639
Curran Assoc., Inc. Northampton, Mass.	Review of EIS's (68-01-4710)	09/30/77-11/30/78	24,376
Development Sciences, Inc. East Sandwich, Mass.	Support Services for the Development, Implementation, and Review and Defense of Regs. and Reports for Designated EPA Program Area III - Strategy Development (68-01-3856)	01/13/77-06/13/78	278,430

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Development Sciences, Inc. East Sandwich, Mass.	Resource Recovery Assistance to State Govts. and Federal Agency (68-01-4426)	01/13/77-06/13/78	\$278,430
E. G. & G. International, Inc. Bionics Operations Wareham, Mass.	Environmental Impact of Selected Toxic Water Pollutants (68-01-4636)	06/01/77-06/01/78	786,871
Energy Resources Co., Inc. Cambridge, Mass.	"Thermal Pollution Guidelines" (68-01-3459)	08/01/77-11/18/77	49,940
3 Energy Resources Co., Inc. Cambridge, Mass.	"Analytical Services to Assist in the Budget-Making Process" (68-01-3860)	08/02/77-10/02/77	18,000
Energy Resources Co., Inc. Cambridge, Mass.	"Environmental Assessment of National and Regional Energy Policy and Scien- tific Assessment of Selected Pesticide Organics, and Other Environmental Pollutants" (68-01-4169)	01/07/77-07/07/77	50,000
Energy Resources Co., Inc. Cambridge, Mass.	"An Evaluation of Administrative Impact of Selected 301(c) of the FWPCA as Amended" (68-01-4327)	09/27/76-12/27/77	80,025
Energy Resources Co., Inc. Cambridge, Mass.	Assessment of Noise Regulations - Air Conditioners (68-01-4410)	12/10/76-06/30/78	87,488

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Energy Resources Co., Inc. Cambridge, Mass.	Economic Impact Analysis - Hazardous Waste Management Reg. - Organic Chemi- cals Industry (68-01-4637)	05/27/77-03/26/78	\$ 93,051
Energy Resources Co., Inc. Cambridge, Mass.	"Statistical and Substantive Evalua- tion of Selected Oncogenic Studies" (68-01-4687)	07/11/77-01/11/79	120,000
Environmental Research and Technology, Inc. Concord, Mass.	Develop Point Source Diffusion Model ..... (68-02-2759)	09/23/77-07/22/78	77,297
Environmental Research and Technology, Inc. Concord, Mass.	Data Collection, EIS/EIA For Sewage Sludge Disposal Guidelines (68-01-3891)	08/29/77-09/30/78	238,129
GCA Corp. GCA Technology Div. Bedford, Mass.	Determination - Percentages - Vehicle Operating - Cold - Start Mode (68-02-2510)	11/29/76-05/15/77	53,610
GCA Corp. GCA Technology Div. Bedford, Mass.	Assist. Washington - Determ. Reasons for Non-attainment..... (68-02-2567)	12/29/76-03/14/77	19,900
GCA Corp. GCA Technology Div. Bedford, Mass.	Non-personal, Quick Reaction, Eg. Tech. Services (68-02-2607)	02/23/77-02/22/79	274,132
GCA Corp. GCA Technology Div. Bedford, Mass.	Preliminary Environmental Assessment of CAFB Proc. .... (68-02-2632)	04/19/77-06/30/78	109,937

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
MASSACHUSETTS (Cont.)			
GCA Corp. GCA Technology Div. Bedford, Mass.	Preparation and Char. of Environmental - Biological Experiments (68-02-2771)	09/29/77-09/28/78	\$74,835
GCA Corp. GCA Technology Div. Bedford, Mass.	Air Monitoring Data Management Evalua- tion - Baltimore AQCR (68-02-2810)	08/04/77-02/04/78	36,695
GCA Corp. GCA Technology Div. Bedford, Mass.	Revise and Apply Co. Hot Spot Guide- lines (68-02-2831)	07/26/77-11/26/77	45,299
2 GCA Corp. GCA Technology Div. Bedford, Mass.	Verification and Update - New Jersey, New York and Mid-Hudson AQMAS (68-02-2866)	09/29/77-06/29/78	64,585
GCA Corp. GCA Technology Div. Bedford, Mass.	"Studies of Stationary Source Air Enforcement Proceedings and Compliance Monitoring" (68-01-4143)	09/26/76-09/26/77	603,065
GCA Corp. GCA Technology Div. Bedford, Mass.	"Feasibility Study for State/Local Information Systems for Monitoring Air Quality Maintenance" (68-01-4354)	09/30/76-06/30/77	49,256
GCA Corp. GCA Technology Div. Bedford, Mass.	Auto Emissions Inspection/Maintenance Programs (68-01-4458)	02/25/77-07/25/77	19,535

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Hamilton Standard Windsor Locks, Conn.	"Studies Covering Point Source Water Pollution Control and Treatment" (68-01-3280)	06/26/75-03/31/78	\$300,170
Harbridge House, Inc. Boston, Mass.	"The Environmental Protection Agy. Project Officers' Seminar" (68-01-4269)	05/05/77-10/05/77	99,579
Index Systems, Inc. Cambridge, Mass.	"An ADP System Audit of EPA's Office of Pesticide Programs" (68-01-3835)	01/03/77-09/03/77	79,000
Index Systems, Inc. Cambridge, Mass.	"Development of a Manual for Aid in Conducting or Evaluating Feasibility Studies" (68-01-3836)	04/24/77-05/31/77	15,000
International Data Corp. Waltham, Mass.	"Information Systems Planning Services" (68-01-3873)	08/23/77-08/23/78	15,000
JBF Scientific Corp. Burlington, Mass.	Disposal of Arsenic Bearing Wastes (68-03-2503)	12/09/76-12/08/78	110,939
JBF Scientific Corp. Wilmington, Mass.	In-place Pollutants/Michigan City (68-01-4336)	12/10/76-12/10/77	71,678
Laser Analytics, Inc. Lexington, Mass.	Det. of High Resolution Absorption Spectra., etc. (68-02-2482)	11/26/76-07/17/77	94,926

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (CONT.)</u>			
Marine Research, Inc. Falmouth, Mass.	Marine Benthic Infauna (68-01-3940)	09/21/77-09/21/78	\$ 35,000
Mass. Dept. of the Auditor Boston, Mass.	"Audit Services for Audit of EPA Grants to Municipalities and Inter- municipal Agencies in the State of Massachusetts" (68-01-4654)	08/10/77-08/10/78	21,450
Mass. Institute of Technology Ctr. for Policy Alternatives Cambridge, Mass.	"A Detailed Analysis of Regulatory Alternatives for Occupational Noise" (68-01-4133)	06/29/76-06/29/77	4,975
Meta Systems, Inc. Cambridge, Mass.	"Documentation of Several Aspects of the Study of the Land Use/Environ- mental Quality Relationship in Quinnipiac River" (68-01-2622)	05/10/74-03/15/77	5,944
Meta Systems, Inc. Cambridge, Mass.	"Study and Support of Comparative Schemes for River Basin Planning and Pollution Control in the U.S. and U.S.S.R." (68-01-3922)	09/12/77-12/12/77	18,811
Meta Systems, Inc. Cambridge, Mass.	"Technical Assistance on the River Basin Water Quality Planning and Management Project" (68-01-4361)	09/30/76-11/30/78	13,624

		<u>CONTRACTS</u>		
<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>	
<u>MASSACHUSETTS (CONT.)</u>				
Meta Systems, Inc. Cambridge, Mass.	"Best Available Technology Economic- ally Achievable (BATEA) Economic Impact Analysis for the Organic Chemicals Group and for the Forest Products Group" (68-01-4675)	07/22/77-10/22/79	\$628,702	
Northeastern University Boston, Mass.	"Evaluation of Data on Subjective Effects of Noise" (68-01-4223)	08/24/77-05/24/78	48,425	
37 Raytheon Company Lexington, Mass.	Construct Mobile Laser - Doppler Velocimeter, etc. (68-02-2784)	09/30/77-09/30/78	110,000	
Raytheon Company Burlington, Mass.	Operation of ONAC Information Retrieval System (68-01-4468)	04/05/77-04/05/78	226,830	
RDP, Inc. Waltham, Mass.	"Computer Program to Predict Noise Emission Level" (68-01-3837)	03/04/77-03/04/78	72,380	
The Research Corp. of New England Wethersfield, Conn.	"A Feasibility Study for Noise Emis- sion Data Base" (68-01-4656)	06/27/77-11/18/77	27,275	
Technology Consulting Group Boston, Mass.	"Economic Analysis - Chain Saws" (68-01-3894)	08/30/77-03/29/79	76,370	

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (CONT.)</u>			
Technology and Economics, Inc. Cambridge, Mass.	"Health and Welfare Effects of Noise" (68-01-4406)	11/26/76-11/26/77	\$159,431
Temple, Barker, and Sloane, Inc. Wellesley Hills, Mass.	"Review and Financial Analysis of Best Available Technology, New Source Performance Standards and Pretreatment Standards for the Steam Electric Utility Industry" (68-01-3877)	09/23/77-03/31/79	127,832
38 Temple, Barker, and Sloane, Inc. Wellesley Hills, Mass.	"Financial Analysis of the Impact of Environmental Regulations in the Electric Utility Industry" (68-01-4107)	06/07/76-06/07/78	149,896
Temple, Barker, and Sloan, Inc. Wellesley Hills, Mass.	"Economic Evaluation of Primary Drink- ing Water Regulations" (68-01-4163)	08/30/76-08/30/77	475,580
Thermo Electron Corp. Waltham, Mass.	Collection and Chromatographic Analysis for Nitrosamines (68-02-2766)	09/23/77-09/23/78	70,722
United Technologies Corp. Hamilton Standard Division Windsor Locks, Conn.	"Technical Analysis of Treatment Alternatives for Revised Effluent Limitation Guidelines for Electro- plating and the Machinery and Mechan- ical Products Manufacturing Point Source Categories" (68-01-4668)	07/14/77-08/14/78	702,154

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>MASSACHUSETTS (Cont.)</u>			
Urban Systems Resources & Engineering, Inc. Cambridge, Mass.	Eng. and Socio-Economic Impact of Evaluation of Wastewater Management Alt..... (68-03-2614)	09/29/77-09/29/78	\$ 89,338
Urban Systems Resources & Engineering, Inc. Cambridge, Mass.	"Data Research - Strategic Environ- mental Assessment System" (68-01-4358)	09/28/76-09/28/77	118,386
Urban Systems Resources & Engineering, Inc. Cambridge, Mass.	"Analysis of the Used Tire Problem" (68-01-4362)	08/30/76-10/15/76	17,520
Woods Hole Oceanographic Institute Woods Hole, Mass.	1976 Site-Specific Survey of Atlantic 2800 Meter Deep- water Radioactive Waste Dumpsite: Radiochemistry (68-01-3986)	10/05/77-10/04/78	65,000
TOTAL			<u>\$14,962,242</u>

CONTRACTS

<u>CONTRACTOR</u>	<u>CONTRACT</u>	<u>PERIOD OF AWARD</u>	<u>AMOUNT</u>
<u>RHODE ISLAND</u>			
Environmental Research Analyses, Inc. Narragansett, R.I.	Support Analytical Services: Metals, Hydrocarbons, etc. (68-03-2495)	11/22/76-11/22/78	\$ 42,240
R.I. Nuclear Science Cou. Narragansett, R.I.	Neutron Activation Analyses of Marine Samples (68-03-2543)	05/10/77-04/30/81	34,700
R.I., University of Graduate School of Oceanography Kingston, R.I.	Stat. and Experimental Design Contract (68-03-2480)	11/09/76-11/09/78	71,803
		<u>TOTAL</u>	<u>\$ 148,743</u>

CONTRACTS

CONTRACTOR

CONTRACT

PERIOD OF AWARD

AMOUNT

VERMONT

Agency of Environmental Conservation  
State of Vermont  
Montpelier, Vt.  
In conjunction with:  
GCA Corp.  
Bedford, Mass.

"Source Testing Wood-Fired Boilers  
and Wide-Bodied Cyclones Associated  
with the Wood Industry"  
(68-02-2607)

07/15/77-01/15/78

\$ 16,500

Dufresne-Henry Engineering Corp.  
North Springfield, Vt.

"Development of a Technical Bulletin  
to Supplement the EPA Guidelines for  
Sewer System Evaluation and Resulting  
Rehabilitation"  
(68-01-3110)

12/16/74-11/19/76

2,914

TOTAL

\$ 19,414