**COMPLIANCE REPORTS** 

For the Year Ended June 30, 2022

And Reports of Independent Auditor



TABLE OF CONTENTS

Report of Independent Auditor on the Schedule of Expenditures of Federal Awards	1-2
Report of Independent Auditor on Internal Control over Financial Reporting and on Compliance and Other Matters based on an Audit of the Financial Statements Performed in Accordance with Government Auditing Standards	3-4
Report of Independent Auditor on Compliance for Each Major Program and Report on Internal Control over Compliance Required by the Uniform Guidance	5-7
Schedule of Expenditures of Federal Awards	8-27
Notes to Schedule of Expenditures of Federal Awards	28-29
Schedule of Findings and Questioned Costs	30-33



## Report of Independent Auditor on the Schedule of Expenditures of Federal Awards

To the Board of Trustees Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation, and Georgia Institute of Technology Atlanta, Georgia

### Report on the Audit of the Schedule of Expenditures of Federal Awards

### **Opinion**

We have audited the accompanying Schedule of Expenditures of Federal Awards (the "Schedule") of Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation and Georgia Institute of Technology (collectively, the "Organization") for the year ended June 30, 2022, and the related notes to the schedule of expenditures of federal awards.

In our opinion, the accompanying Schedule presents fairly, in all material respects, the expenditures of federal awards of the Organization for the year ended June 30, 2022, in accordance with accounting principles generally accepted in the United States of America.

### Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards ("Uniform Guidance"). Our responsibilities under those standards and the Uniform Guidance are further described in the Auditor's Responsibilities for the Audit of the Schedule section of our report.

We are required to be independent of the Organization and to meet our other ethical responsibilities, in accordance with the relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

### Responsibilities of Management for the Schedule

Management is responsible for the preparation and fair presentation of the Schedule in accordance with accounting principles generally accepted in the United States of America and for the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of the Schedule that is free from material misstatement, whether due to fraud or error.

### Auditor's Responsibilities for the Audit of the Schedule

Our objectives are to obtain reasonable assurance about whether the Schedule as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance will always detect a material misstatement when it exists. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control. Misstatements are considered material if there is a substantial likelihood that, individually or in the aggregate, they would influence the judgment made by a reasonable user based on the Schedule.

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In performing an audit in accordance with generally accepted auditing standards, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material misstatement of the Schedule, whether due to fraud or error, and design and perform audit procedures responsive to those risks. Such procedures include examining, on a test basis, evidence regarding the amounts and disclosures in the Schedule.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Organization's internal control. Accordingly, no such opinion is expressed.
- Evaluate the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluate the overall presentation of the Schedule.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit, significant audit findings, and certain internal control-related matters that we identified during the audit.

### **Other Matters**

We have audited the financial statements of the business-type activities and each major fund of Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation (collectively, "GTRC") as of and for the year ended June 30, 2022, and the related notes to the financial statements, which collectively comprise GTRC's basic financial statements. We issued our report thereon dated September 19, 2022, which contained an unmodified opinion on those financial statements.

The State of Georgia Department of Audits and Accounts has audited the basic financial statements of Georgia Institute of Technology as of and for the year ended June 30, 2022, and related notes and has issued its report thereon based on the audit of the basic financial statements performed in accordance with auditing standards generally accepted in the United States of America dated December 19, 2022, which expressed an unmodified opinion on those financial statements and reports no findings in relation to internal control over financial reporting or compliance and other matters.

Atlanta, Georgia January 17, 2023

Cherry Bekaert LLP



## Report of Independent Auditor on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of the Financial Statements Performed in Accordance with Government Auditing Standards

To the Board of Trustees Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation Atlanta, Georgia

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the business-type activities, and each major fund of Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation (collectively, "GTRC") as of and for the year ended June 30, 2022, and the related notes to the financial statements which collectively comprise GTRC's basic financial statements, and have issued our report thereon dated September 19, 2022.

### Report on Internal Control over Financial Reporting

In planning and performing our audit of the financial statements, we considered GTRC's internal control over financial reporting ("internal control") as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements but not for the purpose of expressing an opinion on the effectiveness of GTRC's internal control. Accordingly, we do not express an opinion on the effectiveness of GTRC's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of GTRC's financial statements will not be prevented, or detected and corrected, on a timely basis. A significant deficiency is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses or significant deficiencies may exist that were not identified.

### **Report on Compliance and Other Matters**

As part of obtaining reasonable assurance about whether GTRC's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### **Purpose of this Report**

Cherry Bekaert LLP

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing and not to provide an opinion on the effectiveness of GTRC's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering GTRC's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

Atlanta, Georgia

September 19, 2022, except for the schedule of expenditures of federal awards which is dated January 17, 2023.



## Report of Independent Auditor on Compliance for Each Major Federal Program and on Internal Control over Compliance Required by the Uniform Guidance

To the Board of Trustees Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation, and Georgia Institute of Technology Atlanta, Georgia

### Report on Compliance for Each Major Federal Program

### **Opinion on Each Major Federal Program**

We have audited the compliance of Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation, and the Georgia Institute of Technology (collectively, the "Organization") with the types of compliance requirements described in the *OMB Compliance Supplement* that could have a direct and material effect on each of the Organization's major federal programs for the year ended June 30, 2022. The Organization's major federal programs are identified in the *Summary of Auditor's Results* section of the accompanying schedule of findings and questioned costs.

In our opinion, the Organization complied, in all material respects, with the types of compliance requirements referred to above that could have a direct and material effect on each of its major federal programs for the year ended June 30, 2022.

### **Basis for Opinion on Each Major Federal Program**

We conducted our audit of compliance in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and the audit requirements of Title 2 U.S. *Code of Federal Regulations* Part 200, *Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards* ("Uniform Guidance"). Our responsibilities under those standards and the Uniform Guidance are further described in the *Auditor's Responsibilities for the Audit of Compliance* section of our report.

We are required to be independent of the Organization and to meet our other ethical responsibilities, in accordance with relevant ethical requirements relating to our audit. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion on compliance for each major federal program. Our audit does not provide a legal determination of the Organization's compliance with the compliance requirements referred to above.

### **Responsibilities of Management for Compliance**

Management is responsible for compliance with the requirements referred to above and for the design, implementation, and maintenance of effective internal control over compliance with the requirements of laws, statutes, regulations, rules, and provisions of contracts or grant agreements applicable to the Organization's federal programs.

### Auditor's Responsibilities for the Audit of Compliance

Our objectives are to obtain reasonable assurance about whether material noncompliance with the compliance requirements referred to above occurred, whether due to fraud or error, and express an opinion on the Organization's compliance based on our audit. Reasonable assurance is a high level of assurance but is not absolute assurance and, therefore, is not a guarantee that an audit conducted in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance will always detect material noncompliance when it exists. The risk of not detecting material noncompliance resulting from fraud is higher than for that resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

Noncompliance with the compliance requirements referred to above is considered material if there is a substantial likelihood that, individually or in the aggregate, it would influence the judgment made by a reasonable user of the report on compliance about the Organization's compliance with the requirements of each major federal program as a whole.

In performing an audit in accordance with generally accepted auditing standards, *Government Auditing Standards*, and the Uniform Guidance, we:

- Exercise professional judgment and maintain professional skepticism throughout the audit.
- Identify and assess the risks of material noncompliance, whether due to fraud or error, and design and
  perform audit procedures responsive to those risks. Such procedures include examining, on a test
  basis, evidence regarding the Organization's compliance with the compliance requirements referred to
  above and performing such other procedures as we considered necessary in the circumstances.
- Obtain an understanding of the Organization's internal control over compliance relevant to the audit in
  order to design audit procedures that are appropriate in the circumstances and to test and report on
  internal control over compliance in accordance with the Uniform Guidance, but not for the purpose of
  expressing an opinion on the effectiveness of the Organization's internal control over compliance.
  Accordingly, no such opinion is expressed.

We are required to communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and any significant deficiencies and material weaknesses in internal control over compliance that we identified during the audit.

### Other Matters

The results of our auditing procedures disclosed instances of noncompliance which are required to be reported in accordance with the Uniform Guidance and which are described in the accompanying schedule of findings and questioned costs as item 2022-001. Our opinion on each major federal program is not modified with respect to these matters.

Government Auditing Standards requires the auditor to perform limited procedures on the Organization's response to the noncompliance findings identified in our audit described in the accompanying schedule of findings and questioned costs. The Organization's response was not subjected to the other auditing procedures applied in the audit of compliance and, accordingly, we express no opinion on the response.

### Report on Internal Control over Compliance

A deficiency in internal control over compliance exists when the design or operation of a control over compliance does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, noncompliance with a type of compliance requirement of a federal program on a timely basis. A material weakness in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance, such that there is a reasonable possibility that material noncompliance with a type of compliance requirement of a federal program will not be prevented, or detected and corrected, on a timely basis. A significant deficiency in internal control over compliance is a deficiency, or a combination of deficiencies, in internal control over compliance with a type of compliance requirement of a federal program that is less severe than a material weakness in internal control over compliance, yet important enough to merit attention by those charged with governance.

Our consideration of internal control over compliance was for the limited purpose described in the *Auditor's Responsibilities for the Audit of Compliance* section above and was not designed to identify all deficiencies in internal control over compliance that might be material weaknesses or significant deficiencies in internal control over compliance. Given these limitations, during our audit we did not identify any deficiencies in internal control over compliance that we consider to be material weaknesses, as defined above. However, material weaknesses or significant deficiencies in internal control over compliance may exist that were not identified.

Our audit was not designed for the purpose of expressing an opinion on the effectiveness of internal control over compliance. Accordingly, no such opinion is expressed.

The purpose of this report on internal control over compliance is solely to describe the scope of our testing of internal control over compliance and the results of that testing based on the requirements of the Uniform Guidance. Accordingly, this report is not suitable for any other purpose.

Atlanta, Georgia January 17, 2023

Cherry Bekaert LLP

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Research and Development-Cluster:		- Name of	<u> </u>	
Department of Agriculture				
Agriculture and Food Research Initiative (AFRI)	10.310		\$ -	\$ 686,692
Wood Utilization Assistance	10.674		-	36,910
Agricultural Research Basic and Applied Research Passed through from:				
KWJ ENGINEERING INC/NEWARK, CA	10.001	145131	-	77,167
OREGON STATE UNIVERSITY/CORVALLIS, OR	10.001	J2285A-C	-	22,961
Specialty Crop Block Grant Program - Farm Bill Passed through from:				
GEORGIA DEPARTMENT OF AGRICULTURE/ATLANTA, GA	10.170	21SCBPGA1021-00	_	847
UNIVERSITY OF GEORGIA/ATHENS, GA	10.170	RE680-207/S001565	-	(12,039)
Agriculture and Food Research Initiative (AFRI) Passed through from:				
GEORGIA DEPARTMENT OF AGRICULTURE/ATLANTA, GA	10.310	USDA/AMS 2018 SP CROP CLOCK GR	-	(117)
UNIVERSITY OF FLORIDA/	10.310	2018-67013-27452	-	1,324
UNIVERSITY OF FLORIDA/ US ENDOWMENT FOR FORESTRY AND COMMUNITIES/GREENVILLE, SC	10.310 10.310	SUB00003042 E18-16	-	64,007 34,133
US ENDOWMENT FOR FORESTRY AND COMMUNITIES/GREENVILLE, SC	10.310	E10-10		-
Department of Commerce			-	911,885
Economic Development_Technical Assistance	11.303		-	120,000
Economic Adjustment Assistance Trade Adjustment Assistance for Firms	11.307 11.313		6,916 178,902	324,720 537,242
Climate and Atmospheric Research	11.431		176,902	247,581
Measurement and Engineering Research and Standards	11.609		49,720	2,104,869
Manufacturing Extension Partnership Minority Business Resource Development	11.611 11.802		276,500	409,087 765,057
MBDA Business Center	11.805		270,300	(126)
Ocean Exploration				
Passed through from:				
MOTE MARINE LABORATORY/SARASOTA, FL	11.011	MML 105-320	-	2,509
Cluster Grants Passed through from:				-
EMORY UNIVERSITY/ATLANTA, GA	11.020	A391823	-	110,915
Sea Grant Support				
Passed through from:	11.417	SUB 00002404		9,398
UNIVERSITY OF GEORGIA/ATHENS, GA UNIVERSITY OF GEORGIA/ATHENS, GA	11.417	SUB00002257	-	55,948
UNIVERSITY OF GEORGIA/ATHENS, GA UNIVERSITY OF GEORGIA/ATHENS, GA	11.417 11.417	SUB00002329 SUB00002640	-	3,493 20,440
UNIVERSITY OF GEORGIA/ATHENS, GA	11.417	SUB00002641	=	24,733
Coastal Zone Management Administration Awards				
Passed through from: GEORGIA SOUTHERN UNIVERSITY/STATESBORO, GA	11.419	39G2905-GATECH		9,528
GA DEPT NATURAL RESOURCES/	11.419	AGR DTD 28 JUL 2020	-	13,802
GA DEPT NATURAL RESOURCES/	11.419	GCAMP GWRAP PORTAL MAINT	-	10,000
Climate and Atmospheric Research				
Passed through from: FLORIDA STATE UNIVERSITY/TALLAHASSEE, FLA	11.431	R000002728	_	24,626
Weather and Air Quality Research				
Passed through from:				
UNIVERSITY CORPORATION FO	11.459	SUBCON002177	-	(4,249)
Integrated Ocean Observing System (IOOS)				
Passed through from: NATL FISH & WILDLIFE FOUN/WASHINGTON, DC	11.473	0318.19.066115	84,487	180,535
	11.470	0010.10.000110	04,407	100,000
Center for Sponsored Coastal Ocean Research Coastal Ocean Program Passed through from:				
LEHIGH ŬNIVERSITY/BETHLEHEM, PA	11.478	543829-78002	-	57,622
Measurement and Engineering Research and Standards				
Passed through from:	44.000	0.00040.00		454.440
COLORADO STATE UNIVERSITY/COLLINS, CO	11.609	G-99042-03	-	151,449
Arrangements for Interdisciplinary Research Infrastructure				
Passed through from: NIIMBL/WASHINGTON, DC	11.619	PC2.2-122	_	20,824
Total Department of Commerce			596,525	5,200,003
Department of the Army				
Basic and Applied Scientific Research	12.300		5,098,922	24,767,460
Military Medical Research and Development Basic Scientific Research	12.420 12.431		161,387 42,748,294	752,796 231,937,512
Basic Scientific Research Basic, Applied, and Advanced Research in Science and Engineering	12.431		42,748,294	2,590,231
Research and Technology Development	12.910		81,404	178,645
Military Medical Research and Development				
Passed through from:				
	12.420	SUBK00013481	_	52,539

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Basic Scientific Research			300.00ipioitt	
Passed through from:				
FLORIDA STATE UNIVERSITY/TALLAHASSEE, FLA	12.431	#R000002607	\$ -	\$ 21,143
PURDUE UNIVERSITY/WEST LAFAYETTE, IN	12.431	13000844-026	-	242,671
EARTHLY DYNAMICS CORPORATION/ATLANTA,GA	12.431	144320	-	17,632
MILLENNITEK LLC/KNOXVILLE, TN	12.431	144639	-	262,251
CARBONICS INC/CULVER CITY, CA	12.431	145449	-	59,160
MILLENNITEK LLC/KNOXVILLE, TN	12.431	147839	-	36,882
ENGINEERING AND SOFTWARE SYSTEM SOLUTIONS INC (ES3)/SAN DIEGO, CA MXD (MANUFACTURING X DIGITAL)/CHICAGO,IL	12.431 12.431	17119 2020-09	-	35,172 43,245
GIRD SYSTEMS INC./CINCINATTI, OH	12.431	42-004-0321TM70	-	120,413
UNIVERSITY OF ARIZONA/TUCSON, AZ	12.431	530518	_	21,910
UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA	12.431	572622	_	871,753
CORNELL UNIVERSITY/ITHACA, NY	12.431	76091-10525	_	19,175
DIGITAL ANALOG INTEGRATION INC./AUBURN,AL	12.431	AGMT DTD 18-NOV-2015	_	47,385
AUTONOMOUS SOLUTIONS INC./MENDON, UT	12.431	AGMT DTD 19-JUN-2020	-	239,794
PURDUE UNIVERSITY/WEST LAFAYETTE, IN	12.431	AWD-001412	-	40,028
SEMI/MILPITAS, CA	12.431	FT-19-20-P198	-	316,485
SEMI/MILPITAS, CA	12.431	FT19-21-206	-	314,473
MAYO CLINIC/ROCHESTER, MN	12.431	GEO-259318-01	-	84,612
ALCATERA/LOS ANGELES,CA	12.431	GTRC 143327 DTD 08/24/2020	-	56,786
HILL TECHNICAL SOLUTIONS INC/HUNTSVILLE, AL	12.431	OTA-CF-2020PO-1	-	36,845
ENGINEERING AND SOFTWARE SYSTEM SOLUTIONS INC (ES3)/SAN DIEGO, CA	12.431	PO 17256	-	25,000
CORNERSTONE RESEARCH GROUP/DAYTON, OH	12.431	PO 2020-1714	-	1,640
Basic, Applied, and Advanced Research in Science and Engineering				
Passed through from: UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA	10.630	#576905		92,344
BOEING RESEARCH & TECHNOLOGY/SEATTLE,WA	12.630 12.630	1982655		192,190
SOUTHWEST RESEARCH INSTITUTE/	12.630	P99000NS	_	30,000
LOUISIANA STATE UNIVERSITY/BATON ROUGE, LA	12.630	PO-0000126336	-	6,572
ADVANCED REGENERATIVE MANUFACTURING INSTITUTE/MANCHESTER, NH	12.630	T0170	-	43,392
ADVANCED REGENERATIVE MANUFACTURING INSTITUTE/MANCHESTER, NH	12.630	T0171	-	52,036
ADVANCED REGENERATIVE MANUFACTURING INSTITUTE/MANCHESTER, NH ELEMENTUM 3D/ERIE,CO	12.630 12.630	T1075 W911NF20C0012/A2-7889	-	120,219 90,823
Research and Technology Development	12.000	770 7 771 20000 12712 7000		55,525
Passed through from:				
UNIVERSITY OF TEXAS AT DALLAS/RICHARDSON, TX	12.910	1907638		128,371
Total Department of the Army			48,090,003	263,949,585
Department of the Navy	12.300		9.064.770	20.052.204
Basic and Applied Scientific Research	12.630		8,061,772	39,853,301
Basic, Applied, and Advanced Research in Science and Engineering	12.800		-	(9)
Air Force Defense Research Sciences Program Research and Technology Development	12.910		238,391	1,032,575 361,503
				,,,,,,
Basic and Applied Scientific Research Passed through from:				
UNIVERSITY OF WASHINGTON/SEATTLE, WA	12.300	#UWSC9065	-	(741)
BOEING RESEARCH & TECHNOLOGY/SEATTLE,WA	12.300	1451798	-	-
GLOBAL TECHNOLOGY CONNECTIONS/ATLANTA, GA	12.300	149448	-	41,997
UNIVERSITY OF CONNECTICUT/STORRS, CT	12.300	184733	-	486,228
PHASE IV INC/	12.300	2022-001	-	88,186
PHASE IV INC/	12.300	2022-002	-	10,191
CLEMSON UNIVERSITY/CLEMSON, SC	12.300	2190-202-2013781	-	94,180
COMBUSTION RESEARCH AND FLOW TECHNOLOGY INC / HUNTSVILLE, AL	12.300	21-C-0336/C828	-	150,219
PHYSICAL SCIENCES INC/ANDOVER, MA	12.300	87352-4233-46	-	(1,108)
UNIVERSITY OF MARYLAND/COLLEGE PARK, MD	12.300	94433-Z8312201	-	82,523
UNIVERSITY OF MARYLAND/COLLEGE PARK, MD	12.300	95497-Z8318201	-	98,790
ETEGENT TECHNOLOGIES LTD/CINCINNATI, OH	12.300	AGR DTD 11/24/2021	-	41,999
UNIVERSITY OF VIRGINIA/CHARLOTTESVILLE, VA	12.300	GG12136.159334	-	62,340
UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA	12.300	KR 705027	-	22,900
UNIVERSITY OF TENNESSEE/	12.300	N00164-20-2008-GEORGIA PO 10323	-	46,545
PHOTODIGM INC/RICHARDSON, TX	12.300		-	14,294
STRATEGIC ANALYSIS INC/ARLINGTON, VA PHYSICAL SCIENCES INC/ANDOVER, MA	12.300 12.300	SA-GAT-NRL-0135-2019 SC-8061-7420-021-001	-	(5,595) 126,352
PRINCETON UNIVERSITY/PLAINSBORO, NJ	12.300	SUB0000364	-	114,002
MAKAI OCEAN ENGINEERING/WAIMANALO, HI	12.300	SUB-2019-002	239,973	421,958
Total Department of the Navy	12.500	30B-2013-002	8,540,136	43,142,630
Department of the Air Force				
Basic and Applied Scientific Research	12.300		129,110	9,151,849
Basic, Applied, and Advanced Research in Science and Engineering	12.630		316,435	268,977
Air Force Defense Research Sciences Program	12.800		70,407,363	271,594,119
Mathematical Sciences Grants	12.901		-	46,344
Research and Technology Development	12.910		-	(10,824)
Basic, Applied, and Advanced Research in Science and Engineering				
Passed through from:				
AZIMUTH CORPORATION/BEAVERCREEK, OH	12.630	238-5404-GIT3	-	193,108

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

An Face Edwine Repearsh Searmer Program	Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Passet Breugh, from:					
VERLIS RESEARCHANGEL BILLIONERUE IM 12 200 11 11 11 11 11 11 11 11 11 11 11 11 1	Passed through from:	40.000	W4/4040	•	454.007
ARCTOS TER-MAN, DOLYAK, LITONS LLO DAYTON, CHI.  ARCTOS TER-MAN, DOLYAK, LITONS LLO DAYTON, CHI.  ARCTOS TER-MAN, DOLYAK, LITONS LLO DAYTON, CHI.  LARIMET VANAMIC CORPORADONAL TANA, AG.  LARIMET VANAMIC CORPORADONAL TANA, AG.  LARIMET VANAMIC CORPORADONAL TANA, AG.  ARADONAL TANAMIC CORPORADONAL CAI.  ARADONAL TANAMIC CORPORADONAL CAI.  ARADONAL TANAMIC CORPORATION CAI.  ARADONAL TANAMIC CORPORAL TO THE CORPORATION CAI.  ARADONAL TANAMIC CORPORATION CAI.  ARADONAL TA	UNIVERSITY OF CALIFORNIA/SANTA BARBARA,CA VERUS RESEARCH/ALBUQUERQUE NM			\$ -	
Destrict DYNAMICS DOPEROR (NO. 14 CAR. 12 CA	ARCTOS TECHNOLOGY SOLUTIONS LLC/ DAYTON, OH			-	
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THE BOBNIG COMPANYST I, CUISE, MOY AMALEIGH. NO. 12,800 MARCE AND STATE AND	ARCTOS TECHNOLOGY SOLUTIONS LLC/ DAYTON, OH			-	
AMERICA JAMES YOUNGSTOWN, OH 2,000 20020099 0.010-01-011 1.79-040 ARTOTOS TECHNICLOYS (OLD CULTIMOS LIC DAYTON, OH 2,000 20020091-00-01-01-01-01-01-01-01-01-01-01-01-01	THE BOEING COMPANY/ST. LOUIS, MO	12.800	1944274	-	7,776
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NATIONAL AEROSPACE SOLUTION LICARNOLD AFB.TN   128.00   42.015   22.216	CLEMSON UNIVERSITY/CLEMSON, SC		2357-200-2015033	-	
LINCOLN LABORATORYAMSSAGHISETTS INST OF TECH  2.00 0700437192 (1.26.00)  RECOMMENDATION LINWESSTYMM 1.2.00)  RECOMMENDATION LINWESSTYMM 1.0.00 (1.2.00)  RECOMMENDATION 1.0.00 (1.2.00)  RECOMMENDATIO	LUNA INNOVATIONS/BLACKBURG, VA			-	
FLORIDA NTERNATIONAL UNIVERSITYMAMM. FL CROWN STEWARD MANUER STEWA				-	
FLORIDA INTERNATIONAL UNIVERSITY/MAMILE I 12.800 800011043-01UG - 55.115 STONE PROOK IN WISE STONE PROOK I	FLORIDA INTERNATIONAL UNIVERSITY/MIAMI, FL			-	
BINGHAMTON INNIVERSITY/BINGHAMTON, NY	FLORIDA INTERNATIONAL UNIVERSITY/MIAMI, FL	12.800	800011034-01UG	-	55,113
BINGHAMTON LINNYERSITYORNOHAMTON, NY 12.800 8754511 (18002)				-	
CORNELL LUNICESTITITHACA, NY 12.80 88102-11285				-	
BOOZ_ALLEN AND HAMILTON INC				-	
NEXTFLEX/SAN LOSE, CA   1.8				-	
ARIZONA STATE UNINERSITYMERIE, AZ  ARIZONA STATE UNINERSITYMERIE, AZ  ATLAS DEVICES LLOBIGSTON, MA  12.800  PA68501-15-24601  PA68501-15-2				-	
SPACE DYNAMICS LAB ATLAS DEVICES LICRIOSTON, MA 12 800 FA98691-1988 S - 62,2453 BINGHAMTON UNIVERSITY/BINGHAMTON, NY 12 800 FA9869-15-2-5401 G - 76,8650-15-2-5401 G - 76,8650-1				-	
BINCHAMTON UNIVERSITY/BINCHAMTON, NY	SPACE DYNAMICS LAB			-	
OPTOXENSE INC./SAN RAMON, CA         12.800         GTRC SUBK 114593 DTD 9-21-2020         4 31,58           LONG WAVE INC/ORLA/HOMA CITY, CK         12.800         M516-21-36         3.26,14           FLEXTECH ALLIANCE INC/SAN JOSE, CA         12.800         N518-21-36         3.845-2           APPLIED RESEARCH ASSOCIATES LEXINSTON, MA         12.800         PC19-21-14-M0006         - 2.5387           SOUTHWESTERN OHIO COUNCIL FOR HIGHER EDUCATION/DAYTON, OH         12.800         S-192-11-14-M0006         - 78,447           BUSINDOATON, OH         12.800         S-192-11-14-M0006         - 78,447           UES INCIDATON, OH         12.800         S-182-11-14-M012         - 13,447           UES INCIDATON, OH         12.800         S-202-16-001         - 2.230           INNOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)/DAYTON, OH         12.800         S820255         - 69,427           SPECITRAL ENRGIES ILLC / DAYTON, OH         12.800         S820256         - 69,427           SPECITRAL ENRGIES ILLC / DAYTON, OH         12.800         S820256         - 70,852,000           TOLAI DEPARTMENT OF the PEROLUC GROUP/BEAVERCREEK, OH         12.800         TASK ORDER NO 004         - 2.201           Scientific Research         12.800         TASK ORDER NO 004         - 70,852,000         - 70,852,000           Baui	ATLAS DEVICES LLC/BOSTON, MA	12.800	FA864921P0858	-	82,453
LONG WAVE INCIDICAL-HONAC CITY, OK				-	
FLEXTECH ALLIANCE INCISAN JOSE, CA				-	
APPLIED RESEARCH ASSOCIATES/LEXINGTON, MA SOUTHWESTERN DIO COUNCIL FOR HIGHER EDUCATION/DAYTON, OH 12.800 S-162-11-MR010 12.800 S-16				-	
SOUTHWESTERN OHIOC COUNGLE FOR HIGHER EDUCATION/DAYTON,OH				-	
UES INCIDATYON, OH         12.800         \$-162-11-MR0011         6         15,100           UES INCIDATYON, OH         12.800         \$-162-11-MR011         6         3.232           UES INCIDATYON, OH         12.800         \$-20-01-001         6         3.232           INNOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)DAYTON, OH         12.800         \$-80-02-10-001         6         9.9427           SPECTRAL ENERGIES LLC / DAYTON, OH         12.800         \$820265         6         9.9427           SPECTRAL ENERGIES LLC / DAYTON, OH         12.800         \$82122-001-1         6         2.055           NIRVAN TECHNOLOGIES INCMORAINE, OH         12.800         \$8505-001-1         7.0582.900         28.055.527           Department of Defonse         7.0582.900         28.055.527         2.051.527         2.05				-	
UES INCIDATYON, OH         12,800         S-162-11-MR012         1,304           UES INCIDATYON, OH         12,800         S-201-10-001         2,323           UES INCIDATYON, OH         12,800         S-200-210-001         3,232           INNOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)/DAYTON, OH         12,800         S820255         -         6,594,27           INNOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)/DAYTON, OH         12,800         S820256         -         6,22,75           NIEVANA TECHNOLOGIES INC/MORAINE, OH         12,800         S89550-001-1         -         -         6,333           TOLD PERFOLUCO GROUPEEA/VERCREEK, OH         12,800         TSK ORDER NO.004         -         7,958,290         285,105,273           Department of the Air Force           Telepations of Mark Proces           Basic And Applied Scientific Research - Combating Wespons of Mass Destruction         12,251         -         1,793,879         4,592,803           Scientific Research - Combating Wespons of Mass Destruction         12,251         -         -         1,793,879         4,592,803           Scientific Research - Combating Wespons of Mass Destruction         12,251         -         -         1,793,879         4,592,803           Scientific Research - Combating Wespons of Mass Destruction				-	
UES INCIDATON, OH         12.800         \$-200-210-001         -         23.230           INNOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)/DAYTON, OH         12.800         \$B820251         -         2,715           INNOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)/DAYTON, OH         12.800         \$B820250-01-1         -         0.20,57           NIRVANA TECHNOLOGIES INC/MORAINE, OH         12.800         \$B8550-001-1         -         0.20,57           NIRVANA TECHNOLOGIES INC/MORAINE, OH         12.800         \$B8550-001-1         -         70.852.908         28.510.527           Total Department of the Air Force           Department of Definase           Basic and Applied Scientific Research - Combaing Weapons of Mass Destruction         12.301         -         1,793.879         4,592.803           Scientific Research - Combaing Weapons of Mass Destruction         12.801         -         -         7,763         455.003           Basic Scientific Research - Combaing Weapons of Mass Destruction         12.801         -         -         -         4,592.803           Scientific Research - Combaing Weapons of Mass Destruction         12.801         -         -         -         -         -         -         -         -         -         -         -         -         -				-	
NINOVATIVE SCIENTIFICS SOLUTIONS INC (ISSI)DAYTON, OH		12.800	S-162-11-MR012	-	1,324
NINOVATIVE SCIENTIFIC SOLUTIONS INC (ISSI)/DAYTON, OH				-	
SPECTRAL ENERGIES LLC / DAYTON, OH				-	
NIRVANA TECHNOLOGIS NICKMORAINE, OH				-	
THE PERDUCO GROUPBEAVERCREEK, OH				-	
Department of the Air Force   Pase				-	
Basic and Applied Scientific Research   12.301   1.793,879   4.592,803   3.501   1.5				70,852,908	
Scientific Research - Combating Weapons of Mass Destruction   12.351   453.091   453	Department of Defense				
Basic, Applied, and Advanced Research in Science and Engineering         12.431         -         495,842           Basic, Applied, and Advanced Research Sciences Program         12.630         -         6,932,686         105,654,756           Air Force Defense Research Sciences Program         12.910         -         4,668,966         8,603,579           Basic and Applied Scientific Research         -         -         1,948         -         4,668,966         8,603,579           Basic and Applied Scientific Research         -         -         -         7,9089         -         7,9089           Basic Applied Scientific Research         -         -         -         7,9089         -         -         7,9089           Basic Applied Applied Scientific Research         -         -         -         7,9089         -         -         7,9089           Basic Applied Applied Scientific Research         -         -         -         -         -         7,9089         -         -         -         -         9,086         -				1,793,879	4,592,803
Basic, Applied, and Advanced Research in Science and Engineering         12,630         6,932,268         105,654,756           Air Force Defense Research Sciences Program         12,800         4,668,966         109,481           Research and Technology Development         12,910         4,668,966         8,603,579           Basic and Applied Scientific Research         79,089         79,089         79,089         79,089           Passed through from:         12,300         122356         2,961         2,961           UNIV OF SO CA         12,300         127224382         2         2,23,421           PURDUB UNIV         12,300         12,300         13000648-032         2         23,421           PURDUB UNIV STRUM         12,300         174646         2         59,896           PRECISE SYSTEMS INC         12,300         18-0850/C745         2         59,896           PRECISE SYSTEMS INC         12,300         18-00850/C745         2         49,096           UNIVERSITY OF ROCHESTER, NY         12,300         3602-AVY-28/GTRI         2         49,096           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12,300         3602-AVY-28/GTRI         2         2,272           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12,300         ASM TOT 12-02-2021				77,663	
Air Force Defense Research Sciences Program   12.800   12.910   4.668,966   8.603.579					
Research and Technology Development   Sasic and Applied Scientific Research				6,932,268	
Basic and Applied Scientific Research   Passed through from:   UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA   12.300   #108547341   - 79,089     JOHNS HOPKINS UNIV   12.300   122356   - 2,961     UNIV OF SO CA   12.300   122356   - 223,421     PURDUE UNIV   12.300   13000648-032   - 233,421     PURDUE UNIV   12.300   13000648-032   - 3833     JOHNS HOPKINS UNIV   12.300   174646   - 58,986   - 59,896     PRECISE SYSTEMS INC   12.300   18-0850/C745   - 59,896     PRECISE SYSTEMS INC   12.300   19-0044-21   - (6,901)     LUNIA LABS USA LLC   12.300   3602-NVY-2S/GTRI   - 49,096     UNIVERSITY OF ROCHESTER/ROCHESTER, NY   12.300   417645G/UR FAO GR510976   - 8,489     VIASAT INC   12.300   4208464   - 2,2720     UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA   12.300   4208464   - 2,2720     UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA   12.300   575186   - 12.3461     BAE SYSTEMS   12.300   47590   47590   47590   - 475,803     MATERIALS TECHNOLOGIES CO   12.300   AGMT DTD 12-02-2021   - 26,640     SYNTEK TECHNOLOGIES CO   12.300   AGMT DTD 3/31/2022   - 388     LUNIA INNOVATIONS   12.300   AGR DTD 11/1/22/2019   - 5,317     DYNETICS INC   12.300   DISC11918BTJ00021   - 6,157     DYNETICS INC   12.300   DISC21918BTJ00021   - 9,141     R-DEX SYSTEMS/ MARIETTA,   12.300   DISC21918BTJ00021   - 18,26,640     DYNETICS INC   12.300   DISC21918BTJ00021   - 18,26,640     DYNETICS I				4 660 066	
Passed through from:   UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA   12.300		12.310		4,000,900	0,003,379
UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA         12.300         #108547341         - 79,089           JOHNS HOPKINS UNIV         12.300         122356         - 2,961           UNIV OF SO CA         12.300         127224382         - 223,421           PURDUE UNIV         12.300         13000648-032         - 833           JOHNS HOPKINS UNIV         12.300         174646         - 51,883           CRAFT TECH/HUNTSVILLE, AL         12.300         18-C-0850/C745         - 59,866           PRECISE SYSTEMS INC         12.300         19-0044-21         - 6,901           LUNA LABS USA LLC         12.300         3602-NNY-2S/GTRI         - 6,901           UNIVERSITY OF ROCHESTER/ROCHESTER, NY         12.300         4176456/UR FAO GR510976         - 8,489           VIASAT INC         12.300         4208464         - 2,720           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12.300         578186         - 12,306           BAE SYSTEMS         12.300         A7590         - 478,803           MATERIALS TECHNOLOGIES CO         12.300         AGMT DTD 12-02-2021         - 26,640           SYNTEX TECHNOLOGIES         12.300         AGR DTD 12/19/16         - (166)           BORGWARNER/ ARDEN, NC         12.300         AGR DTD 11/12/21/2019					
JOHNS HOPKINS UNIV	UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA	12.300	#108547341	-	79,089
PURDUE UNIV         12.300         13000648-032         -         833           JOHNS HOPKINS UNIV         12.300         174646         -         1,583           CRAFT TECH/HUNTSVILLE, AL         12.300         18-C0850/C745         -         59,896           PRECISE SYSTEMS INC         12.300         19-0044-21         -         (6,901)           LUNA LABS USA LLC         12.300         3602-NVY-28/GTRI         -         49,096           UNIVERSITY OF ROCHESTER/ROCHESTER, NY         12.300         417645G/UR FAO GR510976         -         8,489           VIASAT INC         12.300         4208464         -         2,720           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12.300         578186         -         123,461           BAE SYSTEMS         12.300         975057         -         (506)           BOOZ, ALLEN, & HAMILTON         12.300         A7590         -         478,803           MATERIALS TECHNOLOGIES CO         12.300         AGMT DTD 12-02-2021         -         26,640           SYNTEK TECHNOLOGIES         12.300         AGMT DTD 3/31/2022         -         398           LUNA INNOVATIONS         12.300         AGR DTD 11/22/2019         -         5,317           DYNETICS INC		12.300	122356	-	2,961
JOHNS HOPKINS UNIV				-	
CRAFT TECH/HUNTSVILLE, AL       12.300       18-C-0850/C745       -       59,896         PRECISE SYSTEMS INC       12.300       3602-NVY-28/GTRI       -       (6,901)         LUNA LABS USA LLC       12.300       3602-NVY-28/GTRI       -       49,096         UNIVERSITY OF ROCHESTER/ROCHESTER, NY       12.300       417645G/UR FAO GR510976       -       8,489         VIASAT INC       12.300       4208464       -       2,720         UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA       12.300       578186       -       12,3461         BAE SYSTEMS       12.300       975057       -       (506)         BOOZ, ALLEN, & HAMILTON       12.300       A7590       -       478,803         MATERIALS TECHNOLOGIES CO       12.300       AGMT DTD 12-02-2021       -       26,640         SYNTEK TECHNOLOGIES       12.300       AGRT DTD 3/31/2022       -       398         LUNA INNOVATIONS       12.300       AGR DTD 11/22/19/16       -       (166)         BORGWARNER/ ARDEN, NC       12.300       ARG DTD 11/22/2019       -       5,317         DYNETICS INC       12.300       DI-SC-15-05       -       (57)         DYNETICS INC       DI-SC 19-40/TO 0001       -       1,982,668      <				-	
PRECISE SYSTEMS INC         12.300         19-0044-21         - (6,901)           LUNA LABS USA LLC         12.300         3602-NVY-2S/GTRI         - 49,096           UNIVERSITY OF ROCHESTER, NY         12.300         417645G/UR FAO GR510976         - 8,489           VIASAT INC         12.300         4208464         - 2,720           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12.300         578186         - 123,461           BAE SYSTEMS         12.300         975057         - 6,506           BOOZ, ALLEN, & HAMILTON         12.300         A7590         - 478,803           MATERIALS TECHNOLOGIES CO         12.300         AGMT DTD 12-02-2021         - 26,640           SYNTEK TECHNOLOGIES         12.300         AGMT DTD 3/31/2022         - 398           LUNA INNOVATIONS         12.300         AGR DTD 11/22/2019         - 5,317           DYNETICS INC         12.300         ARG DTD 11/22/2019         - 5,317           DYNETICS INC         12.300         DI-SC-15-05         - 6(57)           DYNETICS INC         12.300         DI-SC-19-40/TO 0001         - 1,982,668           DYNETICS INC         DI-SC-19-40/TO 0001         - 91,441           R-DEX SYSTEMS/ MARIETTA,         12.300         GTARC 144208 AGMT DTD 07242020         - 162,157 <td></td> <td></td> <td></td> <td>-</td> <td></td>				-	
LUNA LABS USA LLC       12.300       3602-NVY-2S/GTRI       -       49.096         UNIVERSITY OF ROCHESTER, NY       12.300       417645G/UR FAO GR510976       -       8.489         VIASAT INC       12.300       4208464       -       2.720         UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA       12.300       578186       -       123,461         BAE SYSTEMS       12.300       975057       -       (506)         BOOZ, ALLEN, & HAMILTON       12.300       A7590       -       478,803         MATERIALS TECHNOLOGIES CO       12.300       AGMT DTD 12-02-2021       -       26,640         SYNTEK TECHNOLOGIES       12.300       AGMT DTD 3/31/2022       -       398         LUNA INNOVATIONS       12.300       AGR DTD 1/21/9/16       -       (166)         BORGWARNER/ ARDEN, NC       12.300       ARG DTD 11/22/2019       -       5,317         DYNETICS INC       12.300       DI-SC-15-05       -       (57)         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       -       1,982,668         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       -       1,982,668         DYNETICS INC       0       0       0       0       0       0 <td< td=""><td></td><td></td><td></td><td>-</td><td></td></td<>				-	
UNIVERSITY OF ROCHESTER/ROCHESTER, NY         12.300         417645G/UR FAO GR510976         -         8,489           VIASAT INC         12.300         4208464         -         2,720           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12.300         578186         -         12,3461           BAE SYSTEMS         12.300         975057         -         (506)           BOOZ, ALLEN, & HAMILTON         12.300         A7590         -         478,803           MATERIALS TECHNOLOGIES CO         12.300         AGMT DTD 12-02-2021         -         26,643           SYNTEK TECHNOLOGIES         12.300         AGR DTD 12/19/16         -         (166)           BORGWARNER/ARDEN, NC         12.300         AGR DTD 11/22/2019         -         5,317           DYNETICS INC         12.300         DI-SC-15-05         -         (57)           DYNETICS INC         12.300         DI-SC-19-40/TO 0001         -         1,982,668           DYNETICS INC         12.300         DI-SC-19-40/TO 0001         -         1,982,668           DYNETICS INC         12.300         DI-SC-19-40/TO 0001         -         1,982,668           DYNETICS INC         0         0         0         0         0         0         0					
VIASAT INC         12.300         4208464         -         2,720           UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA         12.300         578186         -         123,461           BAE SYSTEMS         12.300         975057         -         (506)           BOOZ, ALLEN, & HAMILTON         12.300         A7590         -         478,803           MATERIALS TECHNOLOGIES CO         12.300         AGMT DTD 12-02-2021         -         26,640           SYNTEK TECHNOLOGIES         12.300         AGM DTD 3/31/2022         -         398           LUNA INNOVATIONS         12.300         AGR DTD 12/19/16         -         (166)           BORGWARNIER/ ARDEN, NC         12.300         ARG DTD 11/22/2019         -         5,317           DYNETICS INC         12.300         DI-SC-15-05         -         (57)           DYNETICS INC         12.300         DI-SC-19-40/TO 0001         -         1,982,668           DYNETICS INC         12.300         DISC-219-18BTJ.00021         -         1,982,668           DYNETICS INC         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0         0 <td< td=""><td></td><td></td><td></td><td>_</td><td></td></td<>				_	
UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA       12.300       578186       -       123,461         BAE SYSTEMS       12.300       975057       -       (506)         BOOZ, ALLEN, & HAMILTON       12.300       A7590       -       478,803         MATERIALS TECHNOLOGIES CO       12.300       AGMT DTD 12-02-2021       -       26,640         SYNTEK TECHNOLOGIES       12.300       AGMT DTD 3/31/2022       -       398         LUNA INNOVATIONS       12.300       AGR DTD 12/19/16       -       (166)         BORGWARNER/ ARDEN, NC       12.300       ARG DTD 11/22/2019       -       5,317         DYNETICS INC       12.300       DI-SC-15-05       -       (57)         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       -       1,982,668         DYNETICS INC       12.300       DISC-2191SBTJ00021       -       91,441         R-DEX SYSTEMS/ MARIETTA,       12.300       GTARC 144208 AGMT DTD 07242020       -       183         UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,       12.300       M200275       -       162,157				-	
BAE SYSTEMS       12.300       975057       - (506)         BOOZ, ALLEN, & HAMILTON       12.300       A7590       - 478,803         MATERIALS TECHNOLOGIES CO       12.300       AGMT DTD 12-02-2021       - 26,640         SYNTEK TECHNOLOGIES       12.300       AGMT DTD 3/31/2022       - 398         LUNA INNOVATIONS       12.300       AGR DTD 12/19/16       - (166)         BORGWARNER/ ARDEN, NC       12.300       ARG DTD 11/22/2019       - 5,317         DYNETICS INC       12.300       DI-SC-15-05       - (57)         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       - 1,982,668         DYNETICS INC       12.300       DISC-219-40/TO 0001       - 91,441         R-DEX SYSTEMS/ MARIETTA,       12.300       GTARC 144208 AGMT DTD 07242020       - 183         UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION       12.300       M2200275       - 162,157				-	
MATERIALS TECHNOLOGIES CO       12.300       AGMT DTD 12-02-2021       -       26,640         SYNTEK TECHNOLOGIES       12.300       AGMT DTD 3/31/2022       -       398         LUNA INNOVATIONS       12.300       AGR DTD 12/19/16       -       (166)         BORGWARNER/ ARDEN, NC       12.300       AGR DTD 11/12/2019       -       5,317         DYNETICS INC       12.300       DI-SC-15-05       -       (57)         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       -       1,982,668         DYNETICS INC       12.300       DISC-19-18BJJ00021       -       1,982,668         DYNETICS INC       12.300       DISC-19-80/TO 0001       -       1,982,668         DYNETICS INC       12.300       DISC-19-40/TO 0001       -       1,982,668         DYNETICS INC       12.300       DISC-19-40/TO 0001       -       1,833				-	
SYNTEK TECHNOLOGIES       12.300       AGMT DTD 3/31/2022       -       398         LUNA INNOVATIONS       12.300       AGR DTD 1/2/19/16       -       (166)         BORGWARNER/ ARDEN, NC       12.300       ARG DTD 11/22/2019       -       5,317         DYNETICS INC       12.300       DI-SC-15-05       -       (57)         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       -       1,982,668         DYNETICS INC       12.300       DISC-219-18BTJ.00021       -       91,441         R-DEX SYSTEMS/ MARIETTA,       12.300       GTARC 144208 AGMT DTD 07242020       -       183         UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,       12.300       M2200275       -       162,157				-	
LUNA INNOVATIONS     12.300     AGR DTD 12/19/16     - (166)       BORGWARNER/ ARDEN, NC     12.300     ARG DTD 11/122/2019     - 5,317       DYNETICS INC     12.300     DI-SC-15-05     - (67)       DYNETICS INC     12.300     DI-SC-19-40/TO 0001     - 1,982,668       DYNETICS INC     12.300     DISC21918BTJ00021     - 91,441       R-DEX SYSTEMS/ MARIETTA,     12.300     GTARC 144208 AGMT DTD 07242020     - 183       UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION     12.300     M2200275     - 162,157				-	
BORGWARNER/ ARDEN, NC       12.300       ARG DTD 11/22/2019       -       5,317         DYNETICS INC       12.300       DI-SC-15-05       -       (57)         DYNETICS INC       12.300       DI-SC-19-40/TO 0001       -       1,982,668         DYNETICS INC       12.300       DISC2191SBTJ00021       -       91,441         R-DEX SYSTEMS/ MARIETTA,       12.300       GTARC 144208 AGMT DTD 07242020       -       183         UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,       12.300       M2200275       -       162,157				-	
DYNETICS INC         12.300         DI-SC-15-05         -         (57)           DYNETICS INC         12.300         DI-SC-19-40/TO 0001         -         1,982,668           DYNETICS INC         12.300         DISC2191SBTJ00021         -         91,441           R-DEX SYSTEMS/ MARIETTA,         12.300         GTARC 144208 AGMT DTD 07242020         -         183           UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,         12.300         M2200275         -         162,157				-	
DYNETICS INC         12.300         DI-SC-19-40/TO 0001         -         1,982,668           DYNETICS INC         12.300         DISC21918BTJ00021         -         91,441           R-DEX SYSTEMS/ MARIETTA,         12.300         GTARC 144208 AGMT DTD 07242020         -         183           UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,         12.300         M2200275         -         162,157				-	
DYNETICS INC         12.300         DISC2191SBTJ00021         -         91,441           R-DEX SYSTEMS/ MARIETTA,         12.300         GTARC 144208 AGMT DTD 07242020         -         183           UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,         12.300         M2200275         -         162,157				-	
R-DEX SYSTEMS/ MARIETTA,       12.300       GTARC 144208 AGMT DTD 07242020       -       183         UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,       12.300       M2200275       -       162,157				-	
				-	
UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION, 12.300 M2200279 162,500 251,552	UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,	12.300	M2200275	-	162,157
	UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,	12.300	M2200279	162,500	251,552

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

ederal Grantor/Pass-Though brantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
ADVANCED TECHNOLOGY INTER	12.300	N660012291010	\$ -	\$ 332,603
LEIDOS INC	12.300	P010217722	· -	126,781
LEIDOS INC/MCLEAN, VA	12.300	P010230959 TO1	-	72,629
SAIC	12.300	P010260127	-	176,663
SAIC	12.300	PO10238931	-	179
ISLAND CREEK ASSOCIATES	12.300	PO-19C0618-01	-	1,069
PHYSICAL OPTICS CORP	12.300	POC# 10201-GTRI	-	(69,209)
LEIDOS, INC	12.300	RFP-7234-0219-007	-	(1,285)
ENVISIONEERING INC ENVISIONEERING INC	12.300 12.300	S20-16 S22-02	-	(797) 581,444
SOAR TECHNOLOGY INC	12.300	SC-19-005	-	10,233
SOAR TECHNOLOGY INC	12.300	SC-19-005		105,090
UNIVERSITY OF SOUTH CAROLINA/COLUMBIA, SC Scientific Research - Combating Weapons of Mass Destruction	12.300	18-3437	-	12,243
Passed through from:	40.054	00405 04000		22.007
CORNELL UNIVERSITY/ITHACA, NY EMORY UNIVERSITY/ATLANTA, GA	12.351 12.351	90425-21229 A316609	-	23,007 91,321
ROTC Language and Culture Training Grants	12.331	A310009	-	91,321
Passed through from:				
INSTITUTE OF INTERNATIONAL EDUCATION/WASHINGTON, DC	12.357	PGO1801-GT-03-PGO-051-PO3	_	31,656
INSTITUTE OF INTERNATIONAL EDUCATION/WASHINGTON, DC	12.357	PGO1801-GT-03-PGO-051-PO3		342,109
Basic Scientific Research	12.557	1 00 100 1-01-03-1 00-031-1 04	-	342,103
Passed through from:				
JOHNS HOPKINS UNIV/BALTIMORE, MD	12.431	2005355675	_	44,009
STANFORD UNIVERSITY/STANFORD, CA	12.431	#61892934-130810	-	(8,515)
UNIVERSITY OF ALABAMA AT BIRMINGHAM/BIRMINGHAM, AL	12.431	000529073-001	-	77,674
ADVANCED TECHNOLOGY INTER	12.431	2017-311A PA 5	1,182,840	2,557,690
GEN ELEC CORP RES & DEVL	12.431	401153380	-,102,010	113,804
GEN ELEC CORP RES & DEVL	12.431	401153812	_	498,374
GEN ELEC CORP RES & DEVL	12.431	401153817	_	560,988
NATL CTR FOR DEFENSE MANU	12.431	41000103	_	7,141
GIRD SYSTEMS INC	12.431	420021018CF40	-	477
ROBOTICS TECHNOLOGY	12.431	70-201708	-	5,510
EARTHLY DYNAMICS CORP	12.431	AGMT DTD 10/27/2021	-	17,972
R-DEX SYSTEMS/ MARIETTA,	12.431	GTARC 145615 DTD 1/14/2021	-	(1,383)
AUGUSTUS AEROSPACE CO/ LO	12.431	GTARC 146761 DTD 2/17/2021	-	(4,379)
R-DEX SYSTEMS/ MARIETTA,	12.431	GTARC 149029 DTD 6-21-2022	-	2,014
ADVANCED TECHNOLOGY INTER	12.431	PROJECT AGREEMENT NO 1	-	(14)
SCIENTIFIC RES	12.431	SR20201820	-	48,514
SCIENTIFIC RES	12.431	SR20210264	-	378,583
SCIENTIFIC RES	12.431	SR20220019	-	252,081
SCIENTIFIC RES	12.431	SR20220089	-	342,677
DIGITAL ANALOG INTEGRATION INC./AUBURN,AL	12.431	W911QX19C004	-	62,152
Basic, Applied, and Advanced Research in Science and Engineering				
Passed through from:				
UNIVERSITY OF NOTRE DAME/SOUTH BEND, IN	12.630	#203278GT-BAKIR	-	162,030
UNIVERSITY OF NOTRE DAME/SOUTH BEND, IN	12.630	#203278GT-YU	-	280,155
UNIVERSITY OF ILLINOIS	12.630	096363-17536	-	(3,304)
UNIVERSITY OF CALIFORNIA/BERKELEY, CA	12.630	10037	-	(63,132)
LOCKHEED MARTIN CORP	12.630	1010121	-	79,575
NORTHROP CORP	12.630	1012174443	-	26,366
BAE SYSTEMS/BURLINGTON MA	12.630	1017356	-	357,583
APPLIED RESEARCH LABORATO	12.630	102768-Z9717201	-	16,862
UNIVERSITY OF ILLINOIS/CHICAGO,IL	12.630	104071-18540	-	14,620
BAE SYSTEMS	12.630	1115682	-	278,133
BAE SYSTEMS/BURLINGTON MA	12.630	1125267	-	484,219 122,929
JACOS SVERDRUP ADVANCE SY INFORMATION SCIENCE INSTI	12.630 12.630	1234-01-00-03 136299980	-	314,692
WEST COAST SOLUTIONS/HUNTINGTON BEACH, CA	12.630	140208	-	201,274
CHARLES RIVER ANALYTICS INC / CAMBRIDGE, MA	12.630	140D0419C0048	-	(30,236)
ZETA ASSOCIATES INC	12.630	173118LS-GTARC-01	-	52,438
JOHNS HOPKINS UNIV/BALTIMORE, MD	12.630	2004731073	-	292,981
ADVANCED TECHNOLOGY INTER	12.630	2017-311A PA 06		1,777,865
JT4-LLC/LAS VEGAS, NV	12.630	2021JW5124	-	288,222
JT4-LLC/LAS VEGAS, NV	12.630	2022JW5594		45,749
UNIVERSITY OF NOTRE DAME/SOUTH BEND, IN	12.630	203278GT-KHAN		286,270
UNIVERSITY OF NOTRE DAME/SOUTH BEND, IN	12.630	203278GT-NAEEMI	_	338,442
UNIVERSITY OF NOTRE DAME/SOUTH BEND. IN	12.630	203278GT-Raychowdhury	_	822,072
SIEMENS CORPORATE RESEARCH/PRINCETON, NJ	12.630	208-03	_	28,973
CARNEGIE MELLON INSTITUTE/PITTSBURGH, PA	12.630	21-00038-SUB-000	_	165,527
STEVENS INST OF TECHNOLOGY/	12.630	2103117-01	_	8,871
STEVENS INST OF TECH	12.630	2103197-01	_	99,259
STEVENS INST OF TECH	12.630	2103221-12	-	172,498
STEVENS INST OF TECH	12.630	2103254-01	_	58,712
INTELLIGENT AUTOMATION IN	12.630	2509-1	-	2,165,565
RAYTHEON	12.630	4202392536	-	848,839
RAYTHEON	12.630	4202392548	-	171,940
KONTRON AMERICA INC	12.630	4500125358	-	187,769
NORTHROP GRUMMAN SYS CORP	12.630	5300029642	-	436,652
NORTHROP GRUMMAN/BALTIMORE, MD	12.630	5300039885	-	23,886
NORTHWESTERN UNIVERSITY/EVANSTON, IL	12.630	60060216 GIT	-	221,541
LOCKHEED MARTIN CORP	12.630	6574055372	-	56,945
RESONANT SCIENCES LLC	12.630	ACL-EM-22-P14817	-	45,044
DEFENSEWERX-ICEWERX/NICEV	12.630	AGMT DTD 2/25/2022	-	69,377

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

ederal Grantor/Pass-Though rantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
EPIRUS INC/SEGUNDO, CA	12.630	AGREEMENT DTD 11/19/2021	\$ -	\$ 120,891
TETRA TECH ARD	12.630	AID-OAA I-14-00068/TO-16-00016	-	2,056
NuWave Solutions -BigBear	12.630	ATP DTD 05 MAY 2022	-	4,068
DRAPER LABORATORY/CAMBRIDGE, MA	12.630	B20-2020184G002	-	94,110
INTEL CORPORATION/	12.630	CW2051835	-	197,754
DYNETICS INC	12.630	DISC1505 TO 09	-	(785
DYNETICS INC	12.630	DI-SC-15-05 TO 10	-	151,237
DYNETICS INC	12.630	DI-SC-16-01	-	(1,311
DYNETICS INC	12.630	DI-SC-20-91	-	123,677
MACAULAY-BROWN	12.630	DSC2134-01	_	22
ENGENIUSMICRO/MABLETON, GA	12.630	EGM1342	_	7,249
ALION SCIENCE AND TECH	12.630	FA807517F1257	_	664
KARAGOZIAN AND CASE STRUCTURAL ENGINEERS/GLENDALE, CA	12.630	FFP-149623	_	11,55
KYRWYLE/HUNTSVILLE,AL	12.630	HHM402-21-D-0150	_	27,09
SYSTEM HIGH	12.630	HR001117F0001	_	39,020
UNIVERSITY CONSORTIUM FOR APPLIED HYPERSONICS (UCAH)/COLLEGE STATION,	12.630	M2200459	_	70,44
LEIDOS INC	12.630	P010192863	_	724,96
LEIDOS INC/MCLEAN, VA	12.630	P010244149	_	(13,49
SAIC	12.630	P010251920		263,29
LEIDOS INC	12.630	P010264877	=	222,88
			-	
PHYSICAL SCIENCES INC.	12.630	PO 10-04345	-	200 74
ROCKWELL COLLINS	12.630	PO 4507393359	-	236,74
DYNETICS INC	12.630	PO SB80027	-	90,57
NORTHROP GRUMMAN SYS CORP	12.630	PO#5300010064	-	432,51
SRI INTERNATIONAL/PRINCETON,NJ	12.630	PO54003	-	348,26
SIERRA NEVADA CORPORATION	12.630	S21FNE063	-	1,63
DYNETICS INC	12.630	SB800046	-	12,33
DYNETICS INC	12.630	SB800055	-	190,93
DRAPER LABORATORY	12.630	SC001-0000001394	_	1,268,24
PHYSICAL SCIENCES INC.	12.630	SC-4566-170221-013-001	_	349,31
STEEL FOUNDERS SOCIETY OF AMERICA/	12.630	SPI005	_	107,25
UNIVERSITY OF MICHIGAN/	12.630	SUBK00011571		425,30
	12.630		=	
NOVATEUR RESEARCH SOLUTIONS/LEESBURG, VA	12.030	SUBK-NGA172-003	-	(1:
Air Force Defense Research Sciences Program				
Passed through from:				
PURDUE UNIVERSITY/WEST LAFAYETTE, IN	12.800	#13000716-051	-	17,37
FREEDOM PHOTONICS SANTA B	12.800	#S7200-01	-	364,83
BOOZ, ALLEN, & HAMILTON	12.800	106445SB18/TO 3	-	142,82
ASSURED INFORMATION SECUR	12.800	1159-SB	-	33,25
ASSURED INFORMATION SECUR	12.800	1161-SA	-	23,08
ARCTOS TECHNOLOGY SOLUTIONS LLC/ DAYTON, OH	12.800	165852-18F5828-19-16-C1	-	50,04
SPG INSTITUTE INC	12.800	2019-ARC-S-19004	-	(3,41
SPG INSTITUTE INC	12.800	2019-ARC-S-19006	-	2,51
JT4-LLC/LAS VEGAS, NV	12.800	2020JW3092	_	4
AEROBOTIX INC MADISON AL	12.800	210331-21667	_	55,79
SMART MUNITIONS EXPERTS S	12.800	3/9/2022 AGMT	_	19,03
JT4-LLC/LAS VEGAS, NV	12.800	4020JW2539		(3,59
JT4-LLC/LAS VEGAS, NV	12.800	4021GT3098		105,38
LOCKHEED MARTIN SPACE SYS	12.800	4105205656		4,14
			-	
L3 COMMUNICATIONS/ROCKWA	12.800	4501890959	-	15,70
NORTHROP CORP	12.800	5300019650-GTRI	-	786,11
JT4-LLC/LAS VEGAS, NV	12.800	700009/0002	-	123,31
LINCOLN LAB	12.800	7000472951	-	186,80
NORTHROP CORP	12.800	7500165537	-	(8,32
NORTHROP CORP	12.800	7500172237-01	-	152,37
BAE SYSTEMS	12.800	994129	-	
BOOZ, ALLEN, & HAMILTON	12.800	A8270	-	371,42
MATERIALS TECHNOLOGIES CO	12.800	AGMT DTD 10-18-2021	-	15,28
ATC MATERIALS/WESTLAKE OH	12.800	AGMT DTD 11-08-2019	22,886	98,75
SARA/CYPRESS CA	12.800	ATP DTD 2/20/19	· <u>-</u>	143,43
ALION SCIENCE AND TECHNOL	12.800	D9770	_	34,71
FLORIDA INST OF TECH/	12.800	DTFACT-17-C-0001	=	138,60
	12.800	EGLIN-05012020	-	
SEALING TECHNOLOGIES INC			-	6,65
SOSSEC/ATKINSON,NH	12.800	FA87501699000	-	(40,20
STELLAR SCIENCE LTD/ALBU	12.800	GTRC AGMT DTD 11-03-2020	-	131,08
NORTHROP GRUMMAN INNOVAT	12.800	MP00301412	-	(24
CACI	12.800	P000105680	-	653,75
SW RES INSTITUTE	12.800	P99026N	-	133,87
SOSSEC/ATKINSON,NH	12.800	PLA-0047	-	2,71
RELIANCE TEST AND TECH	12.800	R21N0188	-	(35
UES INC	12.800	S119040001	-	4
UES INC	12.800	S-124-001-004	_	(3,83
FREEDOM PHOTONICS SANTA B	12.800	SAF20A-T002	-	7,66
NORTHROP CORP	12.800	SP00116946	-	
			-	(22
SCIENTIFIC RES	12.800	SR20201140	-	155,13
SCIENTIFIC RES	12.800	SR20201522	-	118,81
SCIENTIFIC RES	12.800	SR20210482 (J413)	-	670,60
	12.800	SUB1148651-002	-	301,85
ALION SCIENCE AND TECH		SUB1157903	-	42,34
ALION SCIENCE AND TECH	12.800			
ALION SCIENCE AND TECH ALION SCIENCE AND TECHNOL	12.800 12.800		_	185 16
ALION SCIENCE AND TECH ALION SCIENCE AND TECHNOL ALION SCIENCE AND TECHNOL	12.800	SUB1157903 004	-	
ALION SCIENCE AND TECH ALION SCIENCE AND TECHNOL ALION SCIENCE AND TECHNOL ALION SCIENCE AND TECHNOL ALION SCIENCE AND TECHNOL	12.800 12.800	SUB1157903 004 SUB1157903 RELASE 002	1 050 500	(3,69
ALION SCIENCE AND TECH ALION SCIENCE AND TECHNOL	12.800 12.800 12.800	SUB1157903 004 SUB1157903 RELASE 002 SUB1157903 RELEASE 001	1,952,500	185,16i (3,69i 4,529,43i
ALION SCIENCE AND TECH ALION SCIENCE AND TECHNOL ALION SCIENCE AND TECHNOL ALION SCIENCE AND TECHNOL	12.800 12.800	SUB1157903 004 SUB1157903 RELASE 002	1,952,500	(3,69

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
TAU TECHNOLOGIES LLC/ALB	12.800	TAU 2021-003	\$ -	\$ 122,743
BATTELLE	12.800	US001-0000832821	-	35,621
WRIGHT BROTHERS INSTITUTE	12.800	WBPO21039GTRI	-	24,546
BINGHAMTON UNIVERSITY/BINGHAMTON, NY	12.800	1170861/92514	-	12,614
Research and Technology Development  Passed through from:				
UNIVERSITY OF CALIFORNIA/BERKELEY, CA	12.910	00010318	-	67,202
GENERAL DYNAMIC BATH IRON	12.910	07162AOWLH	-	(2,754)
UNIVERSITY OF COLORADO/DENVER, CO TELEDYNE SCIENTIFIC & IMAGING LLC/THOUSAND OAKS, CA	12.910 12.910	FY18.920.001 PO00143792	-	(20,521) (28,475)
Total Department of Defense	12.910	F000143792	16,793,502	160,775,306
Department of the Interior				
Water Desalination Research and Development	15.506			20,555
Assistance to State Water Resources Research Institutes Earthquake Hazards Program Assistance	15.805 15.807		59,258	149,269 116,351
National Center for Preservation Technology and Training	15.923		-	7,050
Cooperative Research and Training Programs – Resources of the National Park System	15.945		-	71,830
Research Grants (Generic) Passed through from:				
GALLUP	15.650	HR001119C0135-001	-	1,661
			59,258	366,716
Department of Justice National Institute of Justice Research, Evaluation, and Development Project Grants	16.560			62,232
Passed through from:	10.500		-	02,232
THE URBAN INSTITUTE	16.560	PRE-AUTH. LTR		28,707
Total Department of Justice			-	90,939
Department of Labor				
Occupational Safety and Health_Susan Harwood Training Grants	17.502			210,423
Total Department of Labor			-	210,423
Department of State				
Cyberspace and Digital Policy	19.665		-	33,214
Investing in People in The Middle East and North Africa Passed through from:				
INTL RES & EXCHANGE BD (IREX)/WASHINGTON, DC	19.021	FY21-HEP19-GT-01	-	19,748
Middle East Partnership Initiative Passed through from:				
AMERICAN UNIVERSITY OF BEIRUT/BERIUT, LABANON	19.500	SNEAAC20CA0028	-	376,588
Total Department of State			-	429,550
Department of Transportation				
Air Transportation Centers of Excellence Highway Planning and Construction	20.109 20.205		1,073,450	5,951,916 732,976
Highway Training and Constitution  Highway Training and Education	20.215		-	40,462
Pipeline Safety Program State Base Grant	20.700		-	64,995
University Transportation Centers Program	20.701		194,371	506,631
National Infrastructure Project Assistance (Mega Projects) Air Transportation Centers of Excellence	20.937		-	4,033
Passed through from:				
GEORGIA DEPT OF TRANSPORTATION	20.109	AGR DTD 5/10/2022	-	60,272
UNIVERSITY OF FLORIDA/	20.109	AWD-002685	-	38,412
UNIVERSITY OF TEXAS AT ARLINGTON/ARLINGTON, TX NATL ACADEMY OF SCIENCES/	20.109 20.109	CTEDD 021-13 NCHRP-226		15,000 193
UNIVERSITY OF FLORIDA/	20.109	UFDSP00011673	-	44,071
ATL REGIONAL COMMISSION/	20.109	UP2153	-	152,589
Highway Research and Development Program Passed through from:				
OKLAHOMA STATE UNIVERSITY/STILLWATER, OK	20.200	1-578560-GTRC	_	31,416
THE NATIONAL ACADEMIES	20.200	200011051	-	79,460
Highway Planning and Construction				
Passed through from: OLD DOMINION UNIVERSITY/SUFFOLK, VA	20.205	#14055 ACRP AWARD		6,000
GEORGIA DEPT OF TRANSPORTATION	20.205	02-148, RES PROJ 14-06	-	(769)
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	20.205	087795-17555	-	73,955
ARIZONA STATE UNIVERSITY/TEMPE, AZ	20.205	17-166	-	544,505
CREARE INC/HANOVER, NH UNIVERSITY OF CALIFORNIA/DAVIS, CA	20.205 20.205	6913G618C100008 A17-0183-S002		99 394,646
UNIVERSITY OF FLORIDA/	20.205	AMEND 20 (UFDSP00011673)	-	77,995
UNIVERSITY OF FLORIDA/	20.205	AMENDMENT 23	-	16,213
UNIVERSITY OF FLORIDA/	20.205	AMENDMENT 24 AWD-102446	-	69,731
GEORGIA DEPT OF TRANSPORTATION UNIVERSITY OF TEXAS AT ARLINGTON/ARLINGTON, TX	20.205 20.205	AWD-102446 CTEDD 021-04	-	5,170 48,947
UNIVERSITY OF TEXAS AT ARLINGTON/ARLINGTON, TX	20.205	CTEDD 2021 # 021-08	-	41,652
GEORGIA DEPT OF TRANSPORTATION	20.205	EMAIL DTD 16 OCT 2018 - T8499	-	1,312
GEORGIA DEPT OF TRANSPORTATION	20.205 20.205	FTA5311-FY20 NTD FUNDED FROM T8499	-	82,201 85,341
CEODGIA DEDT OF TRANSPORTATION	20.205		-	85,341 42,748
GEORGIA DEPT OF TRANSPORTATION UNIVERSITY OF NEVADA LAS VEGAS/LAS VEGAS. NV		GR10321	-	
GEORGIA DEPT OF TRANSPORTATION UNIVERSITY OF NEVADA LAS VEGAS/LAS VEGAS, NV NATL ACADEMY OF SCIENCES/	20.205 20.205	GR10321 HR-01-60	26,230	
UNIVERSITY OF NEVADA LAS VEGAS/LAS VEGAS, NV NATL ACADEMY OF SCIENCES/ TRANSPORTATION RESEARCH BOARD/WASHINGTON, DC	20.205 20.205 20.205	HR-01-60 NCHRP-214	26,230	101,362 9,349
UNIVERSITY OF NEVADA LAS VEGAS/LAS VEGAS, NV NATL ACADEMY OF SCIENCES/	20.205 20.205	HR-01-60	26,230	101,362 9,349 (2,595) 69,380

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
GEORGIA DEPT OF TRANSPORTATION	20.205	RES PROJ 2014-60, TO 17-14	\$ -	\$ (800)
UNIVERSITY OF GEORGIA/ATHENS, GA	20.205	SUB00002399	-	32,668
GEORGIA DEPT OF TRANSPORTATION	20.205	TASK ORDER 2014-108, RP 20-22	-	108,694
GEORGIA DEPT OF TRANSPORTATION	20.205	TASK ORDER 2014-92 RP 19-10	68,401	40,960
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-100 RP 20-10	-	102,209
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-101 RP 20-11	-	63,671
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-102 RP 20-12	-	145,193
GEORGIA DEPT OF TRANSPORTATION GEORGIA DEPT OF TRANSPORTATION	20.205 20.205	TO 2014-104, RP 20-15 TO 2014-105 RP 20-17	10.700	72,081
GEORGIA DEPT OF TRANSPORTATION  GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-105 RP 20-17 TO 2014-106 RP 20-18	19,708 21,027	113,251 125,288
GEORGIA DEPT OF TRANSPORTATION  GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-100 RP 20-18	21,027	95,694
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-109 RP 20-24	_	21,710
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-110 RP 20-25	_	42,685
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-73, REP PROJ 18-01	_	114,306
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-76, RES PRO 18-02	_	2,028
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-77 RP 18-13	-	(2
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-79, RES PROJ 18-11	-	164
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-80, RES PROJ 18-07	-	55,475
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-84, RP18-08	-	15,544
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-89 RP 19-11	24,253	65,424
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-90 RP 19-13	23,229	(450
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-91, RP 19-04	-	137,524
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-96 RP 19-27	-	(2,236
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-97 RP 20-01	-	44,412
GEORGIA DEPT OF TRANSPORTATION	20.205	TO 2014-99 RP 20-09	-	147,487
GEORGIA DEPT OF TRANSPORTATION	20.205	TO2014-88 RP 19-09	-	36,376
UNIVERSITY OF FLORIDA/	20.205	UFDSP00011673 - AMEND 20	-	3,355
UNIVERSITY OF FLORIDA/	20.205	UFDSP00011673 - PROJECT Q2	-	45,914
UNIVERSITY OF FLORIDA/	20.205	UFDSP00011673 AMEND 18 PROJ F3	-	17,383
UNIVERSITY OF FLORIDA/	20.205	UFDSP00011673 AMEND. 5	-	96,765
University Transportation Centers Program				
Passed through from:	00.704	#0055000 00D		00.550
MISSOURI UNIVERSITY OF SCIENCE & TECHNOLOGY/ROLLA, MO MISSOURI UNIVERSITY OF SCIENCE & TECHNOLOGY/ROLLA, MO	20.701 20.701	#0055082-02D 00055082-02A	-	88,552
MISSOURI UNIVERSITY OF SCIENCE & TECHNOLOGY/ROLLA, MO	20.701	00055082-02A 00055082-02C	-	(42 79,439
TEXAS A & M UNIVERSITY/COLLEGE STATION, TX	20.701	12-S171237	-	333,787
PURDUE UNIVERSITY/WEST LAFAYETTE, IN	20.701	16100096-024		340,180
Total Department of Transportation	20.701	10100090-024	1,450,669	12,021,718
GA BOARD OF REGENTS GA BD OF REGENTS GA BD OF REGENTS	21.019 21.019 21.019	AWD-000999 EMAIL DTD 4 APR 2020 FORTNER FORTNER EMAIL 4 APR 2020	- - -	(802 (322,443 (164,537
CORONAVIRUS STATE AND LOCAL FISCAL RECOVERY FUNDS Passed through from:				
GA OFC PLANNING & BUDGET Total Department of Treasury	21.027	EMAIL DTD 1/12/2022		81,814 (405,968
GENERAL SERVICES ADMINISTRATION				
General Services Administration Funding	39.0FA		-	107,107
General Services Administration Funding				
Passed through from:	00.054	1150 01 00 00		750.000
JACOS SVERDRUP ADVANCE SY	39.0FA	1153-01-00-06	-	758,806
JACOS SVERDRUP ADVANCE SY	39.0FA	1153-01-02-06 5300027015 R1	-	1,190,127
NORTHROP CORP DYNETICS INC	39.0FA 39.0FA	DI-SC-21-60	-	1,234,435 59,007
ECCALON LLC/HANOVER,MD	39.0FA	EDUCATIONAL AGMT	-	61,617
Total GENERAL SERVICES ADMINISTRATION	39.01 A	EDOCATIONAL AOMI	-	3,411,099
LIBRARY OF CONGRESS  Affiliate Centers for the Book Programming Grants				
Passed through from:				
ASSOCIATION OF AMERICAN PUBLISHERS (AAP)/WASHINGTON, DC	42.014	AGMT EXEC 1/6/2022	_	116,825
otal LIBRARY OF CONGRESS	12.011	76 EXEC 1767.2022		116,825
National Aeronautics and Space Administration				
Science	43.001		1,859,299	9,734,774
Aeronautics	43.002		720,082	2,399,691
Exploration	43.003		55,394	199,084
Education	43.008		350,641	692,648
Space Technology	43.012		560,104	2,331,377
Science				
Passed through from:	40.004	000030464		04.0=
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	000030161	-	34,378
CONTINUUM DYNAMICS INC/EWING, NJ	43.001	146215	-	26,069
EDGEDWELLER INC/ATLANTA, GA	43.001	147067	-	35,852
GLOBAL TECHNOLOGY CONNECTIONS/ATLANTA, GA	43.001	147285	-	46,769
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1619992	-	4,181
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1627438	-	80,398
JET PROPULSION LAB/CALIFORNIA INST. OF TECH JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001 43.001	1639653 1640630	-	7 10
JET PROPULSION LAB/CALIFORNIA INST. OF TECH  JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1644381	-	25,691
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1650969	-	40,659
SETTING GEOLOGICALDONALII ONNIA INST. OF TEGIT	43.001	1000000	-	40,03

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Federal Assistance	Pass-through	Amount Passed	
ederal Grantor/Pass-Though	Listing	Entity ID	Through to	Federal
rantor/Cluster or Program Title	Number	Number	Subrecipient	Expenditures
JET PROPULSION LAB/CALIFORNIA INST. OF TECH JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001 43.001	1656498 1660879	\$ -	\$ 17,34° 25,980
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1662067	-	18,07
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1663730	_	51,03
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1668200	-	7,99
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1671083	-	33,11
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1671441	-	145,24
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1671740	-	24,76
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	201201-GTRC	-	145,50
NORTH CAROLINA STATE UNIVERSITY/RALEIGH, NC NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001 43.001	2020-0613-01 202071	-	44,81 54,02
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	202071 202078-GTRC		215,48
SPACEWORKS ENTERPRISES/ATLANTA, GA	43.001	21-003	_	10,03
JACOBS SPACE EXPLORATION GROUP/HUNTSVILLE, AL	43.001	21N00505	-	123,32
JACOBS SPACE EXPLORATION GROUP/HUNTSVILLE, AL	43.001	21N0146	-	11,83
JACOBS SPACE EXPLORATION GROUP/HUNTSVILLE, AL	43.001	22N00163	-	25,00
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	302001-GTRC	-	345,20
PLASMA PROCESSES INC/ HUNTSVILLE, AL	43.001	6006-040-JK-073021	-	103,40
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	602007	-	313,34
SOUTHWEST RESEARCH INSTITUTE/	43.001	699054X/15.12029	-	197,08
CFD RESEARCH CORPORATION/HUNTSVILLE, AL	43.001	80ARC021F0055	-	111,34
NASA/HEADQUARTERS/WASHINGTON, DC SPACE TELESCOPE SCIENCE INSTITUTE	43.001 43.001	80NSSC18K1301 80NSSC21K1053	-	66,01 8,38
UNIVERSITY OF ALABAMA/TUSCALOOSA, AL	43.001	A21-0039-S001	-	6,97
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	AWD-002288	-	273,36
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	AWD-002425	_	163,88
SPACE DYNAMICS LAB	43.001	CP0065524	_	329,00
EPISYS SCIENCE INC/POWAY,CA	43.001	EPISCI-TEAMASTRO-S001	-	29,50
WEST COAST SOLUTIONS/HUNTINGTON BEACH, CA	43.001	GRTC# 694	-	14,09
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	43.001	MIT-GT-S5255	-	83,49
UNIVERSITY OF ARIZONA/TUCSON, AZ	43.001	PO# 109150	-	26,06
LMI/MCLEAN,VA	43.001	PO20-00435; TO02 NASA TO55	-	37,04
DARTMOUTH COLLEGE/HANOVER, NH	43.001	R1549	-	3,72
UNIVERSITY OF CALIFORNIA RIVERSIDE/RIVERSIDE, CA	43.001	S-000728	-	8
UNIVERSITY OF CALIFORNIA RIVERSIDE/RIVERSIDE, CA	43.001	S-001436	-	143,51
PENNSYLVANIA STATE UNIV/UNIV PARK, PA	43.001	S001845-NASA	-	252,17
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	43.001	S4102/750175	-	26,09
UNIVERSITY OF IDAHO/MOSCOW, IDAHO	43.001	SP3303-SB-223473	-	(4,30
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.001	T13-6500-GT	-	2,072,81
UNIVERSITY OF IDAHO/MOSCOW, IDAHO	43.001	WRAY-ADP	-	27,83
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.001	1670431	-	5,58
Aeronautics				
Passed through from: UNIVERSITY OF TEXAS AT AUSTIN/AUSTIN, TX	43.002	#133480	_	15,69
PHYSICAL SCIENCES INC.	43.002	10-02490-1943	_	10,00
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.002	1648767	_	(1
JET PROPULSION LAB/CALIFORNIA INST. OF TECH	43.002	1659103	-	103,04
MILLENNIUM ENGINEERING	43.002	2019-0123	-	(18
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.002	202026-GTRC	-	17,18
JACOBS ENGINEERING GROUP	43.002	20N0565	-	62,54
NORTH CAROLINA A&T STATE UNIV/GREENSBORO, NC	43.002	220072A	-	287,84
OHIO STATE UNIVERSITY/COLUMBUS, OH	43.002	60061601	-	122,64
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.002	602003	-	120,88
STANFORD UNIVERSITY/STANFORD, CA	43.002	62485886-176172	-	161,62
OEWAVES INC./PASADENA, CA	43.002	AGMT. 142585 DATED 04-07-2020	-	121,25
TDA RESEARCH INC./WHEAT RIDGE, CO UNIVERSITY OF VIRGINIA/CHARLOTTESVILLE, VA	43.002 43.002	GA.4101.030.GTRC.20.01 GD10052 152367	-	12,47
JACOBS SPACE EXPLORATION GROUP/HUNTSVILLE, AL	43.002	PO # 20N0379		(29,66 27,53
LMI/MCLEAN, VA	43.002	PO20-00435/TO01/TO033		7,09
BOOZ, ALLEN, & HAMILTON	43.002	S900016BAH	-	38,64
SOAR TECHNOLOGY INC	43.002	SC-20-027	_	5,21
CROWN CONSULTING INC/ARLINGTON,VA	43.002	TASK ORDER 02	-	133,57
Education				
Passed through from:				
NATIONAL INSTITUTE OF AEROSPACE/HAMPTON, VA	43.008	201089-GTRC	-	18
PRAIRIE VIEW A&M UNIVERSITY/PRAIRIE VIEW, TEXAS XAVIER UNIVERSITY OF LA/NEW ORLEANS, LA	43.008	M2000595/S200508	-	98,03
Space Technology	43.008	ORSP-21-216812-01A	-	127,27
Passed through from:				
MICHIGAN TECHNOLOGICAL UNIVERSITY/HOUGHTON, MICH	43.012	1607060Z4	_	157,42
UNIVERSITY OF CALIFORNIA/DAVIS, CA	43.012	A19-2477-S002	-	584,81
OREGON STATE UNIVERSITY/CORVALLIS, OR	43.012	NS335A-A	-	3,78
al National Aeronautics and Space Administration	10.0.2		3,545,520	23,419,81
e National Endowment for the Humanities Promotion of the Humanities Office of Digital Humanities	45.169		_	50,89
Promotion of the Humanities Office of Digital Humanities  Promotion of the Humanities Division of Preservation and Access	73.103		-	50,08
Passed through from:				
UNIV OF GEORGIA	45.149	SUB00001681	-	43,49

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

ederal Grantor/Pass-Though Srantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Vational Science Foundation				
Engineering Grants	47.041		\$ 4,936,816	\$ 21,900,654
Mathematical and Physical Sciences	47.049		644,098	9,576,845
Geosciences	47.050		196,828	4,791,345
Computer and Information Science and Engineering	47.070		1,003,163	14,678,349
Biological Sciences	47.074		77,488	3,424,671
Social, Behavioral, and Economic Sciences	47.075		23,720	1,642,661
Education and Human Resources	47.076		283,365	7,502,675
Polar Programs	47.078		-	137,906
Office of International Science and Engineering	47.079		-	60,579
Office of Integrative Activities	47.083		•	986,409
NSF Technology, Innovation, and Partnerships	47.084		•	1,492
Engineering Grants				
Passed through from:				
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.041	#083276-16803	-	(1)
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.041	083276-18339 (AC291)	-	57,720
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.041	083276-18381 (AC291)	-	65,000
COLUMBIA UNIVERSITY/NEW YORK, NY	47.041	1(GG13910)	-	3,357
PURDUE UNIVERSITY/WEST LAFAYETTE, IN	47.041	10001522-041	-	4,423
UNIVERSITY OF UTAH/SALT LAKE CITY, UT	47.041	10046930-GaTech	•	106,741
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.041	101397-18222	-	75,561
HARVARD UNIVERSITY/BOSTON, MA	47.041	124050-5104116	•	(8,151
WI-SENSE LLC/SMYRNA, GA	47.041	140559	-	(15.571
VAXESS TECHNOLOGIES INC/CAMBRIDGE, MA	47.041	145275 15-741	-	(15,571
ARIZONA STATE UNIVERSITY/TEMPE, AZ	47.041 47.041	15-741 16406249-02	-	527,521
UNIVERSITY OF CENTRAL FLORIDA/ ARIZONA STATE UNIVERSITY/TEMPE, AZ	47.041 47.041	16406249-02 17-098	-	13,565 39,469
			-	
GEORGE WASHINGTON UNIVERSITY/WASHINGTON, DC	47.041	18-S10	-	103,496
COLUMBIA UNIVERSITY/NEW YORK, NY	47.041	2(GG013222)	-	14,180
BSCS SCIENCE LEARNING/COLORADO SPRINGS, CO	47.041	2020-20	-	99,876
UNIVERSITY OF NEBRASKA/LINCOLN, NE NORTH CAROLINA A&T STATE UNIV/GREENSBORO, NC	47.041	25-0521-0210-003	-	15,946
	47.041	281230C	-	35,914
UNIVERSITY OF KENTUCKY RESEACH FDN/LEXINGTON,KY	47.041 47.041	320004377-22-075 513147	-	49,852
TEACHERS COLLEGE - COLUMBIA UNIVERSITY/NEW YORK, NY			-	30,784
UNIVERSITY OF DELAWARE/NEWARK, DE AMERICAN SOCIETY FOR ENG EDU/WASHINGTON, DC	47.041 47.041	57824	-	81,219 19,564
UNIVERSITY OF CALIFORNIA/BERKELEY, CA	47.041	769-2072 9367	-	
			-	21,061
TEXAS A & M UNIVERSITY/COLLEGE STATION, TX NORTH CAROLINA STATE UNIVERSITY/RALEIGH, NC	47.041 47.041	M1900051 NSF 21-529	-	453 10,525
	47.041	PO# P0044575	-	10,323
MOREHOUSE COLLEGE/ATLANTA, GA MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	47.041	S4009/ 756419	51,137	404,136
UNIVERSITY OF MASSACHUSETTS/LOWELL, MASSACHUSETTS	47.041	S5210039055A221	31,137	26,385
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	47.041	S5562, PO# 700523	-	9,530
UNIVERSITY OF MASSACHUSETTS/LOWELL, MASSACHUSETTS	47.041	S5800041772B5GT	-	29,070
UNIVERSITY OF MASSACHUSETTS/LOWELL, MASSACHUSETTS	47.041	S5800041772B3G1 S5800041772C3GT	-	20,055
UNIVERSITY OF MASSACHUSETTS/LOWELL, MASSACHUSETTS	47.041	S5800041772C5G1	-	20,033
UNIVERSITY OF MASSACHUSETTS/LOWELL, MASSACHUSETTS	47.041	S5800041772G321		602
UNIVERSITY OF MINNESOTA/MINNEAPOLIS, MN	47.041	SSA 146903	_	6,382
PRINCETON UNIVERSITY/PLAINSBORO, NJ	47.041	SUB0000385	_	38,534
PRINCETON UNIVERSITY/PLAINSBORO, NJ	47.041	SUB0000570	_	24,888
TULANE UNIVERSITY/NEW ORLEANS, LA	47.041	TUL-SCC-557922-20-21	_	9,424
UNIVERSITY OF TEXAS AT AUSTIN/AUSTIN, TX	47.041	UTAUS-SUB00000185	_	52,378
UNIVERSITY OF WASHINGTON/SEATTLE, WA	47.041	UWSC10741 BPO NO. 34658	_	39,119
Mathematical and Physical Sciences		0110010111210110.01000		00,0
Pass through from:				
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	47.049	0000000293	_	85,073
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	47.049	0000000293	-	59,344
WORCESTER POLYTECHNIC INSTITU/WORCESTER, MA	47.049	10825-GR	-	40,061
CORNELL UNIVERSITY/ITHACA, NY	47.049	75548-20733	-	46,862
EMORY UNIVERSITY/ATLANTA, GA	47.049	A373696	-	45,222
TEXAS A&M ENGINEERING EXPERIMENT STATION/COLLEGE STATION, TEXAS	47.049	M2003235	-	20,000
UNIVERSITY OF WASHINGTON/SEATTLE, WA	47.049	UWSC12980	_	26,368
Geosciences	47.040	30012000	-	20,300
Pass through from:				
DUKE UNIVERSITY/DURHAM, NC	47.050	#14-NSF-1074		45,331
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	47.050	0000000186	-	2,699
COLUMBIA UNIVERSITY/NEW YORK, NY	47.050	2(GG013237)	-	39,719
UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA	47.050	83829300	-	52,236
FLORIDA STATE UNIVERSITY/TALLAHASSEE, FLA	47.050	R02162	-	556
OREGON STATE UNIVERSITY/CORVALLIS, OR	47.050	S2295C-F	-	17,280
Computer and Information Science and Engineering	÷1.000	5220001	-	17,200
Pass through from:				
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.070	#083276-17340	_	(2,529
UNIVERSITY OF CALIFORNIA/BERKELEY, CA	47.070	00010542	-	90,000
UNIVERSITY OF CALIFORNIA/BERNELET, CA UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.070	083842-16099	-	81,827
JOHNS HOPKINS UNIV/BALTIMORE, MD	47.070	2005091754	-	88,170
COMPUTING RESEARCH ASSOCIATION/WASHINGTON, DC	47.070 47.070	2005091754 2021CIF-GEORGIA TECH-38	-	
COMPUTING RESEARCH ASSOCIATION/WASHINGTON, DC COMPUTING RESEARCH ASSOCIATION/WASHINGTON, DC	47.070 47.070	2021CIF-GEORGIA TECH-38 2021CIF-GEORGIA TECH-39	-	73,499 73,499
		480073-19034	-	
VIRGINIA TECH/BLACKSBURG, VA VIRGINIA TECH/BLACKSBURG, VA	47.070 47.070		-	70,561
VIRGINIA LEGE/DLAGROBURG, VA	47.070	480366-19034 502658-78052	-	40,441
	47.070		-	5,075
NORTHEASTERN UNIVERSITY/BOSTON, MA	47.070			F0 000
NORTHEASTERN UNIVERSITY/BOSTON, MA UNIVERSITY OF NORTH CAROLINA/CHAPEL HILL, NC	47.070	5115818	-	50,322
NORTHEASTERN UNIVERSITY/BOSTON, MA UNIVERSITY OF NORTH CAROLINA/CHAPEL HILL, NC UNIVERSITY OF CALIFORNIA/DAVIS, CA	47.070 47.070	5115818 A18-0727-S001	-	23,065
NORTHEASTERN UNIVERSITY/BOSTON, MA UNIVERSITY OF NORTH CAROLINA/CHAPEL HILL, NC	47.070	5115818	- - -	

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
UNIVERSITY OF CHICAGO/CHICAGO, IL	47.070	AWD064198 (SUB00000575)	\$ -	\$ 5,684
BARNARD COLLEGE/NEW YORK, NY	47.070	GT-1828168	-	79,603
UNIVERSITY OF CALIFORNIA/SANTA BARBARA,CA	47.070	KK1926	-	87,505
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	47.070	S4021, PO#243310	-	70,431
UNIVERSITY OF GEORGIA RESEARCH FDN/ATHENS, GA	47.070	SUB000023660	-	6,630
UNIVERSITY OF TEXAS AT AUSTIN/AUSTIN, TX UNIVERSITY OF WASHINGTON/SEATTLE, WA	47.070 47.070	UTA19-001218 UWSC9939	-	41,333 (13,345)
Biological Sciences				
Pass through from: UNIVERSITY OF WASHINGTON/SEATTLE, WA	47.074	11361		81,411
CORNELL UNIVERSITY/ITHACA, NY	47.074	T.O. 1		35,841
Social, Behavioral, and Economic Sciences	47.074	1.6. 1		00,041
Pass through from:				
EMORY UNIVERSITY/ATLANTA, GA	47.075	#A108033	-	(9,044)
SEARCH TECHNOLOGY INC/	47.075	STI-GTRC-18-1	-	10,998
UNIVERSITY OF MICHIGAN/	47.075	SUBK00010837	-	162,687
EMORY UNIVERSITY/ATLANTA, GA	47.075	T610300	-	(24,379)
Education and Human Resources				
Pass through from: UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	47.076	097202-17661		11,669
UNIVERSITY OF COLORADO/BOULDER, CO	47.076	1554503	-	(465)
UNIVERSITY OF COLORADO/BOULDER, CO	47.076	1559732	_	34,573
GEORGIA RESEARCH ALLIANCE/ATLANTA, GA	47.076	2112532-GATECH	-	432,910
AMERICAN CHEMICAL SOCIETY	47.076	AGMT DTD 5/28/19	-	17,439
AMERICAN CHEMICAL SOCIETY	47.076	AGMT DTD 6/17/2020	-	38,074
NORTHWESTERN UNIVERSITY/EVANSTON, IL	47.076	SP0049508-PROJ0013883	-	135,023
UNIVERSITY OF GEORGIA/ATHENS, GA	47.076	SUB00001592	-	49,000
Polar Programs				
Pass through from: UNIVERSITY OF KANSAS/LAWRENCE, KS	47.078	FY2022-008		96,899
Office of Integrative Activities	47.070	1 12022-000		30,033
Pass through from:				
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	47.083	1913	-	42,626
UNIVERSITY OF MARYLAND/COLLEGE PARK, MD	47.083	104051-Z3820202	-	36,262
EDUWORKS/CORVALLIS,OR	47.083	GAT6120	-	19,666
EDUWORKS/CORVALLIS,OR	47.083	GAT9120	-	410,523
OREGON STATE UNIVERSITY/CORVALLIS, OR	47.083	S2232A-C	-	40,292
VANDERBILT UNIVERSITY/NASHVILLE, TN Total National Science Foundation	47.083	UNIV61733	7,216,615	106,999 69,837,932
			7,210,013	03,037,332
OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE Intelligence Community Centers for Academic Excellence Intelligence Community Centers for Academic Excellence	54.001		325,908	917,275
Pass through from: BROWN UNIVERSITY/PROVIDENCE, RI	54.001	00001811		380,688
DUKE UNIVERSITY/DURHAM, NC	54.001	313-0639	-	27,528
ARIZONA STATE UNIVERSITY/TEMPE, AZ	54.001	ASUB00000950	_	48,579
Total OFFICE OF THE DIRECTOR OF NATIONAL INTELLIGENCE			325,908	1,374,070
Department of Veteran Affairs				
Research and Development  Total Paragraph of Victory Affician	64.054			50,279 50,279
Total Department of Veteran Affairs			-	50,279
Environmental Protection Agency	00.500			070 404
Science To Achieve Results (STAR) Research Program	66.509		-	272,401
Pollution Prevention Grants Program Office of Research and Development Consolidated Research/Training/Fellowships	66.708		-	86,955
Pass through from:				
HEALTH EFFECTS INSTITUTE/CAMBRIDGE, MA	66.511	4988-RFA20-1A/21-11	-	24,090
LAKE MICHIGAN AIR DIRECTORS CONSORTIUM (LADCO)/ROSEMONT, IL	66.511	AGMT DTD 9-29-2021	-	72,404
Science To Achieve Results (STAR) Fellowship Program				
Pass through from:				
LAKE MICHIGAN AIR DIRECTORS CONSORTIUM (LADCO)/ROSEMONT, IL	66.514	AGMT DTD 3/8/2021	-	64,733
GA DEPT NATURAL RESOURCES/	66.514	AGR DTD 4/7/2021	-	40,119
UNIVERSITY OF GEORGIA/ATHENS, GA Total Environmental Protection Agency	66.514	SUB00002418	<del></del>	221,209 781,911
				701,011
Nuclear Regulatory Commission U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	77.008			154,587
Total Nuclear Regulatory Commission	77.000		<del></del>	154,587
Department of Energy				
Cybersecurity, Energy Security & Emergency Response (CESER)	81.008		164,047	844,479
Office of Science Financial Assistance Program	81.049		1,353,711	8,157,252
Conservation Research and Development	81.086		238,903	1,832,868
Renewable Energy Research and Development	81.087		536,433	3,302,953
Fossil Energy Research and Development	81.089		89,101	1,557,219
Stewardship Science Grant Program	81.112		-	342,893
Defense Nuclear Nonproliferation Research	81.113		3,840,380	5,338,807
Energy Efficiency and Renewable Energy Information Dissemination, Outreach, Training and Technic	81.117		145,952	291,030
Nuclear Energy Research, Development and Demonstration	81.121		460,494	1,847,038
Electricity Delivery and Energy Reliability, Research, Development and Analysis	81.122 81.135		55,315 864 564	107,333
Advanced Research Projects Agency - Energy Artificial Intelligence and Technology Office Financial Assistance Program	01.135		864,564	4,023,030
Pass through from:				
FAMU	81.012	C-5133	-	3,315

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Office of Science Financial Assistance Program	Number	Number	Subrecipient	Experiultures
Pass through from:				
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS (AICHE)/NEW YORK, NY VANDERBILT UNIVERSITY/NASHVILLE. TN	81.049 81.049	148101 #19067-S12	\$ -	\$ 24,490 242.123
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	81.049	0000001272	-	36,438
SAVANNAH RIV NATL LAB/SAVANNAH RIV NUCLEAR SOL LLC/AIKEN, SC	81.049	0000509186	-	3,182
SAVANNAH RIVER NATIONAL LABORATORY/BATTELLE SAVANNAH RIVER ALLIANCE/	81.049	0000546198	-	30,783
SAVANNAH RIVER NATIONAL LABORATORY/BATTELLE SAVANNAH RIVER ALLIANCE/	81.049	0000555848	-	29,985
SUSTAINABLE MANUFACTURING INNOVATION ALLIANCE CORP/WEST HENRIETTA, N' SANDIA NATL LABS/SANDIA CORP	81.049 81.049	1 110904	-	49,729
BROWN UNIVERSITY/PROVIDENCE, RI	81.049	1289	-	(7,124) 102,723
FLUOR MARINE PROPULSION LLC/WEST MIFFLIN, PA	81.049	131210	-	288,467
SANDIA NATL LABS/SANDIA CORP	81.049	1441449	-	44
MILLENNITEK LLC/KNOXVILLE, TN	81.049	146470	-	63,364
CONTINUUM DYNAMICS INC/EWING, NJ GLOBAL TECHNOLOGY CONNECTIONS/ATLANTA, GA	81.049 81.049	147072 147590	-	107,903 64,739
SANDIA NATL LABS/SANDIA CORP	81.049	1695955	-	74,111
SANDIA NATL LABS/SANDIA CORP	81.049	1744348	-	(4,289)
SANDIA NATL LABS/SANDIA CORP	81.049	1767660	-	82
SANDIA NATULABS/SANDIA CORP	81.049 81.049	1871005	-	25 FF 071
SANDIA NATL LABS/SANDIA CORP IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	1907283 190986	-	55,071 2,227
SANDIA NATL LABS/SANDIA CORP	81.049	1930550	-	(12,190)
SANDIA NATL LABS/SANDIA CORP	81.049	1975640	-	(10,000)
ARGONNE NATL LAB/UCHICAGO ARGONNE LLC/ARGONNE, IL	81.049	1F-60516	-	25,077
ARGONNE NATL LAB/UCHICAGO ARGONNE LLC/ARGONNE, IL	81.049	1F-60591	-	33,315
SANDIA NATL LABS/SANDIA CORP JOHNS HOPKINS UNIV/BALTIMORE, MD	81.049 81.049	2001728 2004690045	-	22,486 161,921
SANDIA NATL LAB	81.049	2013350	-	30
GEORGIA DEPT OF TRANSPORTATION	81.049	2014-111	-	146,417
SANDIA NATL LABS/SANDIA CORP	81.049	2015247	63,116	78,647
GEORGIA DEPT OF TRANSPORTATION	81.049	2022-02, RES PROJ 21-06	-	3,850
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2041627 2044983	-	(1,914) 78,745
SANDIA NATL LABS/SANDIA CORP	81.049	2051479	-	38,233
SANDIA NATL LABS/SANDIA CORP	81.049	2075873	-	(1,300)
IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	207604	27,608	44,272
SANDIA NATL LAB	81.049	2078144	-	(1,475)
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2079964 2080123	-	61,834
SANDIA NATE LABS/SANDIA CORP	81.049	2085524	-	74,485 60,774
SANDIA NATL LABS/SANDIA CORP	81.049	2086636	-	23,104
SANDIA NATL LABS/SANDIA CORP	81.049	2088470	-	94,245
SANDIA NATL LABS/SANDIA CORP	81.049	2088556	-	5,842
SANDIA NATI LABS/SANDIA CORP	81.049	2094078	-	12,236
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2099968 2103933	-	17,045 163,938
SANDIA NATL LABS/SANDIA CORP	81.049	2104076	-	124,217
SANDIA NATL LABS/SANDIA CORP	81.049	2120337	-	66,366
SANDIA NATL LABS/SANDIA CORP	81.049	2132596	-	19,028
SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2136977	-	27,934
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049	2137351 2139970		(2,927) 6,980
SANDIA NATL LABS/SANDIA CORP	81.049	2141852	-	60,000
SANDIA NATL LABS/SANDIA CORP	81.049	2146288	-	185,041
SLAC NATIONAL ACCELERATOR LABORATORY/MENLO PARK, CA	81.049	215043	-	42,179
SANDIA NATL LABS/SANDIA CORP	81.049	2151489	-	9,218
SANDIA NATL LAB SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2156722 2163299	-	(2,408) 40,739
SANDIA NATE LABS/SANDIA CORP	81.049	2167843	-	85,474
SANDIA NATL LAB	81.049	2167910	-	112,417
SANDIA NATL LAB	81.049	2170449	-	(255)
SANDIA NATL LABS/SANDIA CORP	81.049	2173263	=	37,395
SANDIA NATL LARS/SANDIA CORP	81.049	2181623 2182814	-	45,041 21,197
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2182878	-	54,193
SANDIA NATL LABS/SANDIA CORP	81.049	2183815	-	28,027
SANDIA NATL LABS/SANDIA CORP	81.049	2196829	-	27,744
SANDIA NATL LABS/SANDIA CORP	81.049	2197001	-	63,014
SANDIA NATI LABS/SANDIA CORP	81.049	2200840	-	58,914
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2201282 2204587	-	58,606 210,683
SANDIA NATL LABS/SANDIA CORP	81.049	2204644	-	93,232
SANDIA NATL LABS/SANDIA CORP	81.049	2205488	-	72,693
SANDIA NATL LABS/SANDIA CORP	81.049	2205639	-	68,493
SANDIA NATL LABS/SANDIA CORP	81.049	2206492	-	92,409
SANDIA NATL LABS/SANDIA CORP	81.049	2208511	-	67,955
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2208925 2210029	-	37,786 71,068
SANDIA NATE LABS/SANDIA CORP	81.049	2210236	-	233,477
SANDIA NATL LAB	81.049	2210321	-	34,115
SANDIA NATL LABS/SANDIA CORP	81.049	2211212	-	17,289
SANDIA NATL LABS/SANDIA CORP	81.049	2214568	-	61,241
SANDIA NATL LABS/SANDIA CORP	81.049	2214694	-	23,496
SANDIA NATL LABS/SANDIA CORP SANDIA NATL LABS/SANDIA CORP	81.049 81.049	2214821, 2216268	\$ -	26,548 \$ 49,890
OF WADIA MATE ENDO/ONIVIA CONT	81.049	2217491	Ψ -	57,083

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

antor/Pass-Though uster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
SANDIA NATL LABS/SANDIA CORP	81.049	2218472	<u> </u>	10,468
SANDIA NATL LABS/SANDIA CORP	81.049	2218478	-	9,578
SANDIA NATL LABS/SANDIA CORP	81.049	2220704	_	82,194
SANDIA NATL LABS/SANDIA CORP	81.049	2224297	_	27,400
SANDIA NATL LABS/SANDIA CORP	81.049	2224531	_	50,00
SANDIA NATL LABS/SANDIA CORP	81.049	2234323		23,07
SANDIA NATL LABS/SANDIA CORP	81.049	2236434	_	1,79
			-	
SANDIA NATI LABO(CANDIA CORD	81.049	2243697	-	48,49
SANDIA NATL LABS/SANDIA CORP	81.049	2248233	-	40,71
SANDIA NATL LABS/SANDIA CORP	81.049	2249126	-	46,83
SANDIA NATL LABS/SANDIA CORP	81.049	2252364	-	107,83
SANDIA NATL LABS/SANDIA CORP	81.049	2256491	-	188,63
IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	226040	-	49,70
SANDIA NATL LABS/SANDIA CORP	81.049	2295870	-	49,43
SANDIA NATL LABS/SANDIA CORP	81.049	2302413	-	80,85
SANDIA NATL LABS/SANDIA CORP	81.049	2302845	_	45,50
SANDIA NATL LABS/SANDIA CORP	81.049	2303121	_	20,170
SANDIA NATL LABS/SANDIA CORP	81.049	2308639		49,299
	81.049	2309893	-	
SANDIA NATI LABS/SANDIA CORP			-	110,38
SANDIA NATL LABS/SANDIA CORP	81.049	2311964	-	93,28
SANDIA NATL LABS/SANDIA CORP	81.049	2321430	-	94,909
SANDIA NATL LABS/SANDIA CORP	81.049	2322380	-	33,46
SANDIA NATL LABS/SANDIA CORP	81.049	2324303	-	45,298
SANDIA NATL LABS/SANDIA CORP	81.049	2325234	-	39,08
SANDIA NATL LABS/SANDIA CORP	81.049	2333195	_	129,51
SANDIA NATL LABS/SANDIA CORP	81.049	2335698	_	67,89
SANDIA NATL LABS/SANDIA CORP	81.049	2337470		47,63
	81.049		_	
SANDIA NATL LABS/SANDIA CORP		2343910	-	56,22
SANDIA NATL LABS/SANDIA CORP	81.049	2359215	-	45,84
SANDIA NATL LABS/SANDIA CORP	81.049	2362549	-	7,90
SANDIA NATL LAB	81.049	2382059	-	16,68
IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	245139	-	36,70
IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	254172	_	78,86
IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	255609	_	5,79
IDAHO NATIONAL LAB/BEA/IDAHO FALLS	81.049	256854		36,73
	81.049		_	
BROOKHAVEN NATIONAL LAB/UPTON, NY		343172	-	103,193
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000125663	-	12,464
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000167866	-	103,683
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000170517	-	47
OAK RIDGE NATL LAB	81.049	4000171856	-	1,79
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000175377	-	44,570
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000177997	_	9,196
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000181240	_	25,540
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000191058	_	60,000
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000192646		162,87
	81.049		_	
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN		4000192659	-	115,87
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000192834	-	168,44
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000192842	-	169,16
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000192884	-	54,45
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000192889	-	42,59
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000193240	_	31,290
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000193275	61,935	129,249
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000193316	01,000	202,372
	81.049		_	
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN		4000193660	-	33,289
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000194317	-	62,234
UT BATTELLE LLC/OAK RIDGE NATL LAB - TN	81.049	4000200212/CW34632	-	3,849
CONSOLIDATED NUCLEAR SECURITY LLC./OAK RIDGE, TN	81.049	4300161789	-	86,87
CONSOLIDATED NUCLEAR SECU	81.049	4300166311	-	66,97
CONSOLIDATED NUCLEAR SECU	81.049	4300172993	-	79,63
PACIFIC NW NATL LAB/BATTELLE MEMORIAL INST	81.049	439121	_	(2,37
PACIFIC NW NATL LAB/BATTELLE MEMORIAL INST	81.049	525225		7,72
			_	
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS	81.049	528054	-	32,88
PACIFIC NW NATL LAB/BATTELLE MEMORIAL INST	81.049	535498	-	172,45
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	81.049	535932	-	512,17
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS	81.049	545066	-	4,79
LOS ALAMOS NATL	81.049	547813	-	1,746,23
PACIFIC NW NATL LAB/BATTELLE MEMORIAL INST	81.049	556927	_	7,07
BATTELLE PNW	81.049	566467	_	46,79
PACIFIC NW NATL LAB/BATTELLE MEMORIAL INST	81.049	571871		49,99
			-	
LOS ALAMOS NATL	81.049	609605	-	7,32
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS	81.049	613160	-	131,90
SOUTHERN COMPANY SERVICES INC / GEORGIA	81.049	62668	-	94,89
LOCALANOC NATIONAL LABILOCALANOC NATIONAL CECUBITY (LANCYLOCALANOC	81.049	628281	-	73,45
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS	81.049	633534	_	68,47
		655410	-	
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS			-	(34,07
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL	81.049	68856-TASK 3, PROJ. 1119493	-	60,51
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY	81.049			289,10
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA	81.049 81.049	7360408	-	
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY	81.049 81.049 81.049	7547203	-	
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA	81.049 81.049		-	60,400
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA	81.049 81.049 81.049 81.049	7547203 7587126	- - -	60,400 100,000
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA	81.049 81.049 81.049 81.049	7547203 7587126 7587697	: :	60,400 100,000 45,270
LOS ALAMOS NATIONAL LAB/LOS ALAMOS NATIONAL SECURITY (LANS)/LOS ALAMOS FERMILAB/BATAVIA, IL STATE UNIV OF NY AT STONY BROOK/STONY BROOK, NY LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA LAWRENCE BERKELEY NATIONAL LAB/UNIVERSITY OF CALIFORNIA	81.049 81.049 81.049 81.049	7547203 7587126	- - - -	60,400 100,000 45,276 58,015 28,293

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

al Grantor/Pass-Though or/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditure
ARGONNE NATL LAB/UCHICAGO ARGONNE LLC/ARGONNE, IL	81.049	8F-30135	\$ -	\$ (19,83
INERT PLASMA CHARGING LLC/CHANDLER,AZ	81.049	9/2/2020 ATP	-	80,00
ARGONNE NATL LAB/UCHICAGO ARGONNE LLC/ARGONNE, IL	81.049	9F-60044	_	39,85
UNIVERSITY OF MINNESOTA/MINNEAPOLIS, MN	81.049	A003127003	_	96,94
SAINT GOBAIN RARCH & DEVELOPMENT/NORTHBORO,MA	81.049	AGR DTD 9/17/2021	_	94,59
ARGONNE NATL LAB/UCHICAGO ARGONNE LLC/ARGONNE, IL	81.049	AVTC12	_	56,96
UNIVERSITY OF PITTSBURG/PITTSBURG, PA	81.049	AWD00001252 (415707-1)	_	97,08
SANDIA NATL LABS/SANDIA CORP	81.049	AWD-102245	_	67,3
LAWR LIVERMORE NATL LAB	81.049	B617458	_	. ,-
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE,CA	81.049	B636911	_	88,6
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE,CA	81.049	B639903	_	(2,7
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE,CA	81.049	B642896	_	49,0
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE,CA	81.049	B643120	_	68,7
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE,CA	81.049	B644118	_	120,0
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE.CA	81.049	B644400	_	66,4
LLNL/LAWRENCE LIVERMORE NATL SEC LLC/LIVERMORE,CA	81.049	B650575	_	26,2
CORMETECH INC/CHARLOTTE, NC	81.049	CM-DOE-002	_	100,2
HALLIBURTON ENERGY SERVICES/DUNCAN, OK	81.049	DE-FG02-01ER54656	_	431,3
HONEYWELL INC	81.049	DE-NA0002839	=	(11,0
SAVANNAH RIV NATL LAB/SAVANNAH RIV NUCLEAR SOL LLC/AIKEN, SC	81.049	GT00005	-	41,6
PHILLIPS 66 CO/BARTLESVILLE, OK	81.049	GTRC AGMT DTD. 12/08/2020	-	397,5
			-	
CALABAZAS CREEK RESEARCH	81.049	GTRC AMT 144752 DTD012-2-2020	-	7,8
HONEYWELL INC	81.049	N000037174	-	262,6
HONEYWELL INC	81.049	N000250980	-	
HONEYWELL INC	81.049	N000293974	-	7,
HONEYWELL INC	81.049	N000300107	-	
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000384469	-	68,
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000384869	-	43,
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000386587	-	47,
Honeywell Federal Manufac	81.049	N000388591	-	131,
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000421066	-	46,
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000423693	-	142,4
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000424246	_	69,
HONEYWELL FEDERAL MANUFACTURING AND TECHNOLOGY/KANSAS CITY, MO	81.049	N000429409	_	170,
LEIDOS INC/MCLEAN, VA	81.049	P010230959	_	,
SANDIA NATL LABS/SANDIA CORP	81.049	PO 2112650	_	73,
IBM CORPORATION/	81.049	PO DTD 3/2/2022		227,
SOLIDIA TECHNOLOGIES INC/ PISCATAWAY, NJ	81.049	PO NO 013765		24,
FLORIDA STATE UNIVERSITY/TALLAHASSEE, FLA	81.049	R01436	-	84,0
	81.049		-	
PENNSYLVANIA STATE UNIV/UNIV PARK, PA		S000014-EARPA	-	150, 181,
AMES NATIONAL LABORATORY/AMES, IA	81.049	SC-18-463	-	
AMES NATIONAL LABORATORY/AMES, IA	81.049	SC-19-495	-	102,7
PRINCETON UNIVERSITY/PLAINSBORO, NJ	81.049	SUB0000518	-	84,4
NATIONAL RENEWABLE ENERGY LAB (NREL)	81.049	SUB-2021-10429	-	78,
CISCO SYSTEMS/SAN JOSE, CA	81.049	TASK ORDER #13	-	73,9
GEORGIA DEPT OF TRANSPORTATION	81.049	TASK ORDER 2022-03 RP 21-09	-	37,8
GEORGIA DEPT OF TRANSPORTATION	81.049	TASK ORDER NO. 2022-01	-	20,
onservation Research and Development				
Pass through from:				
VIRGINIA TECH APPLIED RESEARCH CORPORATION/BLACKSB	81.086	#429399-19034	-	20,
UNIVERSITY OF TENNESSEE/	81.086	A21-0468-S001	-	120,0
UNIVERSITY OF VIRGINIA/CHARLOTTESVILLE, VA	81.086	GQ10077	-	81,
NIKOLA MOTOR COMPANY/PHOENIX, AZ	81.086	GTRC 141800 DTD 05/26/2021	-	48,
enewable Energy Research and Development				
Pass through from:				
UNIVERSITY OF DELAWARE/NEWARK, DE	81.087	#53038	_	97,
ELECTRIC POWER RES INST/	81.087	10012453	_	98,
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN. IL	81.087	101795-18675	_	
UNIVERSITY OF CALIFORNIA/SAN DIEGO,CA	81.087	1916-1689	_	29,
TEXAS TECH UNIVERSITY/LUBBOCK, TX	81.087	210345-01		111,
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS (AICHE)/NEW YORK, NY	81.087	4		36,
ARIZONA STATE UNIVERSITY/TEMPE, AZ	81.087	ASUB00000586	-	212,
			-	
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS (AICHE)/NEW YORK, NY	81.087	DE-EE0007888-06-4B	-	(1,
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS (AICHE)/NEW YORK, NY	81.087	DE-EE0007888-09-6		37,
AMERICAN INSTITUTE OF CHEMICAL ENGINEERS (AICHE)/NEW YORK, NY	81.087	DE-EE0007888-10-5	153,921	381,
TEXAS A & M UNIVERSITY/COLLEGE STATION, TX	81.087	M1900414	-	85,
GAS TECHNOLOGY INSTITUTE/DES PAINES, IL	81.087	S1082	-	189,
NORTHWESTERN UNIVERSITY/EVANSTON, IL	81.087	SP0045962-PROJ0012882	-	3,
VANDERBILT UNIVERSITY/NASHVILLE, TN	81.087	UNIV58977	-	(20,
UNIVERSITY OF WASHINGTON/SEATTLE, WA	81.087	UWSC11179	-	64,
ossil Energy Research and Development				
Pass through from:				
GLOBAL THERMOSTAT/NEW YORK, NY	81.089	AGMT DTD 9/3/2021	_	79,
	81.089	AGR DTD 1 APR 2020		76,
PAVEMENT ANALYTICS/TALLAHASSEE.FI	81.089	L99007RI	-	70,
PAVEMENT ANALYTICS/TALLAHASSEE,FL SOUTHWEST RESEARCH INSTITUTE/	81.089	M99005RR	-	12,
SOUTHWEST RESEARCH INSTITUTE/	01.009	MISSOUSIKI	-	12,
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/				
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research				0.10
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from:	04.440	011010000707		
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/	81.113	SUBK0009797	-	310,
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/ uclear Energy Research, Development and Demonstration	81.113	SUBK0009797	-	310,
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/ uclear Energy Research, Development and Demonstration Pass through from:			-	
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/ uclear Energy Research, Development and Demonstration Pass through from: SYRACUSE UNIVERSITY/SYRACUSE, NY	81.113 81.121	SUBK0009797 #30308-05133-S01	-	
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/ uclear Energy Research, Development and Demonstration Pass through from:			-	93,
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/ uclear Energy Research, Development and Demonstration Pass through from: SYRACUSE UNIVERSITY/SYRACUSE, NY	81.121	#30308-05133-S01		93,; 38,;
SOUTHWEST RESEARCH INSTITUTE/ SOUTHWEST RESEARCH INSTITUTE/ efense Nuclear Nonproliferation Research Pass through from: UNIVERSITY OF MICHIGAN/ uclear Energy Research, Development and Demonstration Pass through from: SYRACUSE UNIVERSITY/SYRACUSE, NY AUBURN UNIVERSITY/AUBURN, ALABAMA	81.121 81.121	#30308-05133-S01 22-MREC-211755-GTRC	-	310,8 93,9 38,9 27,1 15,4

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
-	Number	Number	Subrecipient	Expenditures
Advanced Research Projects Agency - Energy Pass through from:				
LEHIGH UNIVERSITY/BETHLEHEM, PA	81.135	#543891-78003	\$ -	\$ 48,975
CARNEGIE MELLON INSTITUTE/PITTSBURGH, PA	81.135	1070254-427580	-	59,299
RENSSELAER POLYTECHNIC INSTIT/TROY, NY	81.135	A12820	-	14
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA UNIVERSITY OF MICHIGAN/	81.135 81.135	S4872, PO#374367 SUBK00010993	-	97,409 55,743
UNIVERSITY OF WASHINGTON/SEATTLE, WA	81.135	UWSC13102	-	70,651
Total Department of Energy	01.100	3.10.0.02	8,055,480	46,174,161
Department of Education	94.045		406,782	461.276
National Resource Centers Program for Foreign Language and Area Studies or Foreign Language at Rehabilitation Services Independent Living Services for Older Individuals Who are Blind	84.015 84.177		406,782	601,636
Graduate Assistance in Areas of National Need	84.200		-	40,559
Centers for International Business Education	84.220		_	294,585
Graduate Assistance in Areas of National Need	84.200		-	7,399
Higher Education Emergency Relief Funding - Institutional Portion	84.425F		-	251,495
Fund for the Improvement of Postsecondary Education				
Pass through from:	84.116	AGR DTD 6-18-2021		20,944
GWINNETT COUNTY PUBLIC SC BOARD OF REGENTS OF THE UNIVERSITY SYSTEM OF GA – WEB SERVICES/ATLANT	84.116	SLA DTD 6-18-2021 SLA DTD 2 MAR 2020	-	20,944
Elementary and Secondary School Emergency Relief Fund	04.110	OLA DID 2 WAIT 2020		3,430
Pass through from:				
GEORGIA STATEWIDE AFTERSCHOOL NETWORK/ATLANTA, GA	84.425U	S425U210012		74,993
Total Department of Education			406,782	1,756,325
Department of Health and Human Services				
Food and Drug Administration Research	93.103		113,929	611,889
Environmental Health	93.113		22,509	32,084
Oral Diseases and Disorders Research	93.121		793,464	2,027,765
Health Program for Toxic Substances and Disease Registry	93.161		1,856,463	7,065,226
Research Related to Deafness and Communication Disorders	93.173			361,854
Mental Health Research Grants	93.242		721,600	1,481,847
Discovery and Applied Research for Technological Innovations to Improve Human Health Trans-NIH Research Support	93.286 93.310		437,293 101,545	3,004,882 1,709,410
21st Century Cures Act -Brain Research through Advancing Innovative Neurotechnologies	93.372		101,343	1,709,410
Cancer Detection and Diagnosis Research	93.394		_	224,090
Cancer Treatment Research	93.395		354,223	2,096,688
Cancer Biology Research	93.396		1,524,347	3,145,687
Cancer Research Manpower	93.398		-	22,408
ACL National Institute on Disability, Independent Living, and Rehabilitation Research	93.433		479,603	2,942,127
CDC Undergraduate Public Health Scholars Program (CUPS): A Public Health Experience to Expose	93.456		83,309	237,514
ACL Assistive Technology Cardiovascular Diseases Research	93.464 93.837		115,467 1,814,460	441,324 3,833,606
Lung Diseases Research	93.838		182,755	496,881
Blood Diseases and Resources Research	93.839		6,831	456,610
Arthritis, Musculoskeletal and Skin Diseases Research	93.846		21,622	1,573,331
Diabetes, Digestive, and Kidney Diseases Extramural Research	93.847		94,174	563,489
Extramural Research Programs in the Neurosciences and Neurological Disorders	93.853		848,701	4,362,073
Allergy and Infectious Diseases Research Biomedical Research and Research Training	93.855		244,867	1,867,497 6,114,115
Child Health and Human Development Extramural Research	93.859 93.865		295,176 328,471	903,662
Aging Research	93.866		212,817	1,032,161
Vision Research	93.867		421,381	1,905,000
International Research and Research Training	93.989		356,050	3,407,501
Preventive Health and Health Services Block Grant	93.991		18,473	281,518
Special Programs for the Aging, Title IV, and Title II, Discretionary Projects				
Pass through from:	93.048	42700-373-0000098226	10 5 4 7	67.939
DHS DIVISION OF AGING SERVICES/ATLANTA,GA ASSOCIATION FOR ASSISTIVE TECHNOLOGY ACT PROGRAMS/SPRINGFIELD, IL	93.048 93.048	42700-373-0000098226 AGMT EXEC 5/18/2021	10,547	50,000
Birth Defects and Developmental Disabilities - Prevention and Surveillance	55.070		-	50,000
Pass through from:				
TASK FORCE GLOBAL HEALTH	93.073	U38OT000316	-	28,647
Prevention of Disease, Disability, and Death by Infectious Diseases				
Pass through from:				
UNIVERSITY OF VIRGINIA/CHARLOTTESVILLE, VA	93.084	GF11175.169404	-	15,00
UNIVERSITY OF VIRGINIA/CHARLOTTESVILLE, VA Food and Drug Administration Research	93.084	GF11176.169201	-	29,998
Pass through from:				
MASSACHUSETTS GENERAL HOSPITAL/BOSTON, MA	93.103	236632	_	227,458
UNIVERSITY OF GEORGIA/ATHENS, GA	93.103	SUB00001793	_	77,45
UNIVERSITY OF GEORGIA/ATHENS, GA	93.103	SUB00002147	-	25,920
Environmental Health				
Pass through from:	00 : : :	4.470500		
EMORY UNIVERSITY/ATLANTA, GA	93.113	A478502	-	86,009
EMORY UNIVERSITY/ATLANTA, GA	93.113	A507001	-	35,845
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.113 93.113	A561670 A662282 (FORMALLY T779501)	-	27,350 37,338
Oral Diseases and Disorders Research	JJ. 113	1002202 (1 OKIVIALL 1 1/19501)	-	31,338
Pass through from:				
EMORY UNIVERSITY/ATLANTA, GA	93.121	A318705	_	188,40
EMORY UNIVERSITY/ATLANTA, GA	93.121	T825580	_	52,66
				***
Injury Prevention and Control Research and State and Community Based Programs				
Injury Prevention and Control Research and State and Community Based Programs Pass through from: EMORY UNIVERSITY/ATLANTA, GA	93.136	A370066		30,692

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

deral Grantor/Pass-Though antor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Health Program for Toxic Substances and Disease Registry				
Pass through from: UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	93.161	097536-17865	\$ -	\$ (332
BIRKELAND CURRENT/PRUF ENERGY CONTROLS/WACO, TX	93.161	145597	φ -	93,446
M S TECHNOLOGIES CORPORATION/ROCKVILLE, MD	93.161	146440	-	199,106
WEILL CORNELL MEDICAL COLLEGE/NEW YORK, NY	93.161	200197	-	43,342
NORTH CAROLINA STATE UNIVERSITY/RALEIGH, NC	93.161	2019-2552-01	-	80,077
COLORADO STATE UNIVERSITY/COLLINS, CO	93.161	G-64112-03	-	90,394
MAYO CLINIC/ROCHESTER, MN MAYO CLINIC/ROCHESTER. MN	93.161 93.161	GEO-234122/PO#67525100 GEO-259345	-	48,451 85,496
Research Related to Deafness and Communication Disorders	93.101	GEO-239343	-	05,490
Pass through from:				
UNIVERSITY OF TEXAS AT DALLAS/RICHARDSON, TX	93.173	UTA19-001005	-	258,982
Drug Abuse and Addiction Research Programs				
Pass through from:	00.070	0000004500		10.000
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	93.279	000001580	-	18,839
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.279 93.279	A371765 (A555961 SUPPLEMENT) A584294		110,669 51,538
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	93.279	S50142-PO 453106	_	176,764
Discovery and Applied Research for Technological Innovations to Improve Human Health	00.2.0	555.12.1 5 .551.65		1.0,.0
Pass through from:				
STANFORD UNIVERSITY/STANFORD, CA	93.286	62440498-142337	-	39,819
EMORY UNIVERSITY/ATLANTA, GA	93.286	A325090	-	510,142
EMORY UNIVERSITY/ATLANTA, GA	93.286	A390401	-	90,092
EMORY UNIVERSITY/ATLANTA, GA	93.286	A454923	-	21
EMORY UNIVERSITY/ATLANTA, GA	93.286	A454979	-	24.00
EMORY UNIVERSITY/ATLANTA, GA	93.286	A547154	-	34,200
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.286 93.286	A547167 A548457	-	87,190 76,022
UNIVERSITY OF PITTSBURG/PITTSBURG, PA	93.286	AWD00003057(135510-1)		31,418
EMORY UNIVERSITY/ATLANTA, GA	93.286	AWD-002052	_	228,440
MICHIGAN STATE UNIVERSITY/EAST LANSING, MI	93.286	RC104170GT	-	208
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	93.286	S5408	-	94,291
Minority Health and Health Disparities Research				
Pass through from:				
NORTHEASTERN UNIVERSITY/BOSTON, MA	93.307	500759-78052	-	65,825
MOREHOUSE SCHOOL OF MEDICINE/ATLANTA, GA	93.307	SIMON U54S-341004-31001GT	-	27,266
Trans-NIH Research Support				
Pass through from:	93.310	0125 GWD486		54,375
UCLA/LOS ANGELES, CA UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	93.310	106390-18695		16,295
UNIVERSITY OF CALIFORNIA	93.310	118211663	_	22,511
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO/SAN FRANCISCO, CA	93.310	12869SC	_	49,102
UNIVERSITY OF CALIFORNIA AT SAN FRANCISCO/SAN FRANCISCO, CA	93.310	13026SC	-	11,775
SIRPANT/HUMMELSTOWN,PA	93.310	150780	-	19,250
AMERICAN ASSOCIATION ON HEALTH AND DISABILITY/ROCKVILLE, MD	93.310	151132	-	19,805
CREIGHTON UNIVERSITY/OMAHA,NE	93.310	270766-2-1	-	28,709
CHILDREN'S RESEARCH INSTITUTE/WASHINGTON, DC	93.310	30006286-03	-	146,579
GEORGIA DEPARTMENT OF PUBLIC HEALTH/ATLANTA, GA IBM CORP/GA	93.310 93.310	40500-036-21213723 4700266271	-	78,445
NORTHWESTERN UNIVERSITY/EVANSTON, IL	93.310	60058446 GTRC	-	(1,739 52,586
EMORY UNIVERSITY/ATLANTA, GA	93.310	A373816	-	113,005
EMORY UNIVERSITY/ATLANTA, GA	93.310	A395206	_	22,008
EMORY UNIVERSITY/ATLANTA, GA	93.310	A464642	_	67,611
EMORY UNIVERSITY/ATLANTA, GA	93.310	A513134	-	122,348
EMORY UNIVERSITY/ATLANTA, GA	93.310	A520841	-	176,590
EMORY UNIVERSITY/ATLANTA, GA	93.310	A540629	-	14,231
EMORY UNIVERSITY/ATLANTA, GA	93.310	A569656	-	43,760
EMORY UNIVERSITY/ATLANTA, GA	93.310	A576223	-	31,030
EMORY UNIVERSITY/ATLANTA, GA	93.310	A577288	-	51,538
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.310 93.310	A587065 A622987		28,601 257,126
EMORY UNIVERSITY/ATLANTA, GA	93.310	ADV PROJECT	-	89,446
TASK FORCE GLOBAL HEALTH	93.310	AGMT DTD 12/17/2021	-	203,460
MAYO CLINIC/ROCHESTER, MN	93.310	GEO-281375/PO#67946792	_	70,403
UNIVERSITY OF MINNESOTA/MINNEAPOLIS, MN	93.310	N008741501	-	81,295
VIRGINIA COMMONWEALTH UNIVERSITY/RICHMOND, VA	93.310	NO. FP00012824_SA001	-	76,013
MOREHOUSE SCHOOL OF MEDICINE/ATLANTA, GA	93.310	PRC-703 HENRY AKINTOBI	-	45,060
THE MARCUS FOUNDATION INC./ATLANTA, GA	93.310	SUB 1701192	-	29,834
UNIVERSITY OF GEORGIA/ATHENS, GA	93.310	SUB00001822	-	210,884
VANDERBILT UNIVERSITY	93.310	VUMC73117	-	75,652
National Center for Advancing Translational Sciences				
Pass through from:  EMORY UNIVERSITY/ATLANTA GA	93.350	141773		(7 FO
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.350	A516200	-	(7,520 444,588
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.350	A520872	-	4,937
EMORY UNIVERSITY/ATLANTA, GA	93.350	A540119	-	54,101
EMORY UNIVERSITY/ATLANTA, GA	93.350	A616167	-	6,741
GEORGIA CLINICAL & TRANSL	93.350	UL1TR002378	-	(572
Research Infrastructure Programs				•
Pass through from:	,			_
Biomedical Advanced Research and Development Authority (BARDA), Biodefense Medical Cou	ช่อ.ออา ntermeasure Develor	IDZUBIU	-	4,347
Pass through from:	monneasure Develop	mion.		
EMORY UNIVERSITY/ATLANTA, GA	93.360	A240077	_	6,052
	93.360	LM0065920		(29

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

	Federal Assistance	Pass-through	Amount Passed	
ederal Grantor/Pass-Though rantor/Cluster or Program Title	Listing Number	Entity ID Number	Through to Subrecipient	Federal Expenditures
Nursing Research				
Pass through from:	00.004	440000	\$ -	f 4.000
QUA INC/NEW ROCHELLE,NY National and State Tobacco Control Program	93.361	146692	\$ -	\$ 1,693
Pass through from:				
UNIVERSITY OF PENNSYLVANIA/PHILADELPHIA, PA	93.387	1RO1HL147256-01	-	341,379
Cancer Detection and Diagnosis Research				
Pass through from:  NEW YORK UNIVERSITY LANGONE MEDICAL CENTER/NEW YORK, NY	93.394	19-A1-00-1002648		172,951
Cancer Treatment Research	33.334	13-71-00-1002040		172,931
Pass through from:				
EMORY UNIVERSITY/ATLANTA, GA	93.395	A392350	-	86,006
UNIVERSITY OF MICHIGAN/ Cancer Biology Research	93.395	SUBK00008227	-	9,823
Pass through from:				
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	93.396	102664-18602	-	106,637
EMORY UNIVERSITY/ATLANTA, GA	93.396	T953287	-	(160
Cancer Centers Support Grants				
Pass through from: EMORY UNIVERSITY/ATLANTA, GA	93.397	A569664		44,146
Strengthening Public Health Systems and Services through National Partnerships to Improve an			_	44,140
Pass through from:				
NORTH CAROLINA STATE UNIVERSITY/RALEIGH, NC	93.421	5 NU38OT000297-02-00	-	37,625
ACL National Institute on Disability, Independent Living, and Rehabilitation Research Pass through from:				
Pass through from: UNIVERSITY OF PITTSBURG/PITTSBURG, PA	93.433	0058440 (130293-1)	_	83,971
GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.433	SP00014685-01	_	20,562
ACL Assistive Technology				
Pass through from:				
ASSOCIATION FOR ASSISTIVE TECHNOLOGY ACT PROGRAMS/SPRINGFIELD, IL	93.464	AGMT EXEC 9/30/2021	-	3,981
Opioid STR Pass through from:				
GA DEPT OF BEHAVIORAL HLTH AND DEVP DISABILITIES/ATLANTA,GA	93.788	44100-906-0000171332	_	31,936
Cardiovascular Diseases Research				
Pass through from:		//= 0 ========		
BAYLOR COLLEGE OF MEDICINE/HOUSTON, TX BRIGHAM AND WOMEN'S HOSPITAL/BOSTON, MA	93.837 93.837	#P.O. 700000129 126090	-	(105,412 30,444
UNIVERSITY OF MARYLAND - BALTIMORE/BALTIMORE, MD	93.837	1701192 REQUEST 4732	-	61,561
ROCHESTER INSTITUTE OF TECHNOLOGY/ROCHESTER, NY	93.837	32433-01	-	4,003
EMORY UNIVERSITY/ATLANTA, GA	93.837	A022924	-	136,660
EMORY UNIVERSITY/ATLANTA, GA	93.837	A092263	-	80,304
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.837 93.837	A430859 A622631	-	16,919 40,102
BOSTON CHILDREN'S HOSPITAL/BOSTON, MA	93.837	GENFD0001664762	_	(8,889
BOSTON CHILDREN'S HOSPITAL/BOSTON, MA	93.837	GENFD0001955860	-	8,889
EMORY UNIVERSITY/ATLANTA, GA	93.837	T586137	-	(21,119
Lung Diseases Research Pass through from:				
PALO ALTO VETERANS INSTITUTE FOR RESEARCH/PALO ALTO, CA	93.838	NIM0003-03	_	22,131
PALO ALTO VETERANS INSTITUTE FOR RESEARCH/PALO ALTO, CA	93.838	NIM0013-03	-	36,228
MOREHOUSE SCHOOL OF MEDICINE/ATLANTA, GA	93.838	PRC-702 HENRY AKINTOBI	-	68,000
Blood Diseases and Resources Research				
Pass through from: EMORY UNIVERSITY/ATLANTA, GA	93.839	A035610		81,229
Arthritis, Musculoskeletal and Skin Diseases Research	33.003	A000010	_	01,223
Pass through from:				
UNIVERSITY OF OREGON/EUGENE, OREGON	93.846	#217420A	-	203,254
GEORGIA STATE UNIVERSITY/ATLANTA, GA COLUMBIA UNIVERSITY/NEW YORK, NY	93.846 93.846	#SP00013208-01	-	(14,799 10,520
EMORY UNIVERSITY/ATLANTA, GA	93.846	2(GG014632-01) A505574		37,071
Diabetes, Digestive, and Kidney Diseases Extramural Research	50.040	7,000074		07,071
Pass through from:				
EMORY UNIVERSITY/ATLANTA, GA	93.847	A365287	-	35,638
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.847 93.847	A375305	-	184,406 33,217
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.847	A379039 A380085		6,410
EMORY UNIVERSITY/ATLANTA, GA	93.847	A380097	_	51,717
EMORY UNIVERSITY/ATLANTA, GA	93.847	A413173	-	7,646
EMORY UNIVERSITY/ATLANTA, GA	93.847	A576210	-	108,079
GEORGIA STATE UNIVERSITY/ATLANTA, GA Extramural Research Programs in the Neurosciences and Neurological Disorders	93.847	SP00013928-02	-	46,441
Pass through from:				
MASSACHUSETTS INST OF TECH (MIT)/CAMBRIDGE, MA	93.853	#64620	-	69,194
ICAHN SCHOOL OF MEDICINE AT MOUNT SINAI	93.853	0255-A446-4609	-	252,674
BMSEED/PHOENIX, AZ	93.853	1R43NS124469-01	-	13,361
DREXEL UNIVERSITY/PHILADELPHIA, PA	93.853	900052	-	91,910
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.853 93.853	A310511 A567140	-	35,415 148,203
	93.853 93.853	A567140 A580374	-	148,203 126,908
EMORY UNIVERSITY/ATLANTA, GA				120,000
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.853	A588417	-	20,504
			-	20,504 28,079 (533

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

deral Grantor/Pass-Though antor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Allergy and Infectious Diseases Research	- ITUINUEI	Tullipo/	Casicolpiciit	
Pass through from:				
BOSTON UNIVERSITY/BOSTON, MA	93.855	#-4500002698	\$ -	\$ (321)
UNIVERSITY OF WISCONSIN - MADISON/MADISON WI	93.855	000001696	-	213,293
UNIVERSITY OF MISSOURI/COLUMBIA, MO	93.855	00071127-1	-	145,472
BRIGHAM AND WOMEN'S HOSPITAL/BOSTON, MA	93.855	123439	-	13,480
UNIVERSITY OF OKLAHOMA/NORMAN, OK	93.855	2020-77	-	62,295
SCRIPPS RESEARCH INSTITUTE/ LA JOLLA,CA	93.855	5-53830	-	220,417
SCRIPPS RESEARCH INSTITUTE/ LA JOLLA,CA	93.855	5-54515	-	124,036
STANFORD UNIVERSITY/STANFORD, CA	93.855	61989439-131451	-	216,818
EMORY UNIVERSITY/ATLANTA, GA	93.855	A085091 A237526	-	107,710 144,706
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.855 93.855	A301957	-	(16,402)
EMORY UNIVERSITY/ATLANTA, GA	93.855	A451237		2,885
EMORY UNIVERSITY/ATLANTA, GA	93.855	A489074	_	41,341
EMORY UNIVERSITY/ATLANTA, GA	93.855	A500863	_	26,563
EMORY UNIVERSITY/ATLANTA, GA	93.855	A540760	_	12,880
EMORY UNIVERSITY/ATLANTA, GA	93.855	A619462	-	61,176
EMORY UNIVERSITY/ATLANTA, GA	93.855	AGREEMENT DTD 8/30/19	_	21,611
GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.855	AWD-102943	_	59,825
MAYO CLINIC/ROCHESTER, MN	93.855	GTR-233617	10,881	60,249
GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.855	SP00013690-01	-	16,100
GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.855	SP00013700-01B	-	128,541
GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.855	SP00013890-01	-	109,272
EMORY UNIVERSITY/ATLANTA, GA	93.855	T365272, A122881	-	1
EMORY UNIVERSITY/ATLANTA, GA	93.855	T970397	-	5,375
UNIVERSITY OF WASHINGTON/SEATTLE, WA	93.855	UWSC12199	-	47,050
Biomedical Research and Research Training				
Pass through from:				
HARVARD UNIVERSITY/BOSTON, MA	93.859	133233-5068506	-	7
HARVARD UNIVERSITY/BOSTON, MA	93.859	133286-5112927	-	286,791
NEW YORK UNIVERSITY LANGONE MEDICAL CENTER/NEW YORK, NY	93.859	17-A1-00-007405-01; Project # 109740	-	91,192
EMORY UNIVERSITY/ATLANTA, GA	93.859	A579704	-	44,697
UNIVERSITY OF VIRGINIA/CHARLOTTESVILLE, VA	93.859	GB10924.PO#2328965	-	46,845
EMORY UNIVERSITY/ATLANTA, GA	93.859	T674760	-	1,177
Child Health and Human Development Extramural Research				
Pass through from:				
UNIVERSITY OF ILLINOIS/CHICAGO,IL	93.865	18095	-	97,803
INDIANA UNIVERSITY/BLOOMINGTON, IN	93.865	9235_GT	-	35,479
EMORY UNIVERSITY/ATLANTA, GA	93.865	A512754	-	311,890
EMORY UNIVERSITY/ATLANTA, GA	93.865	P16527	-	29,632
Aging Research				
Pass through from:				
UNIVERSITY OF NORTH CAROLINA/CHAPEL HILL, NC	93.866	#5111414	-	89,791
UNIVERSITY OF NORTH CAROLINA/CHAPEL HILL, NC	93.866	5118967	-	43,838
UNIVERSITY OF ARIZONA/TUCSON, AZ	93.866	636490	-	39,043
EMORY UNIVERSITY/ATLANTA, GA	93.866	A054728	-	16,567
EMORY UNIVERSITY/ATLANTA, GA	93.866	A338984	-	12
EMORY UNIVERSITY/ATLANTA, GA	93.866	A540603	-	73,767
EMORY UNIVERSITY/ATLANTA, GA	93.866	A558275	-	78,771
WEILL CORNELL MEDICAL COLLEGE/NEW YORK, NY	93.866	ADV PROJECT- SUB W/WCM	-	(1,094)
ARIZONA STATE UNIVERSITY/TEMPE, AZ	93.866	ASUB00000294	- 07.550	1,803
MAYO CLINIC/ROCHESTER, MN	93.866	GEO-233617/PO#67304962	37,556	151,564
FLORIDA STATE UNIVERSITY/TALLAHASSEE, FLA	93.866	R000002734 SUBK00008360	-	6,721
UNIVERSITY OF MICHIGAN/ Vision Research	93.866	SUBK00008360	-	145,297
Pass through from:  EMORY LINIVERSITY/ATLANTA GA	93.867	#A043837		74.007
EMORY UNIVERSITY/ATLANTA, GA VIEWPOINT THERAPEUTICS/SAN FRANCISCO, CA	93.867 93.867	#A043837 1R41EY031203-01	-	71,967 85,172
			-	
CINCINNATI CHILDREN'S HOSPITAL MEDICAL CENTER/CINCINNATI, OH EMORY UNIVERSITY/ATLANTA, GA	93.867 93.867	314961 A473306	-	15,356 4,840
			-	
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.867 93.867	A473348 A621535	-	3,298 45,968
EMORY UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.867	A621613	-	40,982
UNIVERSITY OF TEXAS AT AUSTIN/AUSTIN. TX	93.867	UTA20-000161	-	31,811
CDC's Collaboration with Academia to Strengthen Public Health	53.001	517120-000 TO I	-	31,011
Pass through from:				
EMORY UNIVERSITY/ATLANTA, GA	93.967	T674525		(18,462)
EMORY UNIVERSITY/ATLANTA, GA	93.967	T807472 5P01Al125180-02	-	(10,402)
Preventive Health and Health Services Block Grant	33.301	.00.412 0101/11/20100-02	-	'
Pass through from:				
UNIVERSITY OF OREGON/EUGENE, OREGON	93.991	215830A		176,781
NORTHWESTERN UNIVERSITY/EVANSTON, IL	93.991	60047538 GIT	-	(89,011)
		GENFD0001493133	-	, , ,
		OLIVEDUUU 1480 100	-	(3)
BOSTON CHILDREN'S HOSPITAL/BOSTON, MA	93.991			
BOSTON CHILDREN'S HOSPITAL/BOSTON, MA GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.991	SP00013351-03	-	83,221
BOSTON CHILDREN'S HOSPITAL/BOSTON, MA GEORGIA STATE UNIVERSITY/ATLANTA, GA EMORY UNIVERSITY/ATLANTA, GA	93.991 93.991	SP00013351-03 T783523	-	33,233
BOSTON CHILDREN'S HOSPITAL/BOSTON, MA GEORGIA STATE UNIVERSITY/ATLANTA, GA	93.991	SP00013351-03	- - -	

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Department of Homeland Security				
State and Local Homeland Security National Training Program Emergency Management Performance Grants	97.005 97.042		\$ 300,884	\$ 423,734 573,835
Homeland Security Research, Development, Testing, Evaluation, and Demonstration of Technologies	97.042		-	7,718
Emergency Management Performance Grants				.,
Pass through from:				
SPACE DYNAMICS LAB	97.042	CP0053206	-	(434)
SIERRA NEVADA CORPORATION	97.042	S21CNE180	-	32,660
RAND CORPORATION/PITTSBURGH,PA	97.042	SCON-00000467	-	12,958
Centers for Homeland Security Pass through from:				
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	97.061	077083-16371	_	44,809
UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN/CHAMPAIGN, IL	97.061	077083-17698	-	104,963
IEM INC/BATON ROUGE, LA	97.061	AGR 2013-002	-	9,009
ARIZONA STATE UNIVERSITY/TEMPE, AZ	97.061	ASUB00000286	-	72,982
Homeland Security Grant Program				
Pass through from: GA EMERGENCY MGMT AGENCY	97.067	DELIVERY ORDER 63		1 160
Total Department of Homeland Security	97.007	DELIVERY ORDER 03	300,884	1,162 1,283,396
Agency for International Development				
USAID Foreign Assistance for Programs Overseas				
Pass through from:				
FHI 360/PARTNERS/DURHAM, NC	98.001	PO20000139	95,981	95,554
USAID Development Partnerships for University Cooperation and Development				
Pass through from: FHI 360/PARTNERS/DURHAM, NC	98.012	P021001722	125,686	798,711
Total Agency for International Development	90.012	F021001722	221,667	894,265
Total Research and Development Cluster			177,964,371	986,600,866
Student Financial Assistance-Cluster:				
Department of Education				
Federal Supplemental Educational Opportunity Grants	84.007		-	748,040
Federal Work-Study Program Federal Pell Grant Program	84.033 84.063		-	431,116 12,658,815
Federal Direct Student Loans	84.268		-	70,100,699
Federal Perkins Loan Program Federal Capital Contributions	84.038		_	3,314,787
Total Department of Education			-	87,253,457
Total Student Financial Assistance Cluster:			-	87,253,457
Other Programs:				
Department of Agriculture				
Agricultural Research Basic and Applied Research				
Passed through from:				
DAVID & LUCILE PACKARD FOUNDATION/LOS ALTOS, CA.	10.001	2016-65140		98,496
Total Department of Agriculture			-	98,496
Department of Commerce				
BUILD TO SCALE	11.024		-	116,327
Economic Development_Technical Assistance	11.303		284,835	520,882
Trade Adjustment Assistance for Firms	11.313		201.066	3,529
Manufacturing Extension Partnership Minority Business Resource Development	11.611 11.802		291,966 58,976	3,858,204 84,056
MBDA Business Center	11.805		98,144	1,032,696
Measurement and Engineering Research and Standards			,	1,000,000
Passed through from: POLYTECHNIC UNIVERSITY OF PUERTO RICO/SAN JUAN, PUERTO RICO	11.609	AGMT DTD 9/26/19		2,557
	11.009	MOINT DID 3/20/13		2,557
Arrangements for Interdisciplinary Research Infrastructure Passed through from:				
Passed through from: NIIMBL/WASHINGTON, DC	11.619	PC2.2-122		3,582
Total Department of Commerce	11.013	1 02.2-122	733,921	5,621,833
Department of the Army				
Basic Scientific Research	12.431		-	1,499
Basic, Applied, and Advanced Research in Science and Engineering  Total Department of Army	12.630			1,714 3,213
Department of the Navy				
Basic and Applied Scientific Research	12.300		-	15,343
Total Department of Navy			-	15,343
Department of the Air Force				
Air Force Defense Research Sciences Program	12.800		-	28,764
Air Force Defense Research Sciences Program				
Passed through from:	10.000	DV0 04 40 5 457: 5		
SOUTHWESTERN OHIO COUNCIL FOR HIGHER EDUCATION/DAYTON,OH  Total Papartment of Air Faces	12.800	RY9-GA-19-5-AFRL2		(2,741)
Total Department of Air Force			-	20,023

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Department of Defense				
Procurement Technical Assistance For Business Firms Basic, Applied, and Advanced Research in Science and Engineering	12.002 12.630		\$ - -	\$ 294,505 (108,890)
ROTC Language and Culture Training Grants				
Passed through from: INSTITUTE OF INTERNATIONAL EDUCATION/WASHINGTON, DC	12.357	PGO1801-GT-03-PGO-051-PO3		141,739
Department of Justice			-	327,354
Crime Victim Compensation Passed through from:				
STATE OF GEORGIA - CRIMINAL JUSTICE COORDINATING COUNCIL/ATLANTA, GA Total Department of Justice	16.575	C15-8-380	-	(9,208) (9,208)
Department of Labor Consultation Agreements	17.504		-	1,488,273
WIOA Dislocated Worker Formula Grants				
Passed through from: NORTHWEST GEORGIA REGIONAL COMMISSION/ROME, GA	17.278	CONTRACT DATED 1 SEPT 2017	_	95,212
Total Department of Labor	17.270	CONTRACT DATED 13EF12017		1,583,485
Department of Transportation Highway Training and Education	20.215		_	50,654
	20.210			00,004
Highway Planning and Construction Passed through from:				
GEORGIA DEPT OF TRANSPORTATION GEORGIA DEPT OF TRANSPORTATION	20.205 20.205	AGR DTD 10/05/2017 - T8499 TO 2014-103 RP 20-13	-	175 47,793
Total Department of Transportation	20.203	10 2014-103 RF 20-13		98,622
Department of Treasury COVID-19 Coronavirus Relief Fund	21.019			32,326
Total Department of Treasury	21.019			32,326
National Aeronautics and Space Administration Science	43.001			2,902
Aeronautics	43.001		-	59,153
Education Space Technology	43.008 43.012		-	38,520 288,433
Total National Aeronautics and Space Administration	43.012		-	389,008
National Endowment for the Humanities	45.440			0.057
Promotion of the Humanities_Division of Preservation and Access Promotion of the Humanities Office of Digital Humanities	45.149 45.169		5,297	6,357 5,297
Total National Endowment for the Humanities			5,297	11,654
National Science Foundation Computer and Information Science and Engineering	47.070			5,500
Total National Science Foundation			-	5,500
VETERANS ADMINISTRATION Research and Development	64.054			14,706
Total VETERANS ADMINISTRATION	64.054		<del></del>	14,706
Environment Protection Agency				
Pollution Prevention Grants Program  Total Environment Protection Agency	66.708			166,616 166,616
				100,010
Nuclear Regulatory Commission U.S. Nuclear Regulatory Commission Scholarship and Fellowship Program	77.008			64,337
Total Nuclear Regulatory Commission			-	64,337
Department of Energy Defense Nuclear Nonproliferation Research	81.113		_	35,676
Nuclear Energy Research, Development and Demonstration	81.121			199,347
Total Department of Energy			-	235,023
Department of Education National Resource Centers Program for Foreign Language and Area Studies or Foreign Language ar	84.015		_	144,771
Rehabilitation Services Independent Living Services for Older Individuals Who are Blind	84.177		-	153
Graduate Assistance in Areas of National Need Higher Education Emergency Relief Funding - Student Aid Portion	84.200 84.425E		-	457,411 14,177,162
Higher Education Emergency Relief Funding - Institutional Portion	84.425F			13,727,280 28,506,777
Fund for the Improvement of Postsecondary Education Passed through from:			-	20,000,111
BOARD OF REGENTS OF THE UNIVERSITY SYSTEM OF GA – WEB SERVICES/ATLANT	84.116	AWD-002607	-	33,000
Gaining Early Awareness and Readiness for Undergraduate Programs				
Passed through from: US DEPT OF EDUCATION/GENERAL	84.334	P334S160030	1,462,610	3,021,147
				3.054.147

SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

Federal Grantor/Pass-Though Grantor/Cluster or Program Title	Federal Assistance Listing Number	Pass-through Entity ID Number	Amount Passed Through to Subrecipient	Federal Expenditures
Department of Health and Human Services Trans-NIH Research Support	93.310		\$ -	\$ 61,782
Lung Diseases Research Passed through from: PALO ALTO VETERANS INSTITUTE FOR RESEARCH/PALO ALTO, CA Total Department of Health and Human Services	93.838	NIM0013-03		2,985 64,767
Department of Homeland Security  Homeland Security Grant Program  Passed through from:  GEORGIA EMERGENCY MGMT & HOMELAND SECURITY AGCY/ATLANTA, GA  Total Department of Homeland Security	97.067	GRANT #20	<del></del>	(162) (162)
Total Other Programs			2,201,828	40,309,860
Total Expenditures of Federal Awards			\$ 180,166,19 <b>9</b>	\$1,114,164,183

# GEORGIA TECH RESEARCH CORPORATION, GEORGIA TECH APPLIED RESEARCH CORPORATION, AND GEORGIA INSTITUTE OF TECHNOLOGY NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS

YEAR ENDED JUNE 30, 2022

### Note 1—Basis of presentation

The accompanying schedule of expenditures of federal awards includes the federal grant activity of Georgia Tech Research Corporation ("GTRC"), Georgia Tech Applied Research Corporation ("GTARC"), and Georgia Institute of Technology ("GIT") and is presented on the accrual basis of accounting. The information in the schedule of expenditures of federal awards is presented in accordance with the requirements of Title 2 U.S. Code of Federal Regulations Part 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards ("Uniform Guidance"). Therefore, some amounts presented in this schedule of expenditures of federal awards may differ from amounts presented in or used in the preparation of the basic financial statements. Because the schedule of expenditures of federal awards presents only a selected portion of the activities of GTRC, GTARC, and GIT, it is not intended to, and does not, present either the financial position, changes in net position, or cash flows of GTRC, GTARC, and GIT.

Basis of Accounting – Expenditures reported on the schedule of expenditures of federal awards are reported on the accrual basis of accounting. Such expenditures are recognized following the cost principles contained in the Uniform Guidance; wherein certain types of expenditures are not allowable.

Indirect Cost Rate – GTRC, GTARC, and GIT have elected not to use the 10% de minimis indirect cost rate as allowed under the Uniform Guidance.

Negative Expenditures – Negative expenditures reported in the schedule of expenditures of federal awards may be the result of a correction of an expenditure which was originally posted in a prior fiscal year, such as the recording of a refund for goods or services not received. Although the current expenditures on a grant may be negative, the total of all expenditures on the grant is expected to be positive over its entire period of performance.

### Note 2—Federal assistance listing numbers

Federal assistance listing numbers that are available for each federal award program are indicated on the schedule of expenditures of federal awards.

### Note 3—Student financial aid expenditures

Expenditures for student financial aid programs include the Federal Pell grants to students, the federal share of students' Federal Supplemental Educational Opportunity Grant (FSEOG) program grants, the Federal Work Study (FWS) program earnings, certain other federal financial aid for students, and administrative cost allowances, where applicable. During the fiscal year ended June 30, 2022, GIT disbursed \$70,100,699 in new loans under the Federal Direct Student Loan Programs which included Federal Stafford Loans and Federal PLUS loans. The Federal Perkins Loan Program is administered directly by GIT and balances and transactions relating to the program are included in GIT's financial statements. During the fiscal year ended June 30, 2022, GIT did not disburse new loans under the Federal Perkins Loan Program as under federal law, the authority for schools to make new Perkins Loans ended on Sept. 30, 2017. The balance of loans outstanding under the Federal Perkins Loan Program was \$2,298,145 as of June 30, 2022.

### Note 4—Contingencies

These award programs are subject to financial and compliance audits by grantor agencies. The amount, if any, of expenditures that may be disallowed by the grantor agencies cannot be determined at this time, although GTRC, GTARC, and GIT expect such amounts, if any, to be immaterial.

NOTES TO SCHEDULE OF EXPENDITURES OF FEDERAL AWARDS (CONTINUED)

YEAR ENDED JUNE 30, 2022

### Note 5—Higher Education Emergency Relief Fund (Federal Assistance Listing Number 84.425)

The Coronavirus Aid, Recovery, and Economic Security Act created a Higher Education Emergency Relief Fund ("HEERF") to provide financial relief to students and institutions who were impacted by the COVID-19 pandemic. The Coronavirus Response and Relief Supplemental Appropriations Act and the American Rescue Plan provided additional rounds of HEERF (II and III) funding. HEERF funding contained three components, an institutional award, a student aid award, and a strengthening institutions award.

The following cumulative amounts have been awarded under HEERF as of June 30, 2022:

	Student	Institutional	
	Portion	Portion	Total
HEERF I	\$ 5,194,039	\$ 5,194,038	\$ 10,388,077
HEERF II	5,194,039	11,269,068	16,463,107
HEERF III	14,177,162	14,097,371	28,274,533
	\$ 24,565,240	\$ 30,560,477	\$ 55,125,717

GIT expended the following amounts under HEERF during the year ended June 30, 2022:

		dent tion	Institu Port		 Total
HEERF I	\$	-	\$	-	\$ -
HEERF II		-		-	-
HEERF III	14,1	177,162	13,9	78,775	 28,155,937
	\$ 14,7	177,162	\$ 13,9	78,775	\$ 28,155,937

# GEORGIA TECH RESEARCH CORPORATION, GEORGIA TECH APPLIED RESEARCH CORPORATION, AND GEORGIA INSTITUTE OF TECHNOLOGY SCHEDULE OF FINDINGS AND QUESTIONED COSTS

YEAR ENDED JUNE 30, 2022

### I. Summary of the Auditor's Results

## <u>Financial Statements – Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation</u>

The auditor's reports, dated September 19, 2022, expresses unmodified opinions on whether the financial statements of Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation were prepared in accordance with generally accepted accounting principles ("U.S. GAAP").

No significant deficiencies were disclosed during the audit of the financial statements of Georgia Tech Research Corporation or Georgia Tech Applied Research Corporation. No material weaknesses are reported.

No instances of noncompliance material to the financial statements of Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation, which would be required to be reported in accordance with *Government Auditing Standards*, were reported as a result of those audits.

### Financial Statements - Georgia Institute of Technology

The State of Georgia Department of Audits and Accounts' audit report, dated December 19, 2022, expresses an unmodified opinion on whether the financial statements of Georgia Institute of Technology were prepared in accordance with U.S. GAAP.

No significant deficiencies or material weaknesses were disclosed during the audit of the financial statements of Georgia Institute of Technology in the Report of Independent Auditor on Internal Control over Financial Reporting and on Compliance and Other Matters Based on an Audit of the Financial Statements Performed in Accordance with *Government Auditing Standards* issued by the state of Georgia Department of Audits and Accounts dated December 19, 2022.

No instances of noncompliance material to the financial statements of Georgia Institute of Technology, which would be required to be reported in accordance with *Government Auditing Standards*, were reported as a result of the state of Georgia Department of Audits and Accounts audit for the year ended June 30, 2022.

### **Federal Awards**

The auditor's report on compliance for the major federal award programs for Georgia Tech Research Corporation, Georgia Tech Applied Research Corporation, and Georgia Institute of Technology expresses an unmodified opinion on all major programs.

No significant deficiencies or material weaknesses in internal control over major federal award programs were reported.

Audit findings that are required to be reported in accordance with 2 CFR section 200.516(a) are reported in the schedule of findings and questioned costs.

SCHEDULE OF FINDINGS AND QUESTIONED COSTS (CONTINUED)

YEAR ENDED JUNE 30, 2022

### I. Summary of the Auditor's Results (Continued)

### **Identification of Major Programs**

The programs tested as a major program were:

Federal Assistance Listing Number	Name of Federal Program
Various	Research and Development Cluster
84.007 84.033 84.038 84.063 84.268	Student Financial Aid Cluster: Federal Supplemental Educational Opportunity Grants Federal Work-Study Program Federal Perkins Loan Federal Pell Grant Program Federal Direct Student Loans
84.425	Higher Education Emergency Relief Funding
11.611	Manufacturing Extension Partnership

The dollar threshold for Type A programs was \$3,342,492.

The auditee did qualify as a low-risk auditee.

### II. Financial Statement Findings

### <u>Financial Statement Finding – Georgia Tech Research Corporation and Georgia Tech Applied Research Corporation</u>

None reported.

### Financial Statement Finding - Georgia Institute of Technology

None reported.

SCHEDULE OF FINDINGS AND QUESTIONED COSTS (CONTINUED)

YEAR ENDED JUNE 30, 2022

### III. Federal Award Findings and Questioned Costs

Finding #: 2022-001 Lack of documentation related to verification of

suspension and debarment

Federal Agencies: Department of Education

Federal Program: Higher Education Emergency Relief Fund

Federal Assistance Listing Number: 84.425F

### Statement of Condition

Documentation was not maintained to evidence Georgia Institute of Technology's compliance with the federal regulation that prior to transacting with a non-federal entity verification was performed to ensure that the entity was not suspended or debarred.

### Criteria

As defined in 2 CFR section 180.300 when entering into a covered transaction with another entity the organization must verify that the vendor with whom it intends to do business is not excluded or disqualified by doing the following: (a) checking the System for Award Management (SAM.gov) exclusions; or (b) collecting a certification from that entity; or (c) adding a clause or condition to the covered transaction with that entity.

#### Cause

The initial source of the funding for the expenditure was not federal funds.

**Context:** Georgia Institute of Technology contracted with two hotels in the Metropolitan Atlanta area to provide isolation space for students to use both as they are returning to campus (i.e., international students) and for quarantine activities. The contracts with both of these hotels were selected for testing. One of the two contracts did not have documentation to verify that the vendor was not suspended or debarred.

#### **Effect**

Expenditures could have been made to a vendor that was suspended or debarred.

### Recommendation

Georgia Institute of Technology should ensure it has procedures in place to ensure that when the funding for a project is changed from nonfederal to federal a review is done of the procurement to ensure that all federal regulations that are applicable are compiled with and documentation evidencing that review is maintained.

### Management Response

See attached management's response.

### **Corrective Action Plan**

See attached management's corrective action plan.

# GEORGIA TECH RESEARCH CORPORATION, GEORGIA TECH APPLIED RESEARCH CORPORATION, AND GEORGIA INSTITUTE OF TECHNOLOGY SCHEDULE OF FINDINGS AND QUESTIONED COSTS (CONTINUED)

YEAR ENDED JUNE 30, 2022

### IV. Prior Year Findings

### Finding 2021-001 Revenue-sharing Agreement Non-Compliance

Condition: In August 2020, Georgia Tech Research Corporation ("GTRC") entered into a revenue-sharing agreement on behalf of Georgia Tech Professional Education ("GTPE"). This Specialized Services Agreement ("SSA") created a contractual obligation with third party organizations. The agreement contained an effective date of August 1, 2020, to continue for 12 months. The SSA referenced a Statement of Work ("SOW"). The payment structure outlined in the SOW created a revenue-sharing agreement between GTPE and the specified third parties. As such, GTRC did not have the delegation of authority to sign the agreement and create an obligation of Georgia Institute of Technology ("GT") funds. The agreement should have been processed through the GT Purchasing Office in compliance with state procurement policy. At the time of audit fieldwork, GTRC management was collaborating with GT legal counsel and Administration and Finance to determine the best course of action for fulfilling the monetary obligations to date, and the next steps for sourcing a revised agreement through the GT Purchasing Office.

Current Status: Finding is resolved.

### Finding 2021-002 Subrecipient Monitoring - Research and Development Cluster

**Condition:** Lack of documentation to evidence compliance with federal regulations related to certain subrecipient monitoring activities.

Current Status: Finding resolved.



### **SINGLE AUDIT TASK LIST**

### MANAGEMENT'S CORRECTIVE ACTION PLAN

### Finding 2022-001 - Lack of documentation related to verification of suspension and debarment

We concur with the recommendations. For active (issued) purchase orders, any change requests which include moving dollars to federal funding sources already incorporate a debarment check by our Procurement and Business Services (PBS) department. For closed purchase orders, when funding source changes are submitted via journal entry requests above a \$25,000 threshold, we will incorporate a change to the process whereby campus must submit a Service Now ticket routed to PBS to request approval and debarment review.

We will educate campus about this change in procedure via town halls, monthly campus outreach sessions, and regular email notifications. Our grants and contracts compliance team will also review these transactions on a quarterly basis to ensure that our process changes described above are functioning appropriately.

**Target Date for Implementing Corrective Action:** 

By June 30, 2023

Name and Title of Employee(s) Responsible for Implementing Corrective Action:

Josh Rosenberg, Executive Director – Grants and Contracts