University of Alaska

Subject of RPL Combined request for	ADN/RPL #: 45-0-1139
ARRA Funding	
Amount Requested:	Appropriation Authority: Sec. 4, Ch. 17,
\$4,630,790	SLA 2009, Page 9, Lines 12-16
Funding Source: Federal Stimulus: ARRA	Statutory Authority: AS 14.40.40
2009 – Capital	

PURPOSE

The requested federal stimulus receipt authority will allow the University of Alaska to accept the following awards:

DOE: Validation of Innovative Exploration Techniques Pilgrim Hot Springs, Alaska in the amount of \$4,616,879 for the period 01/29/2010 through 01/31/2012, award DE-EE0002846.

USGS: The Mobility Assignment: Characterization of Volcanic Deposits During Recent Alaskan Eruptions in the amount of \$13,911 for the period 01/01/2010 through 9/30/2011, award 10ARRAV047.

PREVIOUS LEGISLATIVE CONSIDERATION

The projects were not previously considered. They are new multi-year federal awards received after January 14, 2010 and have not been requested as part of the University's budget.

TIMING ISSUES

On February 17, 2009, President Obama signed into law the American Recovery and Reinvestment Act of 2009, which authorized short-term federal spending, designed to stimulate the American economy. Federal stimulus receipt authority was not included in the FY10 budget because ARRA funding was not available for application until February 17, 2009.

BUDGETARY ISSUES

This project is directly aligned with the University of Alaska's long term plans and missions for the University of Alaska Fairbanks: "The University of Alaska Fairbanks, the nation's northernmost Land, Sea and Space Grant University and international research center, advances and disseminates knowledge through teaching, research and public service with an emphasis on Alaska, the circumpolar North and their diverse peoples. UAF – America's Arctic University – promotes academic excellence, student success and lifelong learning".

RPL#:45-0-1139 Page 2

No State General Funds will be used, nor is any match required. The federal stimulus funds will be expended during the period FY10 through FY12. This request adds an additional \$4,630,790 to the University's existing federal economic stimulus authority for competitive, discretionary, and incentive grants capital project appropriation contained within Sec. 4, Ch. 17, SLA 2009.

A copy of the award documents and budgets for these projects are attached.

Agency Contact: Michelle Rizk, (907) 450-8187

OMB Approved:	Date
	Date:

University of Alaska American Recovery and Reinvestment Act 2009 Funding Authority

Title	RPL#	Authority	Agency	Campus	Amount Start Date	End Date
Validation of Innovative Exploration	45-0-1138	02/25/10	DOE	UAF	4,616,879 1/29/2010	1/31/2012
Techniques Pilgrim Hot Springs, Alaska						
The Mobility Assignment: Characterization	45-0-1138	02/25/10	USGS	UAF	13,911 1/1/2010	9/30/2011
of Volcanic Deposits During Recent						
Alaskan Eruptions						
	Validation of Innovative Exploration Techniques Pilgrim Hot Springs, Alaska The Mobility Assignment: Characterization of Volcanic Deposits During Recent	Validation of Innovative Exploration45-0-1138Techniques Pilgrim Hot Springs, Alaska45-0-1138The Mobility Assignment: Characterization45-0-1138of Volcanic Deposits During Recent45-0-1138	Validation of Innovative Exploration45-0-113802/25/10Techniques Pilgrim Hot Springs, Alaska702/25/1002/25/10The Mobility Assignment: Characterization45-0-113802/25/10of Volcanic Deposits During Recent45-0-113802/25/10	Validation of Innovative Exploration45-0-113802/25/10DOETechniques Pilgrim Hot Springs, AlaskaThe Mobility Assignment: Characterization45-0-113802/25/10USGSof Volcanic Deposits During RecentUSGSUSGSUSGS	Validation of Innovative Exploration45-0-113802/25/10DOEUAFTechniques Pilgrim Hot Springs, Alaska <t< td=""><td>Validation of Innovative Exploration45-0-113802/25/10DOEUAF4,616,8791/29/2010Techniques Pilgrim Hot Springs, Alaska45-0-113802/25/10USGSUAF13,9111/1/2010The Mobility Assignment: Characterization45-0-113802/25/10USGSUAF13,9111/1/2010of Volcanic Deposits During Recent45-0-113802/25/10USGSUAF13,9111/1/2010</td></t<>	Validation of Innovative Exploration45-0-113802/25/10DOEUAF4,616,8791/29/2010Techniques Pilgrim Hot Springs, Alaska45-0-113802/25/10USGSUAF13,9111/1/2010The Mobility Assignment: Characterization45-0-113802/25/10USGSUAF13,9111/1/2010of Volcanic Deposits During Recent45-0-113802/25/10USGSUAF13,9111/1/2010

4,630,790

			NOT SP	ECIFIED /	OTHER			0.
			ASSIST	ANCE AGRE	EMENT			Stimul RR
1. Award No. DE-EE0002846		<u> </u>	2. Modificatior		5. Effective Da 01/29/2010		4. CFDA No. 81.087	R. U.
5. Awarded To				ponsoring Off			1	7. Period of Performed
UNIVERSITY OF ALASKA	FAIRBANKS	3	Gol	den Field	d Office			01/29/2010
Attn: MAGGIE GRISCAVA	GE		U.S	5. Depart	ment of Er	nergy		through
GRANTS AND CONTRACTS	ADMINIST	RATION	Gol	lden Field	d Office			01/31/2012
PO BOX 757880			161	17 Cole B	lvd.			
FAIRBANKS AK 99775788	0							
			GOT	lden CO 80	1401			
8. Type of Agreement	9. Authority	/				10. Purchas	se Request or F	unding Document No.
X Grant	111-5, 1	Recovery	Act (2009)			10EE0019	57	
Cooperative Agreement Other	109-58 ,	Energy P	olicy Act	(2005)				
11. Remittance Address			12	. Total Amou	nt		13. Funds Ol	bligated
UNIVERSITY OF ALASKA H	AIRBANKS		Go	ovt. Share	e: \$4,616,	879.00		ion: \$4,616,879.00
Attn: MAGGIE GRISCAVA								
GRANTS AND CONTRACTS A	ADMINISTR	ATION	Cr	ost Share	: \$53,234	1.00	Total	: \$4,616,879.00
PO BOX 757880				Se onare	. 400,205			. 44,010,079.00
FAIRBANKS AK 997757880)				. 64 (70)	112 ^^		
			Тс	otal	: \$4,670,	113.00		
14. Principal Investigator		15. Program	Manager			6. Administra	ator	
Gwen Holdmann		Eric K.	Hass			Golden Fi	eld Office	
Phone: 907-590-4577		Phone: 3	03-275-472	28			rtment of	
							eld Office	
						1617 Cole		
					l c	Golden CO	80401-339	3
17. Submit Payment Requests To)	<u> </u>	18. Paying Of	ffice	I		19. Sub	mit Reports To
OR for Golden			1					
U.S. Department of End	ergy		1					
		nter	1					
	ELVICE CE		1					
Oak Ridge Financial Se	SIVICE CE							
Oak Ridge Financial Se P.O. Box 4517	SIVICE CE							
Oak Ridge Financial Se P.O. Box 4517								
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831								
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation	Data	nts and A	greements					
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation TAS - Recovery EGS Dem	D ata 105 - Grai		greements					
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation TAS - Recovery EGS Dem 21. Research Title and/or Descrip	Data tos - Gran tion of Projec	t		DN TECHNIÇ	QUES PILGF	RIM HOT SI	PRINGS, AL	ASKA
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation TAS - Recovery EGS Dem 21. Research Title and/or Descrip RECOVERY ACT: VALIDATI	Data tion of Projec ON OF IN the Recipient	t NOVATIVE		DN TECHNIÇ	QUES PILGF		PRINGS, AL	
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation TAS - Recovery EGS Dem 21. Research Title and/or Descrip RECOVERY ACT: VALIDATI	Data tion of Projec ON OF IN the Recipient	t NOVATIVE			QUES PILGF	For the Unite	d States of Am	
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation TAS - Recovery EGS Dem 21. Research Title and/or Descrip RECOVERY ACT: VALIDATI	Data tion of Projec ON OF IN the Recipient	t NOVATIVE		25. Signa	ture of Grants	For the Unite	d States of Am	erica
Oak Ridge Financial Se P.O. Box 4517 Oak Ridge TN 37831 20. Accounting and Appropriation TAS - Recovery EGS Dem 21. Research Title and/or Descrip RECOVERY ACT: VALIDATI	Data tion of Projec ON OF IN the Recipient	t NOVATIVE		25. Signa	ture of Grants	For the Unite	d States of Am Officer	erica

NOT SPECIFIED /OTHER

. •

•

...

CONTINUATION SHEET

NOT SPECIFIED /OTHER

Stimulus Funds

DE~EE0002846

NAME OF OFFEROR OR CONTRACTOR

UNIVERSITY OF ALASKA FAIRBANKS

ЕМ NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)		AMOUNT (F)
	DUNS Number: 615245164		(2)	(E)	(F)
	"Electronic signature or signatures as used in		1		
	this document means a method of signing an				
	electronic message that				
	(A) Identifies and authenticates a particular	1			
	person as the source of the electronic message;				
	(B) Indicates such person's approval of the				
	information contained in the electronic message;				
	and,				
	(C) Submission via FedConnect constitutes				
	electronically signed documents."				·
	The administrative office for this award is 03601				
	The administrative office code is needed by the				
	recipient for reporting to FederalReporting.gov				
	concerning awards made with funding from the				
	American Recovery and Reinvestment Act of 2009				1
	(ARRA or Recovery Act).				
	Recipients must report to FederalReporting.gov by				
	the 10th day of each quarter.				
	1. This is a conditional award, comprised of this				
	Assistance Agreement and the Special Terms and				
	Conditions. Upon successful completion of				
	negotiations, this award will be modified to lift				
	its conditional status, to revise the Special				
	Terms and Conditions, and to add additional				
	attachments, such as Attachment 1, Intellectual				
	Property Provisions; Attachment 2, Statement of				
	Project Objectives; Attachment 3, Federal				
	Assistance Reporting Requirements; and Attachment				
	4, Budget Information - Non Construction Programs				
1	-				
	2. The award was prepared using the proposed				
	budget information in the Recipient's				
	application. The Special Terms and Conditions,				
	Provision 1 of the award states DOE will not				
	release the funding obligated by this award until		[4
	the Awardee submits a full application and				
	subsequently requested supplemental information,				
	the Contracting Officer reviews and approves the				
	Awardee's application and supplemental				
	information, and completion of negotiations.				
3	Performance against this award is, therefore, at				
	the Recipient's own risk, and payments for costs				
	incurred for the Recipient's project will not be				
	nade until completion of negotiations.				
······	Continued				
	3. A representative of the DOE office will				

NOT SPECIFIED /OTHER

CONTINUATION SHEET

NOT SPECIFIED /OTHER REFERENCE NO. OF DOCUMENT BEING CONTINUED DE-EE0002846

Stimulus Funds

NAME OF OFFEROR OR CONTRACTOR

UNIVERSITY OF ALASKA FAIRBANKS

EM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	contact the Recipient to request additional			, <i>, ,</i>	
	and/or revised information needed to supplement				
	and clarify the Recipient's application, to				
	complete the negotiations of an amended award.				
	DOE Award Administrator: Melissa Jacobi				
	E-mail: melissa.jacobi@go.doe.gov				
	Phone: (303) 275-6042				
	Recipient Business Officer: Maggie Griscavage				
	E-mail: fygrcon@uaf.edu				
	Phone: (907) 474-7301				
	ASAP: NO Extent Competed: COMPETED Davis-Bacon				
	Act: YES				
	Payment:				
	OR for Golden				
	U.S. Department of Energy				
	Oak Ridge Financial Service Center P.O. Box 4517				
	Oak Ridge TN 37831				
	Fund: 05794 Appr Year: 2009 Allottee: 31 Report				1
	Entity: 200835 Object Class: 41010 Program:				1
	1005101 Project: 2004200 WFO: 0000000 Local Use:				1
	0000000 TAS Agency: 89 TAS Account: 0331				
		· ·			
					1
	· · · · · · · · · · · · · · · · · · ·				
			. 1	-	l de la constante de la consta

Validation of Innovative Exploration Techniques at Pilgrim Hot Springs, Alaska

Submitted by the Alaska Center for Energy and Power, University of Alaska in response to the DOE solicitation DE-FOA-0000109

Summary/Abstract

The project 'Validation of Innovative Exploration Techniques at Pilgrim Hot Springs, Alaska' is being proposed by the University of Alaska Center for Energy and Power (ACEP). The Pilgrim geothermal system was one of the first partially explored geothermal systems in Alaska, with a series of preliminary investigations taking place in the late 1970s and early 1980s. A shallow lateral flow of 90 °C water was found and the chemistry indicated temperatures as high as 150 °C could exist at depth. This project returns to Pilgrim to locate and characterize the deeper and hotter part of the geothermal system so that it can be seriously considered for development as an electrical power source for the city of Nome and the surrounding area. This region has some of the highest energy costs in the United States, with electric power from diesel generators ranging from 38 to 63 cents/kWhr for residential customers. If a significant (>5 MW) resource can be verified at Pilgrim, it may be possible to utilize it to provide geothermal power as a base load for Nome and substantially reduce local energy costs.

The objectives of the project are to utilize remote sensing and ground based geophysical surveys to develop a preliminary conceptual model to site two NQ or HQ sized core holes. These holes will be drilled into a zone of rising thermal water with temperatures between 100 °C and 150 °C that is recharging the shallow 90 °C thermal aquifer at Pilgrim Hot Springs. After these holes are completed, one or two interference tests will be performed to collect data for history matching calibrations for a numerical simulation of the Pilgrim geothermal resource. The conceptual model and numerical simulation will give predictions as to the potential size and megawatt output of the resource. Additionally, the two core holes are intended to discover the up flowing and hotter part of the Pilgrim geothermal resource and provide information on its location, chemistry, and temperature that is needed prior to any future development. Flow testing of individual wells and interference tests will provide information on the overall permeability and size of the resource through the numerical modeling process.

A combination of existing and innovative remote sensing and geophysical techniques will be used to site the two confirmation core holes. These include a suite of Landsat, Aster, and FLIR techniques using infrared radiation combined with a CSAMT/AMT resistivity survey, 4.5 m to 150 m temperature gradient holes, and 1980 convective heat loss calculations. These will be used in combination to determine the natural heat loss from the Pilgrim geothermal system and allow an order of magnitude estimate of the resource potential. This estimate will be compared and contrasted with the numerical modeling output projections. As part of this project we are proposing a new and innovative iterative method of digital processing of acquired thermal infrared data adapted from thermal data processing techniques successfully used to identify small and subtle coal mine fires and in volcanology research. This has been successfully attempted for a geothermal system with a discrete surface expression on one prior occasion by the project team. If this technique can be repeatedly shown to be effective at estimating the heat flow to the surface, it will provide a very low cost and fast method of measuring the natural heat loss for certain geothermal systems which can be used as an indication of its maximum possible electrical megawatt output potential.

This project is planned for two years between 2010 and 2011 in order to maximize use of the short summer field season. It is being led by PI Gwen Holdmann, Director of the Alaska Center for Energy and Power. Co-PI Dr. Anupma Prakash of the Geophysical Institute at the University of Alaska, Fairbanks will oversee the remote sensing Tasks, and co-PI Dr. Joanna Mongrain of the Institute of Northern Engineering at the University of Alaska, Fairbanks will oversee the numerical modeling Task. PI Holdmann will oversee the resistivity survey, drilling, and conceptual modeling tasks and overall integration of the project. Other project participants include Mary's Igloo Native Corporation (MINC) and the Catholic Bishop of Northern Alaska (CBNA), which are providing access to their lands within the area of investigation, as well as contributing modest in-kind cost share (CBNA).

	THIS BOX IS FOR OS		1) The Basics	795
	In: 07/21/09 Out: 07/		-,	795
	Submitted: 07/22/09		b) Sponsor Due Date: _2	
-	To OGCA:			2 3409
Office of Sponsored Programs	Version FY2007 – Replaces A		d) Unit Proposal Number:	
PROPOSAL ROUTING FORM	Complete the Entire Form F		e) Program Guidelines: 🔎	Attached or URL:
(FORM OSP-001)	Minimum of five (5) busine	THE OWNER OF THE OWNER		
(2) Project Background Information	Alaska (lecover			es for
(b) Sponsor: DOE	(c) Div./Prog.: R.A.C			te: 30 Jun 11
(f) Sponsor Type: Federal	State		Organized Research	
University/Inst. Private/Fou			Other Spons. Activity	
(h) Project Type:		(i) Mechanism: 🚺	Grant Grant	
		(j) Proposal Format:	Electronic	Paper
(k) Is UAF a Subaward Recipient?	yes Vro	4 .		Yes Yes
Prime Sponsor:		Subaward(s) To:		
(m) Any Equipment Budgeted?	🛛 🎙 es 🗌 No	(n) Is Tuition Budgete	ed for Grad. Students?	Ves No
(o) Peer Review: 🔀 Internal	External	(p) Is Project EPSCoR	Related?	Yes ANO
(q) Is Project Alaska Specific?	Ves 🗌 No	(r) Banner Research	Theme Code(s): ENOS	00
(s) D-Level Org. Code: DLACE	<u></u>	(t) Related Proposal		000
(3) Personnel Last Name	First Name	Phone Unit	UAF ID#	FTE E-Class
	rann Gwen	SYOZ ACEP	30009241	XR
	rain Joanna	7574 ACEP	30754231	
(c) Co-1 #2 Praka		1897 61	30655327	
(d) Co-I #3		1019 51	20023221	
(e) Unit Contact Hanse		6470		
(f) Fiscal Officer		Slezle		
(4) Ethics and Regulatory Complian		and the second se	(5) Budget Information	Any matching/cost charing
	•	KT8	(M/CS) requires completion of	
(a) Use of Vertebrates?	IACUC#	Q	(a) F&A Rate Percentag	1100
(b) 🔲 Research on Human Subjec			(b) Indirect Cost Rate C	ode: FRN451
(c) 🔲 Use of Radiation, Lasers, or	Significant Chemical Hazards?	Setu 2	-	ode: FRN451 FLAEP1
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? 	Significant Chemical Hazards? LBC#	N P O	(b) Indirect Cost Rate C (c) Distribution Code:	FTAEP1
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, o	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC) 	FIAEP1
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, o ts?	N P O	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1) 	FT-AEP1 c) \$3,007,990 IDC) \$3,260,275
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, o ts?	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery 	FT-AEP1- c) \$3,007,990 IDC) \$3,260,275 \$1,356,604
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, o ts?	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (T (f) F&A Cost Recovery (g) Total Sponsor Requirements 	ETAEP1 c) \$3,007,910 IDC) \$3,260,275 \$1,356,604 uest \$4,616,879
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, o ts? ne?	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF 	ETAEP1 c) \$3,007,990 TDC) \$3,260,275 \$1,356,604
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? oods, or Services? ITSC#	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF (i) M/CS Third Party 	ETAEP1 c) \$3,260,275 \$1,356,604 uest\$4,616,879 \$_53,234 \$_0
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? oods, or Services? ITSC#	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total 	ETAEP1 c) $$3,007,910$ iDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ \$53,234 \$0 \$53,234
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A *** 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requ	pr Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total 	ETAEP1 c) $$3,007,910$ (DC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ \$53,234 $$_0^{+}$ $$_53,234$ $$_0^{-}$ $$_53,234$ $$_0^{-}$ $$_53,234$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items required I as necessary. Attach any relevant docum	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total 	ETAEP1 C) $$3,007,910$ (DC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_653,234$ $$_653,234$ $$_653,234$ $$_653,234$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Infi (6) Project Space Requirements A and Space Planning for budgeting and approval (a) Project requires new space/constitution 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requires a necessary. Attach any relevant docum struction? Yes No (b	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total 	FT-AEP1 C) \$ $3,007,910$ IDC) \$ $3260,275$ \$ 1,356,604 uest\$ 4,616,879 \$ 53,234 \$ 53,234 \$ 53,234 \$ 53,234 \$ 900 \$ 53,234 \$ 900
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requing as necessary. Attach any relevant docum struction? Yes No (bo ditional signature space is nee	or Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Require (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total west Form and consultation with Figervices or Campus and Space Plantton(s) of existing space? m) Read, Sign, and Date: By signing 	FT-AEP1 C) \$3,007,910 IDC) \$3,260,275 \$1,356,604 uest \$4,616,879 \$53,234 \$53,34 \$53,34 \$54 \$54 \$54 \$54 \$54 \$54 \$54
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, proport 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# formation? ISC# formation? forma	pr Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total auest Form and consultation with F Services or Campus and Space Plantition(s) of existing space? (h) Read, Sign, and Date: By signing rant is awarded as a result of the a ant transactions by any federal departed on the space of the	FT-AEP1 C) \$3,007,990 (DC) \$3,260,275 (DC) \$3,275 (
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requires an and the second to the	pr Licensing pr Licensing res completion of the <u>Space Rec</u> entation received from Facilities S) Project requires renova ded, attach another form required progress reports if a gr rooluntarily excluded from currer supports this activity; (4) I certify	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total west Form and consultation with F Services or Campus and Space Plantition(s) of existing space? n) Read, Sign, and Date: By signing and is awarded as a result of the ant transactions by any federal deputation that this proposed project is my or the service of the services of the serv	FT-AEP1. C) \$3,007,910 TDC) \$3,260,275 \$1,356,604 uest \$4,616,879 \$_53,234 \$_616,879 \$_53,234 \$_616,879 \$_53,234 \$_616,879 \$_616,879 \$_53,234 \$_616,879 \$_606,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_616,879 \$_606,879 \$_616,879 \$_606,870 \$_606,870 \$_606,87
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, propeagree to be bound by the terms & conditions or 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requing as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the based for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information	ires completion of the <u>Space Rec</u> entation received from Facilities S) Project requires renova ded, attach another form e required progress reports if a gr r voluntarily excluded from currer supports this activity; (4) I certify n provided on this form & on any or fraudulent statements or claims	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (T (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total muest Form and consultation with F Services or Campus and Space Plantition(s) of existing space? n) Read, Sign, and Date: By signing that this proposed project is my o attached documents related to the start subject me to criminal, civil, 	C) $$3,007,910$ TDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_623,234$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_623,234$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_723,234$ $$_723$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, propoagree to be bound by the terms & conditions or understand & will abide by all UA policies and paccurate & complete to the best of my knowled 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requing as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the based for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information	br Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (T (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total muest Form and consultation with F Services or Campus and Space Plantition(s) of existing space? n) Read, Sign, and Date: By signing that this proposed project is my o attached documents related to the start subject me to criminal, civil, 	FT-AEP1. C) \$3,007,910 (DC) \$3,260,275 \$1,356,604 uest \$4,616,879 \$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, Gr (k) Confidential or Classified Inff (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/constitutions (f) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, proposition or understand & will abide by all UA policies and paccurate & complete to the best of my knowled 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requires as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is nee- conduct of this project and to provide the based for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information dge; and (7) that that any false, fictitious, of	ires completion of the <u>Space Rec</u> entation received from Facilities S) Project requires renova ded, attach another form e required progress reports if a gr r voluntarily excluded from currer supports this activity; (4) I certify n provided on this form & on any or fraudulent statements or claims	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requinities (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total suest Form and consultation with F services or Campus and Space Plantition(s) of existing space? n) Read, Sign, and Date: By signing ant transactions by any federal department to proposed project is my or attached documents related to the smay subject me to criminal, civil, and the service of the comparison of the c	C) $$3,007,910$ TDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_623,234$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_623,234$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_616,879$ $$_623,234$ $$_723,234$ $$_723$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, Gr (k) Confidential or Classified Infi (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/constance presently debarred, suspended, proper agree to be bound by the terms & conditions or understand & will abide by all UA policies and paccurate & complete to the best of my knowled Pl: (b) Unit Approvals Read, Sign, and Date: 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requ I as necessary. Attach any relevant docum struction? Yes No (b ditional signature space is nee conduct of this project and to provide the based for debarment, declared ineligible, o of the sponsored award agreement which procedures; (6) I certify that all information dge; and (7) that that any false, fictitious, Date: Date: Date: Date: Date: 7/17/09 By signing this form, I certify to the best of	ires completion of the Space Rec entation received from Facilities S) Project requires renova ded, attach another form e required progress reports if a gr r voluntarily excluded from currer supports this activity; (4) I certify n provided on this form & on any or fraudulent statements or claims Co-I: Co-I:	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total (j) M/CS Total (ii) M/CS Total (ii) M/CS Total (ii) M/CS Total (j) M/CS Total (j) M/CS Total (j) M/CS Total (ii) All Sponsor Requination with F (j) M/CS Total (j) M/CS Total (j) M/CS Total (j) M/CS Total (j) All Sponsor Requination with F (j) M/CS Total (j) M/CS Total (j) M/CS Total (j) M/CS Total (j) All Sponsor Requination with F (j) M/CS Total (j) M/CS Total	C) $$3,007,910$ TDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_53,234$ $$_66,879$ $$_53,234$ $$_66,879$ $$_53,234$ $$_66,879$ $$_53,234$ $$_66,879$ $$_53,234$ $$_66,879$ $$_67,234$ $$_67,234$ $$_67,234$ $$_67,234$ $$_$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A and Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, propoagree to be bound by the terms & conditions or understand & will abide by all UA policies and paccurate & complete to the best of my knowled Pl: (co-l: Murpure Mathematical Construction (If add accept responsibility for the scientific accept for the scientific	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requilt as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the based for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information dge; and (7) that that any false, fictitious, of Date: Date: Date: Date: No (b) Date:	pr Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total auest Form and consultation with F Services or Campus and Space Plant tion(s) of existing space? n) Read, Sign, and Date: By signing that this proposed project is my of attached documents related to the amount of the services of the common service is related to the service of the service is eligible to be a PI per UAFS of a common service of the serv	C) $$3,007,910$ TDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_653,234$ $$_753,234$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, propagree to be bound by the terms & conditions of understand & will abide by all UA policies and paccurate & complete to the best of my knowled PI: Co-I: Mumpune Mathematical Space (2) PI and Co-I workloads 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requilt as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the based for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information dge; and (7) that that any false, fictitious, ficture Date: Date: Date: Date: Date: 1/11/09. By signing this form, I certify to the best of are within 100% of effort; (3) Unit resource I application and budget are in compliant	pr Licensing pr Licensing res completion of the <u>Space Rec</u> entation received from Facilities S) Project requires renova ded, attach another form required progress reports if a gr rooluntarily excluded from currer supports this activity; (4) I certify n provided on this form & on any or fraudulent statements or claims Co-I: Co-I: my knowledge that: (1) The PI lls res in this application are available with sponsor/agency, state, fec 20 01 Fiscal Review:	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDd (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (1) M/CS UAF (i) M/CS Third Party (j) M/CS Total (j) M/CS Total (i) M/CS Total (j) A/CS Total (j) A/CS Total (j) Read, Sign, and Date: By signing rant is awarded as a result of the a ant transactions by any federal departed to the smay subject me to criminal, civil, (j) State is eligible to be a PI per UAFS e and allocated; (4) All space conderal, and university policies & regularity and the state of the state of	C) $$3,007,910$ TDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_653,234$ $$_753,234$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inff (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/const (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, proposition or understand & will abide by all UA policies and paccurate & complete to the best of my knowled Pl: (6) Unit Approvals Read, Sign, and Date: has been requested; (2) Pl and Co-I workloads have been accounted for; and (5) The proposition of the proposition	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requilt as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the based for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information dge; and (7) that that any false, fictitious, ficture Date: Date: Date: Date: Date: 1/11/09. By signing this form, I certify to the best of are within 100% of effort; (3) Unit resource I application and budget are in compliant	br Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDd (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (1) M/CS UAF (i) M/CS Third Party (j) M/CS Total (j) M/CS Total (i) M/CS Total (j) A/CS Total (j) A/CS Total (j) Read, Sign, and Date: By signing rant is awarded as a result of the a ant transactions by any federal departed to the smay subject me to criminal, civil, (j) State is eligible to be a PI per UAFS e and allocated; (4) All space conderal, and university policies & regularity and the state of the state of	C) $$3,007,910$ TDC) $$3,260,275$ \$1,356,604 uest $$4,616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_53,234$ $$_616,879$ $$_616,$
 (c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/cons (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, propeagre to be bound by the terms & conditions of understand & will abide by all UA policies and paccurate & complete to the best of my knowled Pl: Co-I: Mumpule (8) Unit Approvals Read, Sign, and Date: has been requested; (2) Pl and Co-I workloads have been accounted for; and (5) The propese 	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? OOds, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requing as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the sed for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information dige; and (7) that that any false, fictitious, of Date: Date: Date: 	pr Licensing pr Licensing res completion of the <u>Space Rec</u> entation received from Facilities S) Project requires renova ded, attach another form required progress reports if a gr rooluntarily excluded from currer supports this activity; (4) I certify n provided on this form & on any or fraudulent statements or claims Co-I: Co-I: my knowledge that: (1) The PI lls res in this application are available with sponsor/agency, state, fec 20 01 Fiscal Review:	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDd (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (1) M/CS UAF (i) M/CS Third Party (j) M/CS Total (j) M/CS Total (i) M/CS Total (j) A/CS Total (j) A/CS Total (j) Read, Sign, and Date: By signing rant is awarded as a result of the a ant transactions by any federal departed to the smay subject me to criminal, civil, (j) State is eligible to be a PI per UAFS e and allocated; (4) All space conderal, and university policies & regularity and the state of the state of	FT-AEP1 C) \$ 3 007, 910 [DC) \$ 3 260, 275 \$ 1, 356, 604 uest \$ 4, 616, 879 \$ 53, 234 \$ 53, 234 \$ 53, 234 \$ 53, 234 \$ 53, 234 \$ 616, 879 \$ 53, 234 \$ 616, 879 \$ 53, 234 \$ 616, 879 \$ 53, 234 \$ 616, 879 \$ 60, 979 \$ 616, 879 \$ 616, 879 \$ 616, 879 \$ 616, 879 \$ 616, 879 \$ 616, 879 \$ 60, 979 \$ 60, 979 \$ 60, 970 \$ 70, 970 \$ 60, 970 \$ 70, 970 \$
(c) Use of Radiation, Lasers, or (d) Use of Biohazards? (e) Potential for Tech. Transfer, (f) Material Transfer Agreemen (g) Potential for Program Incom (h) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, G (k) Confidential or Classified Inf (6) Project Space Requirements A mand Space Planning for budgeting and approval (a) Project requires new space/cons (7) Investigator Certification (If add accept responsibility for the scientific & ethical I am not presently debarred, suspended, proposaries to be bound by the terms & conditions or understand & will abide by all UA policies and paraccurate & complete to the best of my knowled Pl: Co-l: (B) Unit Approvals Read, Sign, and Date: has been requested; (2) Pl and Co-l workloads have been accounted for; and (5) The propose Lead Unit Dean/Director: Coll. Unit Dean/Director:	Significant Chemical Hazards? LBC# Patent, Copyright, Trademark, of ts? ne? Oods, or Services? ITSC# formation? ITSC# Yes" answer on either of these items requined as necessary. Attach any relevant docum struction? Yes No (b) ditional signature space is need conduct of this project and to provide the sed for debarment, declared ineligible, of of the sponsored award agreement which procedures; (6) I certify that all information dige; and (7) that that any false, fictitious, of Date: Date:Date: Date: Date:	br Licensing	 (b) Indirect Cost Rate C (c) Distribution Code: (d) Modified TDC (MTDC (e) Total Direct Costs (1 (f) F&A Cost Recovery (g) Total Sponsor Requination (h) M/CS UAF (i) M/CS Third Party (j) M/CS Total Substrained consultation with F Services or Campus and Space Plantition(s) of existing space? n) Read, Sign, and Date: By signing ant transactions by any federal departs that this proposed project is my or attached documents related to the smar subject me to criminal, civil, and allocated; (4) All space conderal, and university policies & regulation (h) M/CS UAF Secording to the UAF Uniform Proposed project (h) Read, Sign, and Date: By signing and the proposed project is my or attached documents related to the smar subject me to criminal, civil, and allocated; (4) All space conderal, and university policies & regulation (h) and the policies	FI-AEP1 C) \$3,007,910 TDC) \$3,260,275 \$1,356,604 Uest \$4,616,879 \$53,234 \$50,50 \$616,879 \$53,234 \$53,234 \$616,879 \$53,234 \$50,50 \$016,50



Form OSP-002: This form must be completed for all mandatory matching funds/cost sharing (M/CS) requirements, regardless of whether the proposal is for research, training or other sponsored activities. Information from the sponsor detailing the matching funds/cost sharing requirement must also be included with this form. For third party contributions, a letter from the third party contributors indicating the amount of matching funds/cost sharing is required. **UAF does not allow voluntary matching funds/cost sharing. Matching funds/cost sharing beyond the minimum required by the sponsor is strongly discouraged and must be fully justified.**

(1) Project Information

_ \"/	r roject information							
(a)	Principal Investigator:	Gwen Holdmann	(d) Project Start/End Dates:					
(b)	Unit Proposal Number:	INE10.002	(e) Banner Number:	\$000				
(c)	Funding Sponsor:	DOE -Recov. Act: Geothermal Tech Prog	(f) Match Terms (i.e., 1:1, 30%)	: n/a				
(g)	(g) Project Title: Recovery Act: Topic 1: Validation of Innovative Exploration Techniques for Pilgrim Hot Springs, Alaska							
(h)	(h) Total Amount of M/CS Commitments: \$ 53,234							

(2) Source of Matching Funds/Cost Sharing Commitments

✓ (a) UAF CommitmentS: salary for Holdmann

(b) Third Party

(3) UAF Matching Funds/Cost Sharing Detail – Department/Unit

	YR 1	YR 2	YR 3	YR 4	YR 5	Cumulative
(a) Salaries	\$ 14,448	\$ 11,012	\$	\$	\$	\$ 25,460
(b) Benefits	\$ 6,372	\$ 4,856	\$	\$	\$	\$ 11,228
(c) Travel	\$	\$	\$	\$	\$	\$ 0
(d) Services	\$	\$	\$	\$	\$	\$ 0
(e) Supplies	\$	\$	\$	\$	\$	\$ 0
(f) Equipment	\$	\$	\$	\$	\$	\$ 0
(g) Tuition Remission	\$	\$	\$	\$	\$	\$ 0
(h) Other	\$	\$	\$	\$	\$	\$ 0
(i) F&A on (a)-(h)	\$ 9,390	\$ 7,156	\$	\$	\$	\$ 16,546
(j) Unrecovered F&A	\$	\$	\$	\$	\$	\$ 0
(k) Total	\$ 30,210	\$ 23,024	\$ 0	\$ 0	\$ 0	\$ 53,234

(4) Third Party Matching Funds/Cost Sharing Commitments

	YR 1	YR 2	YR 3	YR 4	YR 5	Cumulative
Third Party	\$	\$	\$	\$	\$	\$ 0

(5) Total Matching Funds/Cost Sharing Commitments

	YR 1	YR 2	YR 3	YR 4	YR 5	Cumulative
Total M/CS	\$ 30,210	\$ 23,024	\$ 0	\$ 0	\$ 0	\$ 53,234

(6) Certifications and Approvals

I authorize the use of funds listed above for the purposes of matching funds/cost sharing for this project from the department/unit account listed above. Lunderstand that the proposing unit is ultimately responsible for paying these M/CS commitments including third party commitments in frequency fails to provide its contributions.

Dean/Director

I certify that the costs and/or account number(s) stated on this form represent costs and/or projects directly related to the work statement of the named proposal/project, and represent allowable cost sharing per OMB Circular A-110.23 and UAF policy.

Principal Investigator

I REACK

Fiscal Officer

I approve this matching/cost sharing commitment.

I do not approve this matching/cost sharing commitment.

Director, UAF Office of Sponsored Programs

Notes:

PROJECT TITLE: Recovery Act: Topic 1: Validation of Innovative Exploration Techniques for Pilgrim Hot Springs. Alaska PI: Holdmann START: 1 Jan 2010 END: 31 dec 2011 Request Budget

BANNER #: s-12795

DEPT #: ine

8		
2		
3		
e.		

								INE budget	dget				GI budget	tet			Total UAF	
							Year 1		Year 2	ļ		Year 1		Year 2		Year 1	Year 2	Sum
ACCT SALARIES AND WAGES						Hours	50	Hours		Project	Hours		Hours	T	Total Project			
1000 Senior Personnel			Ŧ>	Hourty Lea Wage Ra	Leave Yearly Rate Increase	2 es												
Total Number of Hours	Employee Name																	
0.00	Holdmann	XR - Exempt Staff	\$	\$60.10 20	20.2% 1	1.03 0.	0.0	\$0 0.0	\$0	0 \$0	0.0	\$0	0.0	\$0	\$0	\$0	\$0	\$0
348.00	Mongrain	F9 - Faculty (UNAC)	\$	\$50.24 1.	1.7% 1.(1.045		\$0 348.0	\$18,581	1 \$18,581	1 0.0	\$0	0.0	0\$	\$0	\$0	\$18,581	\$18,581
348.00	Prakash	F9 - Faculty (UNAC)	*	\$49.44 1	1.7% 1.(.045 0	0.0	\$0 0.0	\$0		\$0 261.0	\$13,714	261.0	\$14,331	\$28,045	\$13.714	\$14,331	\$28,045
			Total S	Total Senior Personnel	onnel			\$0	\$18,581	1 \$18,581	-	\$13,714		\$14,331	\$28,045	\$13,714	\$32,912	\$46,626
1000 Other Personnel Total Number of Hours																		
280.00	Research Faculty	FN - Faculty (Non-Union, <12 mo.)		\$57.69 2	2.2% 1	1.03 120.0	0,0 \$7,075	75 160.0	\$9,716	\$16,791	0.0	\$0	0.0	8	\$0	\$7,075	\$9,716	\$16,791
348.00	Schmid	XR - Exempt Staff	\$	\$30.19 20	20.2% 1	1.03 200.0	1.0 \$7,258	58 148.0	\$5,532	2 \$12,790	0.0	\$0	0.0	\$0	0\$	\$7,258	\$5,532	\$12,790
0.00	postdoc(12 months, 1st year)	Select E-Class	\$	\$21.55 2	2.2% 1.(.045 0	0.0	\$0 0.0	\$0		\$0 2088.0	\$48,056	0.0	\$0	\$48,056	\$48,056	\$0	\$48,056
0.00	postdoc(Faculty)	Select E-Class	63	\$21.55 1.	1.7% 1.0	0.045 0.	0.0	\$0 0.0	\$0		\$0 0.0	\$0	960.0	\$22,976	\$22,976	\$0	\$22,976	\$22,976
330.00	Mager	NX - Extended Temp	*	\$19.75 14	14.0% 1	1.03 165.0	0 \$3,715	15 165.0	\$3,826	\$7,541	1 0.0	\$0	0.0	\$0	\$0	\$3,715	\$3,826	\$7,541
1000 Student Employees Number of Students																		
,		SN - Undergrad, academic		\$15.07 0	%0.0	1 760.0	0.0 \$11,453	53 480.0	\$7,234	4 \$18,687	7 0.0	\$0	0.0	\$0	\$0	\$11,453	\$7,234	\$18,687
-		ST - Undergrad, summer		\$15.07 0	0.0%	1 560.0	0.0 \$8,439	39 560.0	\$8,439	\$16,878	8 0.0	\$0	0.0	\$0	\$0	\$8,439	\$8,439	\$16,878
		GN - Graduate, academic		\$25.00 0	0.0%	1 760.0	0.0 \$19,000	00 760.0	\$19,000	0 \$38,000	0.0	\$0	0.0	\$0	0\$	\$19,000	\$19,000	\$38,000
2		GT - Graduate, summer		\$25.00 0	0.0%	1 560.0	000 \$28,000	00 560.0	\$14,000	0 \$42,000	0.0	\$0	0.0	\$0	\$0	\$28,000	\$14,000	\$42,000
-		GT - Graduate, summer		\$25.00 0.	0.0%	760.0	0 \$19,000	00 760.0	\$19,000	0 \$38,000	0.0	\$0	0.0	\$0	\$0	\$19,000	\$19,000	\$38,000
-		GN - Graduate, academic		\$25.00 0.	0.0%	1 560.0	0.0 \$14,000	00 560.0	\$14,000	0 \$28,000	0.0	\$0	0.0	\$0	\$0	\$14,000	\$14,000	\$28,000
1			Total C	Total Other Personnel	onnel		\$117,940	10	\$100,747	7 \$218,687	2	\$48,056		\$22,976	\$71,032	\$165,996	\$123,723	\$289,719
-																		
			- AWAR	日日 ちょうち 日本の 日本日 ちょう ちょう ちょう ちょう	A REAL PROPERTY AND A REAL	and	「「「「「「」」」	1.00	Contraction in the second seco			the set of a lot of			and a set	the state of the s	A DESCRIPTION OF A DESC	「二、二、二、二、二、二、二、二、二、二、二、二、二、二、二、二、二、二、二、

FRINGE BENEFITS Senior Personnel	Holdmann	XR - Exempt Staff		44.1%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
	Mongrain	F9 - Faculty (UNAC)		31.9%	05	\$5,927	\$5,927	\$0	05	\$0	\$0	\$5,927	\$5,927
	Prakash	F9 - Faculty (UNAC)		31.9%	\$0	\$0	\$0	\$4,375	\$4,572	\$8,947	\$4,375	\$4.572	\$8,947
			Total Senior Personnel	Personnel	\$0	\$5,927	\$5,927	\$4,375	\$4,572	\$8,947	\$4,375	\$10,499	\$14,874
Other Personnel													
	Research Faculty	FN - Faculty (Non-Union,	n, <12 mo.)	28.2%	\$1,995	\$2,740	\$4,735	\$0	\$0	\$0	\$1,995	\$2,740	\$4,735
	Schmid	XR - Exempt Staff		44.1%	\$3,201	\$2,440	\$5,641	05	\$0	0\$	\$3.201	\$2.440	\$5,641
	postdoc(12 months, 1st year) Select E-Class	Select E-Class		28.2%	\$0	0\$	95	\$13,552	\$0	\$13,552	\$13.552	\$0	\$13,552
	postdoc(Faculty)	Select E-Class		31.9%	\$0	\$0	\$0	\$0	\$7,329	\$7,329	\$0	\$7,329	\$7,329
	Mager	NX - Extended Temp		41.9%	\$1,557	\$1,603	\$3,160	\$0	\$0	0\$	\$1,557	\$1,603	\$3,160
Student Employees													
	0	0 SN - Undergrad, academic	mic	0.0%	\$0	50	\$0	\$0	05	\$0	\$0	\$0	\$0
	0	0 ST - Undergrad, summer	er	8.0%	\$675	\$675	\$1,350	\$0	\$0	\$0	\$675	\$675	\$1,350
	0	0 GT - Graduate, summer		8.0%	\$1,520	\$1,520	\$3,040	\$0	\$0	\$0	\$1,520	\$1,520	\$3,040
	0	0 GN - Graduate, academic	nic	0.0%	0\$	\$0	0\$	0\$	\$0	\$0	\$0	\$0	\$0
	0	0 GT - Graduate, summer		8.0%	\$1,520	\$1,520	\$3,040	ŝ	\$0	\$0	\$1,520	\$1,520	\$3,040
	0	0 GN - Graduate, academic	hic	0.0%	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Grad Study	Grad Student Health Insurance (Enter manually)				\$2,376	\$2,376	\$4,752	\$0	\$0	\$0	\$2,376	\$2,376	\$4,752
			Total Other Personnel	ersonnel	\$12,844	\$12,874	\$25,718	\$13,552	\$7,329	\$20,881	\$26,396	\$20,203	\$46,599
		NUNCTION NET	TOTAL	TOTAL FRINGE BENEFITS	\$12,844	\$18,801	\$31,645	\$17,927	\$11,901	\$29,828	\$30,771	\$30,702	\$61,473
			TOTAL SALADI	TOTAL BALADICE AND DEVICETTO	101 0010			**** COT	000 00 e	-400 00F			£207 818

DEPT. #1 TRAVEL (INE)		Number of 1rips											
1. Domestic Travel	·	Yr1 2 3 4 5		Yearly Increase									
Airfare	travel to pilgrim	4 4	650	1.1	\$2,600	\$2,860	\$5,460				\$2,600	\$2,860	\$5,460
Meals	travel to pilgrim	60 60	44	-	\$2,640	\$2,640	\$5,280				\$2,640	\$2,640	\$5,280
Lodging	travel to pilgrim	8 8	200	-	\$1,600	\$0	\$1,600				\$1,600	\$0	\$1,600
Airfare	travel to pilgrim	4	650	1.1	\$2,600	\$2,600	\$5,200				\$2,600	\$2,600	\$5,200
Meals	travel to pilgrim	60	44	-	\$2,640	\$2,640	\$5,280				\$2,640	\$2,640	\$5,280
Lodging	travel to pilgrim	8	200	-	\$1,600	\$1,600	\$3,200				\$1,600	\$1,600	\$3,200
Alríare	Frbks to Teller	-	650	-	\$650	80	\$650				\$650	\$0	\$650
Meals	meals/Teller	- 0	4		588	so	\$88				\$88	3	\$88
Lodging	meals/Teller	1	200	· -	\$200	\$0	\$200				\$200	\$0	\$200
Car Rental	truck @ pilgrim	60	100	1.1	\$6,000	\$0	\$6,000				\$6,000	\$0	\$6,000
Airfare	conference travel (2 trips, 2 people)	4	1300	1	\$5,200	\$0	\$5,200				\$5,200	\$0	\$5,200
	Reno meals (2 trips, 2 people	:	S									1	0000
Meals	5 days) Deep lodeige (ditte)	20	49		\$980	20	2980				2980	0, 0	\$980
Louging Airfare	Stanford (1 trip, 2 people)	0 2	1300	1.1	0\$ \$0	\$2,860	\$2,860				0\$	\$2,860	\$2,860
Meals	Stanford (1 trip. 2 people)	0 10	59	-	\$0	\$590	\$590				\$0	\$590	\$590
l odaina	Stanford (1 trip. 2 people)	9 0	132	-	50	\$792	5792				\$0	\$792	\$792
Taxi	conference commute	9 0	50		\$0	\$0	0\$				\$0	\$0	\$0
Airfare	CBNA travel to meetings	8	800	1.1	\$6,400	0\$	\$6,400				\$6,400	\$0	\$6,400
Meais	CBNA meals for meetings	12	4	-	\$528	\$0	\$628				\$528	\$0	\$528
Lodging	CBNA lodging for meetings	12	200	-	\$2,400	\$0	\$2,400				\$2,400	\$0	\$2,400
Taxi	CBNA meeting commute	12	50	1	\$600	0\$	\$600				\$600	20	\$600
Airtare	MINC IFAVEI to meetings	æ (800	1.1	\$6,400	20	\$6,400				\$6,400	0, 0	\$6,400
Meals	MINC fileals for meetings MINC holding for meetings	71 5	# 00c		8205	0%	9794				0704	D, S	000 63
Taxi	MINC meeting commute	1 1	50	- -	\$600	0\$	\$600				\$600	\$0	\$600
Airfare	Training Ontario	-	1400		\$1,400		\$1,400						
Meals	Ontario	7	5	1.1	\$378		\$378						
Lodging	Ontario	7	268	-	\$1,876		\$1,876						
Taxi	Ontario	-	150 Total Domestic Trave	-	\$150 *#2 246	¢16 587	\$150 \$68 878				667 246	418 KR3	668 878
		Number of Trips		IDA B	01-31308	& 10'00F	070.000					400/014	1000
DEPT. #2 TRAVEL (GI)		Number of Trips											
1. Domestic Travel	Description	Yr 12345	Cost Ye	Yearly Increase									
Airfare	travel to pilgrim	4 0	650	1.1				\$2,600	\$0	\$2,600	\$2,600	\$0	\$2,600
Meals	pilgrim field days	20 0	44	-				\$880	\$0	\$880	\$880	\$0	\$880
Lodging	pilgrim field days	20 0	185	-				\$3,700	\$0	\$3,700	\$3,700	8	\$3,700
Tavi	commute to and from Nome to Pilorim	0.1	150	-				SROO	9	SEDO	\$600	US	\$600
Airfare	San Francisco (AGU)		1200					UUT CS	9	\$2 400	\$2 400	5	\$2 400
Meals	San Francisco (AGU)		68					\$680	\$0	\$680	\$680	8	\$680
Lodging	San Francisco (AGU)		230	Ţ				\$2,300	ŝ	\$2,300	\$2,300	\$0	\$2,300
Taxi	San Francisco (AGU)	2 0	150	1.1				\$300	\$0	\$300	\$300	\$0	\$300
			Total Domestic Travel	ravel				\$13,460	\$0	\$13,460	\$13,460	\$	\$13,460
		A DESCRIPTION OF THE OWNER OWNER OF THE OWNER OWNER OF THE OWNER OWNE											

			-	-		-	-	-			-
	CONTRACTUAL SERVICES										
	Contractual Service (include description)	dissemination	0\$	\$3,800	\$3,800	\$0	\$0	05	\$0	\$3,800	\$3,800
	Software License - 3222	modelling software	0\$	\$2,000	\$2,000	\$0	\$0	\$0	\$0	\$2,000	\$2,000
	Honoraria - 3017	Fairbanks Dioceses meeting participants - travel costs & etc.	\$10,000	\$0	\$10,000	\$0	\$0	\$0	\$10,000	\$0	\$10,000
3000	Contractual Service (include description)	local hires, Pilgrim, Nome	\$10,000	\$10,000	\$20,000	\$0	so	\$0	\$10.000	\$10,000	\$20,000
	Contractual Service (include description)	flyovers for FLIR work	\$20,884	\$0	\$20,884	\$0	05	0\$	\$20,884		\$20,884
	Consultants - 3005	Blackweil consulting: 12,000 plus 5,000 travel	\$17,000	\$0	\$17,000	\$0	\$0	\$0	\$17,000		\$17,000
	Consultants - 3005	Dick Benoit (800/day for 4 weeks) (phase 2)plus 2 trips Reno/Frbk	\$24,000	\$0	\$24,000	\$0	\$0	0\$	\$24,000	\$0	\$24,000
	Consultants - 3005	Dick Benolt (800/day for 4 weeks) (phase 3)	\$0	\$24,000	\$24,000						
	Contractual Service (Include description)	Dritling company - 4 holes, see bud just for details	0\$	\$2,025,000		\$0	\$0	\$0		\$2	025,000
	Contractual Service (include description)	Permitting, drilling, etc.	\$0	\$10,000	\$10,000	98	\$0	\$0	\$0	\$10,000	\$10,000
	Registration fees - 3661	conference registration	\$0	\$3,000	\$3,000	so	\$1.600	\$1,600	\$0	\$4,600	\$4,600
	Lab Analysis/Services (Lab Testing) - 3052	water samples	\$0	\$6,600	\$6,600	\$0	\$0	98	\$0	\$6,600	\$6,600
	Journal Publication Page Charges - 3332			\$0	\$0	\$1,800	\$0	\$1,800	\$1,800	\$0	\$1,800
	Freight and Parcel Post - 3351		\$10,000	\$10,000	\$20,000						
	Contractual Service (include description)	On-site accommodations	\$20,000	\$80,000	\$100,000	2					
	Contractual Service (include description)	contracted dritting supervisor & logistics	\$0	\$150,000	\$150,000	\$2,000	\$0	\$2,000	\$2,000 \$	\$150,000 \$152,000	52,000
		Total Other Contractual Srvs	\$111,884	\$2,324,400	********	\$3,800	\$1,600	\$5,400	\$115,684 \$2,326,000 \$2,441,684	326,000 \$2,	141,684
	Subawards subject to F&A (first \$25,000)										
			\$0	\$0	0\$	0\$	\$0	\$0	\$0	\$0	\$0
			\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
3021/			\$0	\$0	0\$	\$0	\$0	0\$	\$0	\$0	\$0
3028			\$0	\$0	\$0	\$0	\$0	0\$	\$0	\$0	\$0
	-	Total Subawards	\$0	\$0	\$0	\$0	\$0	\$0	8	8	8
	2	TOTAL CONTRACTUAL SERVICES	\$111,884	\$2,324,400	*******	\$3,800	\$1,600	\$5,400	\$115,684 \$2	\$2,326,000 \$2,441,684	141,684
	3 COMMODITIES										
	4 Supplies (Field) - 4075	reel & line	\$5,000	\$0	\$5,000	\$0	05	0\$	\$5,000	\$0	\$5,000
	Supplies (Field) - 4075	well repair and flow testing equipment	\$50,000	\$0	\$50,000	0\$	0\$	0\$	\$50,000		\$50,000
	Computer Supplies - 4014	field laptop and phoenix software	\$11,500	\$0	\$11,500	\$0	\$0	\$0	\$11,500	\$0	\$11,500
4000	Supplies (Field) - 4075	batteries, cables (field installation)	\$5,000	\$1,000	\$6,000	\$0	so	90	\$5,000	\$1,000	\$6,000
	Supplies (Field) - 4075	camping gear	\$2,000	\$0	\$2,000	\$0	\$0	\$0	\$2,000	\$0	\$2,000
	Computer Supplies - 4014	Data Storage Device	\$700	\$300	\$1,000	\$0	\$0	\$0	\$700	\$300	\$1,000
	Supplies (Field) - 4075	Temperature loggers	\$1,200	\$0	\$1,200	\$1,700	\$0	\$1,700	\$2,900	\$0	\$2,900
	Supplies (Field) - 4075	Data loggers, fittings, capilary tubing, gases	\$5,000	\$0	\$5,000						
	Supplies (Field) - 4075	Field supplies, notebooks	\$1,200	\$400	\$1,600	\$1,200	80	\$1,200	\$2,400	\$400	\$2,800
		TOTAL COMMODITIES	\$81,600	\$1,700	\$83,300	\$2,900	\$0	\$2,900	\$84,500	\$1,700	\$86,200
	A. MTDC (total costs subject to F&A)		\$376,514	\$2,480,811	********	\$99,857	\$50,808	\$150,665	\$476,371 \$2,531,619 \$3,007,990	531,619 \$3,	001,990
	B. Dept #1 Facilities and Administration (F&A) (INE)	Sponsored Research 45.1%	\$169,808	\$1,118,846	*******				\$214,844 \$1,141,760 \$1,356,604	141,760 \$1,	356,604
	B. Dent #2 Facilities and Administration (F&A) (GI)	Sponsored Research 45.1%				\$45.036	\$22.914	\$67.950			
				-							
	B. Dept #3 Facilities and Administration (F&A) (Cost Share)	Select Activity 0.0%									
	B. Dept #4 Facilities and Administration (F&A)	Select Activity 0.0%									
	EQUIPMENT FABRICATION SALARY COSTS										
	Total Number of Hours Employee	Wage Rate Increase H	Hours	Hours		Hours	Hours				
	0.0	Select E-Class \$0.00 0.0% 0	0.0 \$0	0.0 \$0	\$0	0.0 \$0	0.0 \$0	\$0	\$0	\$0	\$0
	0.0	Select E-Class \$0.00 0.0% 0		0.0 \$0	\$0	0.0 \$0	0.0 \$0	\$0	\$0	\$0	\$0
3022/ 3029	Sub-sward #4		US.	US	05	g	SO	50	\$0	\$0	\$0
		TOTAI SIIRAWARDS EXEMPT EROM E&A	C.	0	0.	20	US US	US	8	9	8
			1.0	1	1.4	124	1	Ē		3	3

					•	-	-				
	EQUIPMENT										
	3 Kuster gauges		\$0	\$27,258	\$27,258	0\$	\$0	\$0	\$0	\$27,258	\$27,258
	flow test pump		\$0	\$5,000	\$5,000	9	\$0	\$0	\$0	\$5,000	\$5,000
	shallow temp measurement probe		\$0	\$5,000	\$5,000	\$0	\$0	\$0	\$0	\$5,000	\$5,000
5000	Gyro Stabilized Platform		\$0	\$0	0\$	\$25,095	\$0	\$25,095	\$25,095	\$0	\$25,095
	Resistivity Survey		\$140,000	\$0	\$140,000	80	30	8	\$140,000	\$0	\$140,000
			\$0	\$0	\$0	50	\$0	\$0	\$0	\$0	\$0
		TOTAL EQUIPMENT	r \$140,000	\$37,258	\$177,258	\$25,095	\$0	\$25,095	\$165,095	\$37,258	\$202,353
	STUDENT SERVICES Number of Students Turition	\$ Per Credit (Fall 2008) credits Total									
	In-State Turtion	\$301 \$0	\$0	\$0	\$0	0\$	\$0	\$0	\$0	\$0	\$0
	2 Out-Of-State Tuition	\$615 18 #######	\$24,343	\$24,343	\$48,686	\$0	\$0	\$0	\$24,343	\$24,343	\$48,686
6000	Scholarship(s) or Fellowship(s)		\$623	\$623	\$1,246	\$0	\$0	\$0	\$623	\$623	\$1,246
		TOTAL STUDENT SERVICES	\$24,966	\$24,966	\$49,932	0\$	0\$	0\$	\$24,966	\$24,966	\$49,932
	C. Total Costs Exempt from F&A		\$164,966	\$62,224	\$227,190	\$25,095	0\$	\$25,095	\$190,061	\$62,224	\$252,285
	D. Total Direct Costs (A+C)		\$541,480	\$2,543,035	*******	\$124,952	\$50,808	\$175,760	\$666,432 \$2,593,843 \$3,260,275	,593,843 \$3	260,275
	E. Total Sponsor Request (B+D) (by unit)		\$711,288	\$3,661,881	*******	\$169,988	\$73,722	\$243,710	\$881,276 \$3,735,603 \$4,616,879	1,735,603 \$4	616,879
	Total Requested Funds (Federal costs)				*******				\$30,210	23024	
	Total cost share committed				\$53,234				\$911,486 \$	\$911.486 \$3,758,627 \$4,670,113	670,113
	Total Project Costs				*****				\$687,252		
									\$224,234		
									\$911,486 fed		non-fed



OF 69 # (Roy, 2-89)

U.S. Office of Personnel Manageme		Assignment Agreemer	nt 👘 👘
FPM Chapter 334	Title IV of the i	intergovernmental Personnel Act of 19	70 (5 U.S.C. 3371 - 3376)
		STRUCTIONS	
This agreement constitutes the w and responsibilities of the parties t under the provisions of the Interge	ritten record of the obligations to a temporary assignment arranged overnmental Personnel Act of 1970.	copies of this form intust	
The term "State or local governm also refers to an institution of high government, and any other eligible	ent," when appearing on this form, er education, an Indian tribal organization.	U.S. Office of Person Personnel Mobility Pr Staffing Operations E 1900 E Street, NW Washington, D.C. 20	ogram Nvision/CEG
Copies of the completed and signe each signatory.	d agreement should be retained by	addressed to either mobili	ompleting the assignment agreement for g to the mobility program should be y program coordinators in each Federal he Personnel Mobility Programs in the U, gement.
PART 1 - NATURE OF THE	ASSIGNMENT AGREEMENT		
1. Check Appropriate Box			
	X New Agreement	Modification	Extension
2. Name (Last, First, Middle)	N PARTICIPATING EMPLOYE		
Larsen, Jessica			3. Social Security Number
4. Home Address (Street, City, St	ate, ZIP Code)	5 A. Have you ever been on a	a mobility accimenta
1270 Upland Drive, Fairbanks,	AK 99709	L YES	X NO
		5 B. If "YES", date of each a From	ssignment (Month and Year)
PART 3 - PARTIES TO THE	ACREMENT		
the agreement) U.S. Geological Survey, Alaska V 3. Is assignment being made throug			(Identify the governmental agency)
If "YES", give name of the progra	am.	YES	X NO
PART 4 - POSITION DATA	·····		
	A - Positio	on Currently Held	
Employment Office Name and Ac	dress (Street, City, State and ZIP	10. Employee's Position Title	11 000
<i>Code)</i> eophysical Institute			11. Office Telephone Number (Include the Area Code)
niversity of Alaska Fairbanks		Research Associate Professor	(907)474-7992
03 Koyukuk Drive		12. Immediate-Supervisor (Name	and Title)
airbanks, AK 99775			
	D. T	Roger Smith, Director, Geophy	sical Institute
Federal Employees (Check appro	B - Type of Ci	urrent Appointment	·····
Career Competitive	Grade Level	14. State and Local Employees State or Local Annual Salary	
Other (Specify):		Said y	Original Date Employed by the
· · · · · · · · · · · · · · · · · · ·		N/A	State or Local Government (Month Day,
·			Year; 1/1/1999
	C - Position To Which	Assignment Will Be Made	
Employment Office Name and Ar Code)	dress (Street, City, State and ZIP	16. Assignee's Position Title	17. Office Telephone Number
5. Geologicał Survey, Alaska Vok 10 University Drive	ano Observatory,	Research Geologist	(Include the Area Code) (907)786-7497
chorage, AK 99508 USA		18. Immediate Supervisor (Name a	
		Tom Murray	· · · · · · · · · · · · · · · · · · ·
		1	

Previous edition is usable

50 59 - 105

ARRA Stimulus Funds

PART 5 - TYPE OF ASSIGNMENT			
19. Check Appropriate Boxes		20. Period of Assignme	ent (Month, Day, Year)
On detail from a Federal agency		From	. To
On leave without pay from a Federal agency	Full Time		1.
X On detail to a Federal agency	Part Time	1/1/2010	9/30/2011
On appointment in a Federal agency	X Intermittent		5/30/2011
PART 6 - REASON FOR MOBILITY ASSIG	INMENT		

21. Indicate the reasons for this mobility assignment and discuss how the work will benefit the participating governments. In addition, indicate how the employee will be utilized at the completion of this assignment.

The USGS Alaska Volcano Observatory is working to characterize and document volcanic deposits produced during the recent eruptions of Redoubt (2009) and Augustine (2006) volcanoes. This includes elemental analysis of mineral and glass phases in rock and ash samples. Dr. Larsen has extensive experience in acquiring and interpreting data from microbeam techniques, including electron probe microanalysis and FTIR spectroscopy. Larsen and students will analyze Redoubt and Augustine samples with these instruments at the Advanced Instrumentation Laboratory at the University of Alaska Fairbanks. The resulting data will be used to ascertain the magmatic storage conditions that were in effect prior to the eruptions - information that can be directly tied to geophysical data collected at the time. This work will inform scientists during the next periods of unrest at these and other active Alaskan volcanoes. At the end of this assignment, we anticipate continued collaboration with Dr. Larsen and the Advanced Instrumentation Laboratory.

This assessment is being funded with ARRA funding allocated to Task 1.3 Alaska Volcano Observatory with the Volcano ARRA project RA0200V, account number RA02-00V13.

PART 7 - POSITION DESCRIPTION

22. List the major duties and responsibilities to be performed while on the mobility assignment.

In collaboration with the USGS, Dr. Larsen and students will prepare rock samples from Redoubt and Augustine for microanalysis and perform analyses of mineral and glass phases using the electron microprobe and the Fourier Transform Infrared (FTIR) spectrometer at the Advanced Instrumentation Laboratory at the University of Alaska Fairbanks (UAF). Resulting data will be provided in tabular format for use in current thermodynamic models to determine pre-eruptive magmatic conditions such as temperature, pressure, volatile content, and depth. This assignment will be intermittent over the period from 1/1/2010 to 9/30/2011 and will include Dr. Larsen's detail to the USGS office in Anchorage, and Larsen and students under her direction working cooperatively with USGS colleagues from UAF.

PART 8 - EMPLOYEE BENEFITS	
23. Rate of Basic Pay During Assignment See attached budget	24. Special Pay Conditions (Indicate any conditions that could increase the assigned employee's compensation during the assignment, period) N/A
25. Leave Provisions (Indicate the annual and sick leave benefits for w	thich the assigned employee is plighte. Careful the analysis

requesting and recording such leave.

N/A

Page 2

ARRA Stimulus Funds

idance records should be sent.
 27. State or Local Government Agency Obligations UAF will continue to pay the employees' salary and benefits during the mobility assignment. UAF will present quarterly invoices to the USGS for operating expenses as specified in the attached budget. Invoices will be sent to: U.S. Geological Survey Volcano Science C enter 1300 SE Cardinal Court, Suite 100 Vancouver, WA 98683 USA attn: Kimberly Cornwall Reference Requisition no: 10ARRAV047
UAF will: Continue Dr. Larsen's participation in all pension and benefit programs. Continue to provide payroll services including deductions for taxes, benefits and other recognized services.
NDUCT

29. The employee has been notified of laws, rules and regulations, and policies on employee conduct which apply to him/her while on this [X] assignment.

PART 11 - OPTIONS		
30. Indicate coverage "N/A"	, if not applicable.	31. State or Local Agency Benefits (Indicate all State employee benefits
A. Federal Employees Group Li	e Insurance	that will be retained by the State or local agency employee being assigned to a Federal agency. Also include a statement certifying
Covered	X N/A	coverage in all State and local employee benefit programs that are elected by the Federal employee on leave without pay from the Federal
B. Federal Civil Service Retiren Retirement System	nent system or Federal Employees	agency to a State or local agency.)
Covered	X N/A	Employee will continue to accrue State of Alaska benefits and will remain enrolled in the State compensation and pension programs.
C. Federal Employee Health Be	nefits	
Covered	[X] N/A	

32. Other Benefits (Indicate any other employee benefits to be made part of this agreement)

PART 12 - TRAVEL AND TRANSPORTATION EXPENSES AND ALLOWANCES 32. Indicate: (1) Whether the Federal agency or State or local agency will pay travel and transportation expenses to, from, and during the assignment as specified in Chapter 334 of the Federal Personnel Manual, and (2) which travel and relocation expenses will be included.

Travel to and from the assignment is authorized. UAF will pay for travel and per diem and be reimbursed by USGS. Travel and per diem shall conform to Federal travel regulation and UAF travel policies.

Page 3 Ó

ARRA Stimulus Funds

PART 13 - APPLICABILITY OF RULES, REGULATION 34. Check Appropriate Boxes	IS AND POLICIES	an a
[X] A. The rules and policies governing the internal operation and of the agency to which my assignment is made under this agr observed by me.	nanagement [] D. I have been informed of app position with my permanent er reduction-in-force procedure.	licable provisions should my nployer become subject to a
 B. J have been informed that my assignment may be terminal time at the option of the Federal agency or the State or local time at the option of the Federal agency or the State or local covered from Federal agency appropriations may be recovered due the United States, if I do not serve until the completion of assignment (unless terminated earlier by either employer) or o whichever is shorter. 	overnment. E Lagree to serve in the Civit S my assignment for a period eq enses Should I fail to serve the requir le as a debt that I will be liable to the Unite my (except salary) of my assignment a year, any)	al to that of my assignment. ed time, I have been informed d States for all expenses
PART 14 - CERTIFICATION OF ASSIGNED EMPLOY		
In signing this agreement, I certify that I understand the terms of th indicated in Part 13 above.	s agreement and agree to the rules, regulations and policie	5 85
35. Location of Assignment (Name of Organization)	36. Date Mon	(b. Day, Year)
4210 University Drive Anchorage AK 99508 (USGS) and 80		10 9/30/2011
PART 15 - CERTIFICATION OF APPROVING OFFICI/ In signing this agreement, we certify that:	18	
 the description of duties and responsibilities is current and fully this assignment is being entered into to serve a sound, mutual) at the completion of the assignment, the participating employe agreement was entered into or a position of like seniority, state 	ublic purpose and not solely for the employee's benefit; will be returned to the position he or she occupied at the	
State or Local Government Agency	Federal Agency	
39. Signature of Authorizing Officer	40. Signature of Authorizing Officer	and and and and a second and a s In the second and a s
41. Date of Signature (Month. Day, Year) 12/18/09	41. Date of Signature (Month. Day, Year)	
43. Typed Name and Tille Andrew Parkerson-Gray, Director UAF O	42. Typed Name and Title SP Karen Baker, Assoc. Director, Admin.,Polic	y and Services

PRIVACY ACT STATEMENT

Sections 3373 and 3374. Assignment of Employees To or From State or Local Governments, of Title 5, U.S. Code, authorizes collection of this information. The data will be used primarily to formally document and record your temporary assignment to or from a State or local government, institution of higher education, Indian tribel government, or other eligible organization. This information may also be used as the legal basis for personnel and financial transactions, to ktentify you when requesting information about you, e.g., from prior employers, educational institutions, or law agencies, or by State, local, or Federal income

Page 4

taxing agencies.

Solicitation of your Social Security Number (SSN) is authorized by Executive Order 9397, which permitted use of the SSN as an identifier of individual records maintained by Federal agencies. Furnishing your SSN or any other data requested is voluntary. However, failure to provide any of the requested information may result in your being ineligible for participation in the Intergovernmental Assignment Program.

Budget for IPA Assignment Agreement and the University of Alaska Fairbanks FY 2010/2011

J. Larsen, Research Associate Professor	0 months salary
Total personal services	\$0
Operating expenses and Equipment (OE&E)	
Instrument time (175 hours at \$45/hour)	\$7,875
Travel (1 RT Fairbanks to Anchorage)	\$1,713
Total Personal Services and OE&E	\$9,588
UAF overhead (45.1%)	\$4,324
Total contract amount	\$13,911 -

Submitted: 12/15 01 In-Hand (b) Sponsor Due Date: AS Works of Sponsored Programs FOC OGCA: In-Hand (c) Unit Due Date: (d) Unit Puroposal Number: (d) Unit Puroposal Nu				Cits FOR OSP		Rush 🗔	(1) The Ba			1330		
To OGCA: IRT (c) Unit Due Date: I/ ORGC of Spongored Programs Versions PYS007 - Replaces All Previous Versions (d) Unit Due Date: (d) Unit Due Date: I/ ORGC of Spongored Programs Complete the Entries Form Per the Instructions (d) Unit Proposal Number: (d) Unit Due Date: (g) Project Background Information (a) Title: The Mobility Assignment: Characterisation of Volcanic Deposits During Recent Alaskan Eruptions (e) Div/Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (f) Sponsor: USGS (c) Div/Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (h) Sponsor: USGS (c) Div/Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (h) Sponsor: USGS (c) Div/Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (h) Project Type: NC Industry/Corporate (f) Mechanism: Grant Z Contract CA Rs. (k) Is UAF a Subaward Recipient? Yes ZNN (f) Does the Project Contain Subawards? Yes INo (g) Partice Alaska Specific? Z Yes INO (f) Banner Research Theme Code(s): NA 0708 INo (g) Paren					1 1							
Office of Sponaced hograms PROPOSAL ROUTING FORM Minimum of five (3) business days for review (d) Unit Proposal Number:GI 10- (e) Program Guidelines:Attached or UB Unsolkited ARRA (g) Project Background Information (a) Title: The Mobility Assignment: Characterisation of Volcanic Deposits During Recent Alaskan Eruptions (b) Sponsor Type:				ahri					<u></u>	NOM		
PROPOSAL ROUTING FORM (FORM OSP-001) Complete the Entire Form Per the Instructions Minimum of five (3) business days for review (c) Program Guidelines: Attached or UF Unsolicited ARRA (2) Project Background Information (a) Title: The Mobility Assignment: Characterisation of Volcanic Deposits During Recent Alaskan Eruptions (b) Sponsor USGS (c) Div/Prog:: (d) Start Dete: 01/01/10 (e) End Date: 09/30/11 (f) Sponsor Type: Prefederal State (g) Activity Type:: Organized Research Training/instruct University/Inst. Private/Found. Industry/Corporate (f) Mechanism: Grant // Contract CA RS/ (k) Is UAF a Subaward Recipient? Yes // No (f) Bootsct EPSCoR Related? Yes // No (g) Activity Type: Intermal (p) Extermal (p) Borgect TepScoR Related? Yes // No (h) Project Type: Intermal Project Type: // Yes // No (f) Banner Research Theme Code(s): NA 0706 // Subaward(s) To: (h) Any Equipment Budgeted? Yes // No (f) Banner Research Theme Code(s): NA 0706 // Yes // No (g) Sciect Alaska Specific? // Yes // No (f) Banner Research Theme Code(s): NA 0706 // Yes // No		R		Replaces Al	Previous	and the second se				GI 10-08		
(8) Project Background Information (a) Title: The Mobility Assignment: Characterisation of Volcanic Deposits During Recent Alaskan Eruptions (b) Sponsor: USGS (c) Div/Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (f) Sponsor Type: [Federal] University/Inst. Private/Found. University/Inst. Private/Found. University/Inst. Private/Found. Industry/Corporate (g) Activity Type: (h) Project Type: NC [k] N PP (l) Mechanism: Grant [] Contract [k] Is UAF a Subaward Recipient? Yes [k] Is Tuttion Budgeted? Yes [k] Is Project Alaska Specific? [] Yes [k] Is Project Alaska Specific? [] Yes [k] Co-1#1 [] Solocal [k] Co-1#1 [] Solocal [k] Co-1#2								- • • · · · · · · · · · · · · · · · · ·				
During Recent Alaskan Eruptions (b) Sponsor: USGS (c) Div/Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (f) Sponsor Type: // Federal State (g) Activity Type: // Organized Research Training/instruct University/Inst. Private/Found. Industry/Corporate Other Spons. Activity Other Spons. Activity. Activity. Spons. Activity. Spons. Activity. Activity. Spons. Activity. Activity. Spons. Activity. Activity. Spons. Activity. Spons. Activity. Spons. Activity. Spons. Activity. Spons. Activity. Activity. Spons. Activity. Activity. Activity. Activity. Activity. Activity. Activity. Spons.												
(b) Sponsor: USGS (c) Div./Prog.: (d) Start Date: 01/01/10 (e) End Date: 09/30/11 (f) Sponsor Type: Z Federal State (g) Activity Type: Z Organized Research Training/Instruct University/Inst. Private/Found. Industry/Corporate (g) Activity Type: Z Organized Research Training/Instruct (h) Project Type: NC Z NN PP (l) Mechanism: Grant Z Contract CA RS (k) Is UAF a Subaward Recipient? Yes Z No (l) Does the Project Contain Subawards? Yes Z No (k) Is UAF a Subaward Recipient? Yes Z No (n) Is Tuition Budgeted for Grad. Students? Yes Z No (k) Is UAF a Subaward Recipient? Yes Z No (n) Is Tuition Budgeted for Grad. Students? Yes Z No (g) Arry Equipment Budgeted? Yes No (r) Banner Research Theme Code(s): NA 0708 Yes No (g) Delevel Org. Code: D6VCLC (t) Related Proposal in Banner: S0000 S0000 (a) Personnel Last Name First Name Phone Unit UAF ID# FE E-Clu (a) Co-I#1 Last Name	(2) Project Backgroun	d information (a) Title	: The Mot	oility Assignm	nent: Char	acterisation	of Volcani	: Deposits				
(f) Sponsor Type: Z Federal State (g) Activity Type:: Z Organized Research Training/instruct University/Inst. Private/Found. Industry/Corporate Other Spons. Activity Off-Campus (h) Project Type: NC NN PP (i) Mechanism: Grant Z Contract CA RS/ (k) Is UAF a Subaward Recipient? Yes No (i) Project Contain Subawards? Yes No (m) Any Equipment Budgeted? Yes No (ii) Industry/Corposal Format: Z Electronic Page (m) Any Equipment Budgeted? Yes No (i) Does the Project Contain Subawards? Yes No (g) Project Alaska Specific? Z Yes No (ii) Banner Research Theme Code(s): NA 0708 No (g) Code: DSVOLC (ti) Related Proposal in Banner: S0000 (g) Code: DSVOLC (ti) Related Proposal in Banner: S0000 (g) Code: DSVOLC (ti) Related Proposal in Banner: S0000		an Eruptions	·····	·······		·						
University/Inst. Private/Found. Industry/Corporate Other Spons. Activity Off-Campus (h) Project Type: NC NN PP (i) Mechanism: Grant Z Contract CA Rs/ (k) Is UAF a Subaward Recipient? Yes No (i) Does the Project Contain Subawards? Yes No (k) Is UAF a Subaward Recipient? Yes Z No (i) Does the Project Contain Subawards? Yes Z No (m) Any Equipment Budgeted? Yes Z No (i) Borosicet EPSCoR Related? Yes Z No (j) Peer Review: Internal External (p) Is Project EPSCoR Related? Yes Z No (g) Is Project Alaska Specific? Z Yes No (r) Banner Research Theme Code(s): NA 0708 S0000 (s) D-Level Org. Code: D6VOLC (t) Related Proposal In Banner: S0000 S0000 (a) Pil Larsen Jessica 7992 GI 30353824 0 F (c) Co-I #2				Prog					and the second of the second se			
(h) Project Type: NC NN PP (i) Mechanism: Grant Contract CA RS RC RN RV XN (j) Proposal Format: Z Electronic Page (k) is UAF a Subaward Recipient? Yes No (i) Does the Project Contain Subawards? Yes No (m) Any Equipment Budgeted? Yes No (n) Is Tuition Budgeted for Grad. Students? Yes No (g) is Project Alaska Specific? Yes No (r) Banner Research Theme Code(s): NA 0708 Yes No (g) Project Alaska Specific? Z Yes No (r) Banner Research Theme Code(s): NA 0708 E-Cla (g) Project Alaska Specific? Z Yes No (r) Banner Research Theme Code(s): NA 0708 E-Cla (g) Project Alaska Specific? Z Yes No (r) Banner Research Theme Code(s): NA 0708 E-Cla (g) Project Alaska Specific? Z Yes No (r) Banner: S0000 S0000 (g) Project Alaska Specific? Z Yes No (r) Banner: S0000 E-Cla (g) Project Project Maska Specific? Jessica 7992 Gi 30353824 0				(Parinin da wa kat	(g) Act	vity Type:			· · · · · · · · · · · · · · · · · · ·			
RC RN RV XN (j) Proposal Format: Z Electronic Page (k) is UAF a Subaward Recipient? Yes No (i) Does the Project Contain Subawards? Yes No prime Sponsor: Subaward Recipient? Yes No (i) Does the Project Contain Subawards? Yes No (o) Peer Review: Internal External (p) is Project EPSCoR Related? Yes No (q) is Project Alaska Specific? Z Yes No (r) Banner Research Theme Code(s): NA 0708 S0000 (s) D-Level Org. Code: D6VOLC (t) Related Proposal in Banner: S0000 S0000 (a) Personnel Last Name First Name Phone Unit UAF ID# FTE E-Cla (a) P1 Larsen Jessica 7992 Gl 30353824 0 F (c) Co-I #2				corporate	(1) Mer	hanism.			And a second sec			
(k) is UAF a Subaward Recipient? Yes No (i) Does the Project Contain Subawards? Yes No Prime Sponsor: Subaward(s) To: (ii) Does the Project Contain Subawards? Yes No (m) Any Equipment Budgeted? Yes No (i) Is Tuition Budgeted for Grad. Students? Yes No (o) Peer Review: Internal External (p) Is Project EPSCoR Related? Yes No (q) Is Project Alaska Specific? Z Yes No (r) Banner Research Theme Code(s): NA 0708 No (s) D-Level Org. Code: D6VOLC (t) Related Proposal in Banner: S0000 (a) PI Last Name First Name Phone Unit UAF ID# FTE E-Cla (b) Co-I #1 Jessica 7992 GI 30353824 0 F (c) Co-I #2										Pape		
Prime Sponsor: Subaward(s) To; (m) Any Equipment Budgeted? Yes No (n) Is Tuition Budgeted for Grad. Students? Yes No (o) Peer Review: Internal External (p) Is Project EPSCoR Related? Yes No (q) Is Project Alaska Specific? Yes Yes No (r) Banner Research Theme Code(s): NA 0708 (s) D-Level Org. Code: D6VOLC (t) Related Proposal in Banner: S0000 (a) PI Last Name First Name Phone Unit UAF ID# FTE E-Clu (a) PI Larsen Jessica 7992 GI 30353824 0 F (b) Co-I #1	(k) Is UAF a Subaward	I Recipient?	Yes					and the second se	Yes	7 No		
(o) Peer Review: Internal External (p) Is Project EPSCoR Related? Yes No (q) Is Project Alaska Specific? Yes No (r) Banner Research Theme Code(s): NA 0708 (s) D-Level Org. Code: D6VOLC (t) Related Proposal in Banner: S0000 (a) Pl Last Name First Name Phone Unit UAF ID# FTE E-Clu (a) Pl Larsen Jessica 7992 GI 30353824 0 F (b) Co-I#1 Image: Contact Hussey Arthur 7562 Image: Contact Hussey Image: Contact Hussey Image: Contact Hussey Janet 604 I Image: Contact Hussey I	Prime Sponsor:					" .						
(q) is Project Alaska Specific? Yes No (r) Banner Research Theme Code(s): NA 0708 (s) D-Level Org. Code: D6VOLC (t) Related Proposal in Banner: S0000 (a) Personnel Last Name First Name Phone Unit UAF ID# FTE E-Clu (a) PI Larsen Jessica 7992 Gl 30353824 0 F (b) Co-I#1	initia and a state of the second s			No	(n) is Tu	lition Budge	ted for Gra	d. Students?	NA	No		
(s) D-Level Org. Code: D6VOLC (t) Related Proposal in Banner: S0000 (a) Pl Last Name First Name Phone Unit UAF ID# FTE E-Cla (a) Pl Larsen Jessica 7992 Gl 30353824 0 F (b) Co-I #1 Larsen Jessica 7992 Gl 30353824 0 F (c) Co-I #2 Co-										V No		
(3) Personnel Last Name First Name Phone Unit UAF ID# FTE E-Cla (a) PI Larsen Jessica 7992 GI 30353824 0 F (b) Co-I #1			/Yes	No	· · · · · · · · · · · · · · · · · · ·					1		
(a) PI Larsen Jessica 7992 GI 30353824 0 F (b) Co-I #1 (c) Co-I #2 (c) Co-I #2 (c) Co-I #3 <			l and a sec		ومنبيني ويتجارفه فتسبقهم				3			
(b) Co-I #1 (c) Co-I #2 (c) Co-I #2 (c) Co-I #3 (d) Co-I #3 (c) Co-I #3 (e) Unit Contact Hussey (f) Fiscal Officer Daley Janet 6Q4 # (4) Ethics and Regulatory Compliance Check # the project involves any of the following: (a) Use of Vertebrates? IACUC# (b) Research on Human Subjects? IRB# (c) Use of Radiation, Lasers, or Significant Chemical Hazards? (c) (d) Use of Biohazards? (c) (e) Potential for Tech. Transfer, Patent, Copyright, Trademark, or Licetang? (d) Modified TDC (MTDC)								·····	· · · · · · · · · · · · · · · · · · ·	E-Clas		
(c) Co-I #2 (d) Co-I #3 (e) Unit Contact Hussey Arthur 7562 (e) Unit Contact Hussey Arthur 7562 (f) Fiscal Officer Daley Janet 604 I (4) Ethics and Regulatory Compliance Check if the project involves any of the following: (5) Budget Information Any matching/cost show (WCS) requires completion of the M/CS Form (a) Use of Vertebrates? IACUC# (a) F&A Rate Percentage: 45.100 (b) Research on Human Subjects? IRB# (b) Indirect Cost Rate Code: FRN451 (c) Use of Radiation, Lasers, or Significant Chemical Hazards? (c) (c) Distribution Code: FGi01 (d) Use of Biohazards? LBC# (d) Modified TDC (MTDC) 9.1		ra)20()	Jessica		1996	91	3	0303824	<u> v</u>	F9		
(d) Co-I #3 (e) Unit Contact Hussey Arthur 7562 (e) Unit Contact Hussey Arthur 7562 (f) Fiscal Officer Daley Janet 6041 (4) Ethics and Regulatory Compliance Check # the project involves any of the following: (5) Budget information Any matching/cost she (MCS) requires completion of the MCS form (a) Use of Vertebrates? IACUC# (a) F&A Rate Percentage: 45.100 (b) Research on Human Subjects? IRB# (b) Indirect Cost Rate Code: FRN451 (c) Use of Radiation, Lasers, or Significant Chemical Hazards? (c) Distribution Code: FGi01 (d) Use of Biohazards? LBC# (d) Modified TDC (MTDC) 9.1				<u></u>	+				+			
(f) Fiscal Officer Daley Janet 6Qit (4) Ethics and Regulatory Compliance Check if the project involves any of the following: (5) Budget information Any matching/cost sh (a) Use of Vertebrates? IACUC# O (a) (b) Research on Human Subjects? IACUC# O (a) (c) Use of Radiation, Lasers, or Significant Chemical Hazards? O O O (a) FRN451 (c) Distribution Code: FRN451 FG101 (d) Use of Biohazards? LBC# D O										1		
(4) Ethics and Regulatory Compliance Check If the project involves any of the following: (5) Budget Information Any matching/cost sh (a) Use of Vertebrates? IACUC# (ACUC# <	(e) Unit Contact	Hussey	Arthur		7562				1	1		
IACUC#												
(a) Use of vertebrates? IACUC# O (b) Research on Human Subjects? IRB# O (a) F&A Rate Percentage: 45.100 (c) Use of Radiation, Lasers, or Significant Chemical Hazards? O (b) Indirect Cost Rate Code: FRN451 (c) Use of Biohazards? LBC# O O O FGI01 (c) Potential for Tech. Transfer, Patent, Copyright, Trademark, or Licedang? O O O O	(4) Ethics and Regulat	ory Compliance Check	If the project is	nvolves any of the	toliovins:							
(c) Use of Radiation, Lasers, or Significant Chemical Hazards? 0 (b) Indirect Cost Rate Code: FRide (d) Use of Biohazards? 1 (c) Distribution Code: FGi01 (d) Use of Biohazards? 1 1 1 (e) Potential for Tech. Transfer, Patent, Copyright, Trademark, or Licedang? 1 1 (d) Modified TDC (MTDC) 9 9	ويجرب بالمحافظ والمتعاد والمتع	فالمتحاد البرجي والمحاصل ويتنشنا بتنصيبه وجواج والمجر المسجع ومساطا الورجية والبرا				8-	- (a) F&/	A Rate Percenta	ige: <u>45.</u>	100		
(d) Use of Biohazards? LBC# (c) Use of Biohazards? (c) (c) Use of Biohazards? (c)			nt Chemical			<u> 27</u>						
(e) Potential for Tech. Transfer, Patent, Copyright, Trademark, or Licensing?			17- 41 (41) (44)			58		ribution Code:	FGI	01		
	(e) Potential for Te	ech. Transfer, Patent,	Copyright, 1	rademark, or	Licensing	XA	1 · ·			9,58		
						2/3			. , ,	4.3		
IS/ Potendarior Program incomer					JU/A	<u> </u>				13.91		
				f		<u>-</u>		-				
(i) Import or Export of Data, Goods, or Services? ITSC# p (i) M/CS Third Party \$	(j) import or Expo	ort of Data, Goods, or	Services?	ITSC#	p				\$			
					đ				<u> </u>			
(i) Conflicts of Interest? (i) Research Restrictions? (j) Import or Export of Data, Goods, or Services? (k) Confidential or Classified Information? (k) Confidential or Classified Information? (i) Project Space Requirements A 'yes' answer on either of these items requires completion of the Space Request Form and consultation with facilities Services or Campus and Space Planning to the proposal.	(h) Conflicts of Int (i) Research Restr (j) Import or Expo (k) Confidential or (6) Project Space Reg	erest? ictions? ort of Data, Goods, or r Classified Information uirements A 745° answe ting and approval as necessa	n? r on either of th ny. Attach any r	ITSC# nese items require elevent documen	tation receive	ed from Facilitie	(g) Tot (h) M/C (i) M/C (j) M/C sourcest Form an Services or Co	al Sponsor Rec S UAF S Third Party S Total Ind consultation with impus and Space Pa	QUEST\$\$ \$\$ Facilities Servi- snining to the p	13,1		
		cientific & ethical conduct of uspended, proposed for del ms & conditions of the spons UA policies and procedures.	this project and barment, declar ored eward agr . (6) I certify the	d to provide the r red ineligible, or v reement which su it all information r	required prog rotuntarily exc pports this ac provided on t	ress reports if a lucied from cur tivity; (4) I certi his form & on a	grant is award with transaction by that this pro- w attached do	ed as a result of the is by any federal de posed project is my currents related to	application; () partment or ag original work; this application	ency; (3)) (5) (5)		
Pl: Date: //5//0 Co-1: Date:	(a) Project requires ne (7) Investigator Certifi accept responsibility for the se lam not presently debarred, a serve to be bound by the ter understand & will ebide by ell accurate & complete to the b	cientific & ethical conduct of uspended, proposed for del ms & conditions of the spons UA policies and procedures.	this project and barment, declar ored award agr (6) I certify the) that that any f	d to provide the r red ineligible, or v reement which su it all information r	required prog columbrity exc pports this ac provided on the frauculent sta	ress reports if a lucied from cur tivity; (4) I certi his form & on a	grant is award with transaction by that this pro- w attached do	ed as a result of the is by any federal de posed project is my currents related to	application; (S partment or ag original work; this application), or administra	ency; (3)) (5) (5)		
Pl: Date: //S //O Co-l: Date: Co-l: Date: Co-l: Date: Date:	(a) Project requires ne (7) Investigator Certifi accept responsibility for the se I am not presently debarred, a signed to be bound by the terr understand & will abids by all accurate & complete to the bo PI:	cientific & ethical conduct of uspended, proposed for del ms & conditions of the spons UA policies and procedures.	this project and barment, declar oracl award agr (6) I certify the) that that any f Date;	d to provide the r red ineligible, or reement which su it all information ; alse, fictitious, or	required prog roluntarily exc pports this ac provided on t fraudulent sto Co-1:	ress reports if a lucied from cur tivity; (4) I certi his form & on a	grant is award with transaction by that this pro- w attached do	ed as a result of the is by any federal de posed project is my currents related to	application; (S partment or ag original work; this application ; or administre Date:	ency; (3)1 (5)1 (5)1		
Co-l: Date: Co-l: Date:	(a) Project requires ne (7) Investigator Certifi accept responsibility for the se I am not presently debarred, a signed to be bound by the terr understand & will abids by all accurate & complete to the be PI: Co-I: (8) Unit Approvals reac	dentific & ethical conduct of uspended, proposed for deli- ns & conditions of the spons UA policies and procedures, est of my knowledge, and (7 5, Sign, and Date: By signing th	this project an barmont, declar ored award agr (6) I certify the (6) I certify the (6) I certify the Date: Date: bis form, I certif	d to provide the r red ineligible, or v reement which su it all information r alse, fictitious, or 1/5/10 y to the best of n	equired prog obuntarily exc poorts this ac provided on t fraudulent sta CO-1: Y knowledge	ress reports if a Juded from cur thity (4) I cert his form & on a stements or clai	grant is award with transaction by that this pro- ity attached do ms may subject issued is elimible	ed as a result of the ts by any federal de posed project is my currents related to me to criminal, civil to be a Pliper UAF	application; (5 partment or ag original work; this application ; or administre Date: Date: 5 Pl Policy or a	ency; (3) (5) is true, live penalt		
Co-I:	(a) Project requires ne (7) Investigator Certifi accept responsibility for the ter understand & will abide by all accurate & completered the be Pl: CO-I: (8) Unit Approvals Read has been requested, (2) Plane	dentific & ethical conduct of uspended, proposed for deli ns & conditions of the spons UA policies and procedures, est of my knowledge, and (7 5, Sign, and Date: By signing the d Co-I workloads are within 1	this project an barment, declar ored eward generation (6) I certify the) that that any f Date: Date: his form, I certify 100% of effort.	d to provide the r red ineligible, or v reement which su it all information s letse, fictitious, or r/5/10 y to the best of n (3) Unit resource	equired prog coluntarity exc pports this ac provided on the fraudulent store CO-1: ty knowledge in this social	ress reports if a Juded from cur thity (4) I cert his form & on a stements or clai that: (1) The Pi stion are availa	grant is award with transaction by that this pro- ity attached do mis may subject itstect is eligibil- bits and allocat	ed as a result of the ts by any federal de posed project is my cuments related to me to criminal, civil e to be a Pi per UAE e to be a Pi per UAE	application; (5 partment or ag original work; this application ; or administra Date: Date: <u>12 Pi Policy</u> or a	ency; (3) 1 (5) 1 i is true, tive penalt		
Co-l:	(a) Project requires ne (7) Investigator Certiff accept responsibility for the se lam not presently debarred, s agree to be bound by the terr understand & will abids by all accurate & complete to the be Pl: CO-l: (8) Unit Approvals reac- have been accounted for; and	dentific & ethical conduct of uspended, proposed for deli- ms & conditions of the spons UA policies and procedures; est of my knowledge; and (7 is on the second second second f, Sign, and Date: By signing to d Co-I workloads are writin 1 I (5) The proposal application	this project an barmont, declar ored award agr (6) I certify the) that that any f Date: Date: his form, I certif 100% of effort, n and Sudget a	d to provide the r red ineligible, or v reement which su it all information p alse, fictitious, or r 1/5/10 y to the best of n (3) Unit resource re in compliance	equired prog obuntarity exc pports this ac provided on the fraudulent sto Co-1: to this application with sponsor/	ress reports if a Juded from cur thy (4) I cert this form & on a stements or clain that: (1) The Pi cation are availa agency, state, f	grant is award with transaction by that this pro- ity attached do mis may subject itstect is eligibil- bits and allocat	ed as a result of the ts by any federal de posed project is my cuments related to me to criminal, civil e to be a Pi per UAE e to be a Pi per UAE	application; (5 partment or ag original work; this application ; or administra Date: Date: <u>12 Pi Policy</u> or a	ency; (3) 1 (5) 1 i is true, tive penalti		
CO-I:	(a) Project requires ne (7) Investigator Certiff accept responsibility for the se lam not presently debarred, s agree to be bound by the terr understand & will ebide by all accurate & completer of the be Pl: Co-iz (8) Unit Approvals reac- hes been requested; (2) Plane have been accounted for; and Lead Unit Deary/Directo	clentific & ethical conduct of uspended, proposed for del ms & conditions of the spons UA policies and procedures, est of the knowledge, and (7 5, Sign, and Date: By signing to d Co-1 workloads are within 1 1 (5) The proposal application bit: free Outrage	this project an barmont, declar ored award agr (6) I certify the) that that any f Date: Date: his form, I certif 100% of effort, n and Sudget a	d to provide the r red include the r red include the red include alive, fictitious, or 1/5/10 y to the best of n (3) Unit resource re in compliance Date12/17/	equired prog obuntarity exc pports this ac provided on the fraudulent stor Co-1:	ress reports if a Juded from cur thity (4) I cert his form & on a stements or clai that: (1) The Pi cation are availa agency, state, f al Review;	grant is award with transaction by that this pro- ity attached do mis may subject itstect is eligibil- bits and allocat	ed as a result of the ts by any federal de posed project is my cuments related to me to criminal, civil e to be a Pi per UAE e to be a Pi per UAE	application; (5 partment or ag original work; this application to administre Date: <u>Date:</u> <u>s PlEplicy or a</u> nuiderations in guiations Date: <u>12</u>	ency; (3) 1 (5) 1 i is true, tive penalti		
Co-1:	(a) Project requires ne (7) Investigator Certifi accept responsibility for the se I am not presently debarred, s agree to be bound by the terr understand & will abide by all accurate & complete to the be PI: CO-I: (a) Unit Approvals Read has been requested; (2) Plane have been accounted for; and Lead Unit Dean/Directo Coli. Unit Dean/Directo	dentific & ethical conduct of uspended, proposed for del ms & conditions of the spons UA policies and procedures, est of the knowledge, and (7 5, Sign, and Date: By signing to d Co-I workloads are writin 1 (5) The proposel application bit: 	this project an barmont, declar ored award agr (6) I certify the) that that any f Date: Date: his form, I certif 100% of effort, n and Sudget a	d to provide the r red ineligible, or v rement which w it all information ; alse, fictitious, or //S//0 y to the best of m (3) Unit resource re in compliance Date:	equired prog oluminarity exc pports this ac- provided on the fraudulent sto Co-1:	ress reports if a cluded from car thity (4) I cert his form & on a stéments or clai that: (1) The Pi cation are availa agency, state, f si Review:	grant is award with transaction by that this pro- ity attached do mis may subject itstect is eligibil- bits and allocat	ed as a result of the ts by any federal de posed project is my cuments related to me to criminal, civil e to be a Pi per UAE e to be a Pi per UAE	application; (5 partment or ag original work; this application this applic	ency; (3) 1 (5) 1 i is true, tive penalti		
Co-I:	(a) Project requires ne (7) Investigator Certifi accept responsibility for the is 1 am not presently debarred, a agree to be bound by the terr understand & will abids by all accurate & complete to the be PI: Co-I: (8) Unit Approvals reac- have been accounted for; and Lead Unit Dean/Directo Coil. Unit Dean/Directo Coil. Unit Dean/Directo	clentific & ethical conduct of uspended, proposed for del ns & conditions of the spons UA policies and procedures, est of my knowledge, and (7 5, Sign, and Date: By signing the Co-I workloads are written 1 (5) The proposal application of:	this project an barment, declar ored award agr (6) I certify the) that that any f Date:	d to provide the r red ineligible, or i rement which su is difinformation p alse, fictitious, or 1/5/10 y to the best of m (3) Unit resource re in compliance Date 12/17/ Date: 	equired prog olumitarity exc pports this ac- provided on the fraudulent stor CO-1:	ress reports if a cluded from cur thity (4) I cert its form & on a stements or clain that: (1) The Pi cation are availa agency, state, if al Review: al Review:	grant is award ent transaction y that this proj y attached do ms may subject listed is eligibl ble and allocat ederal, and uni	ed as a result of the is by any federal de posed project is my cuments related to me to criminal, civil a to be a PI per UAE ed; (4) All space co versity policies & rej	application; (5 partment or ag original work; his application bate: Date: Pl Policy or a miderations in sulations Date: Date: Date:	ency; (3) 1 (5) 1 Is true, the penakt naxemptic the projec (17/55		
Co-I: Date: Co-I: Date: (d) Unit Approvals Read, Sign, and Date: By signing this form, I certify to the best of my knowledge that: (1) The PI listed is eligible to be a PI per UAE's PI Policy of an exemples been requested; (2) PI and Co-I workloads are within 100% of effort; (3) Unit resources in this application are available and allocated; (4) All space considerations in the prophere been accounted for; and (5) The proposal application and budget are in compliance with sponsor/agency, state, federal, and university policies & regulations. Lead Unit Dean/Director: Date:	 (a) Project requires ne (7) Investigator Certification (2015) (7) Investigator Certification (2015) (8) Unit presently debarred, segments to be bound by the terr understand & will abide by all accurate & completered the bound of the bound of the securate a completered the bound of the bound of	dentific & ethical conduct of uspended, proposed for del ms & conditions of the spons UA policies and procedures, est of the knowledge, and (7 5, Sign, and Date: by signing the Co-I workloads are written 1 (5) The proposal application (1) (5) (5) (5) (5) (5) (5) (5) (5) (5) (5	this project and barment, declas ored sward agr (6) I certify the) that that any f Date: Date: Date: Date: his form, I certif 100% of effort; n and budget a fr Rinight	d to provide the r red ineligible, or v rement which w it all information ; alse, fictitious, or 1/5/10 y to the best of m (3) Unit resource re in compliance Date: Date: [certify that the	equired prog olumatify exc pports this ac provided on the fraudulent sto Co-1:	ress reports if a Juded from cur tivity (4) i certi his form & on a stements or clai that: (1) The Pi cation are availa descr.y, state, f al Review: al Review: been reviewed	grant is award ent transaction y that this provi y that this provident of the ms may subject listed is eligiblic listed is eligiblic bie and allocat coloral, and unit according to the	ed as a result of the is by any federal de posed project is my cuments related to i me to criminal, civil a to be a PI per UAE ed; (4) All space co versity policies & re- der 1045 Uniform Pro-	application; (5 partment or ag original work; his application bate: Date: Pl Policy or a miderations in sulations Date: Date: Date:	ency; (3) 1 (5) 1 Is true, the penakt naxemptic the projec (17/55		
Co-I:	 (a) Project requires ne (7) Investigator Certiff accept responsibility for the set lam not presently debarred, a signed to be bound by the terr understand & will abids by ell accurate & completer to the be Pl: (6) Unit Approvals reaches been requested; (2) H and have been accounted for; and Lead Unit Dean/Directo Coll. Unit Dean/Directo Coll. Unit Dean/Directo (9) UAF Final Approval passed review and to the best 	clentific & ethical conduct of uspended, proposed for del ns & conditions of the spons UA policies and procedures, est of my knowledge, and (7 5, Sign, and Date: By signing the co-I workloads are within 1 (5) The proposal application (5) The propos	this project and barment, declas ored sward agr (6) I certify the) that that any f Date: Date: Date: Date: his form, I certif 100% of effort; n and budget a fr Rinight	d to provide the r red ineligible, or i red meligible, or i st all information r alive, fictitious, or i/ <u>5</u> /10 y to the best of n (3) Unit resource the compliance Date12/17/ Date: Date12/17/ Date: Late: Cate:	required prog oblantarity exc pports this ac provided on the fraudulent stat Co-1:	ress reports if a luded from cur thity (4) I cert his form & on a stements or clai that: (1) The Pl stion are availa agency, state, f al Review: al Review: al Review: been reviewed university polic	grant is award ent transaction y that this provi y that this provident of the ms may subject listed is eligiblic listed is eligiblic bie and allocat coloral, and unit according to the	ed as a result of the is by any federal de posed project is my cuments related to i me to criminal, civil a to be a PI per UAE ed; (4) All space co versity policies & re- der 1045 Uniform Pro-	application; (5 partment or ag original work; this application t, or soministre Date: Date: Date: Date: Date: Date: Date: Date: Date: Date:	ency; (3) 1 (5) 1 Is true, the penalti naxemption the project (17/55)		
Co-I: Date: Co-I: Date: (a) Unit Approvals Read, Sign, and Date: By signing this form, I certify to the best of my knowledge that: (1) The PI issed is eligible to be a PI per UAE's PI Folicy or an exemples been requested; (2) PI and Co-I workloads are written 100% of effort; (3) Unit resources in this application are available and allocated; (4) All space considerations in the prophave been accounted for; and (5) The proposal application and Sudget are in compliance with sponsor/agency, state, federal, and university policies & regulations. Lead Unit Dean/Director: Date:	 (a) Project requires ne (7) Investigator Certiff accept responsibility for the set lam not presently debarred, a signed to be bound by the terr understand & will abids by ell accurate & completer to the be Pl: (6) Unit Approvals reaches been requested; (2) H and have been accounted for; and Lead Unit Dean/Directo Coll. Unit Dean/Directo Coll. Unit Dean/Directo (9) UAF Final Approval passed review and to the best 	clentific & ethical conduct of uspended, proposed for del ns & conditions of the spons UA policies and procedures, est of my knowledge, and (7 5, Sign, and Date: By signing the co-I workloads are within 1 (5) The proposal application (5) The propos	this project and barment, declas ored sward agr (6) I certify the) that that any f Date: Date: Date: Date: his form, I certif 100% of effort; n and budget a fr Rinight	d to provide the r red ineligible, or i red meligible, or i st all information r alive, fictitious, or i/ <u>5</u> /10 y to the best of n (3) Unit resource the compliance Date12/17/ Date: Date12/17/ Date: Late: Cate:	required prog oblantarity exc pports this ac provided on the fraudulent stat Co-1:	ress reports if a luded from cur thity (4) I cert his form & on a stements or clai that: (1) The Pl stion are availa agency, state, f al Review: al Review: al Review: been reviewed university polic	grant is award ent transaction y that this provi y that this provident of the ms may subject listed is eligiblic listed is eligiblic bie and allocat coloral, and unit according to the	ed as a result of the is by any federal de posed project is my cuments related to i me to criminal, civil a to be a PI per UAE ed; (4) All space co versity policies & re- der 1045 Uniform Pro-	application; (5 partment or ag original work; this application t, or soministre Date: Date: Date: Date: Date: Date: Date: Date: Date: Date:	ency; (3) 1 (5) 1 Is true, the penalti naxemption the project (17/55)		
Co-i:	 (a) Project requires ne (7) Investigator Certiff accept responsibility for the set lam not presently debarred, a signed to be bound by the terr understand & will abids by ell accurate & completer to the be Pl: (6) Unit Approvals reaches been requested; (2) H and have been accounted for; and Lead Unit Dean/Directo Coll. Unit Dean/Directo Coll. Unit Dean/Directo (9) UAF Final Approval passed review and to the best 	clentific & ethical conduct of uspended, proposed for del ns & conditions of the spons UA policies and procedures, est of my knowledge, and (7 5, Sign, and Date: By signing the co-I workloads are within 1 (5) The proposal application (5) The propos	this project and barment, declas ored sward agr (6) I certify the) that that any f Date: Date: Date: Date: his form, I certif 100% of effort; n and budget a fr Rinight	d to provide the r red ineligible, or i red meligible, or i st all information r alive, fictitious, or i/ <u>5</u> /10 y to the best of n (3) Unit resource the compliance Date12/17/ Date: Date12/17/ Date: Late: Cate:	required prog oblantarity exc pports this ac provided on the fraudulent stat Co-1:	ress reports if a luded from cur thity (4) I cert his form & on a stements or clai that: (1) The Pl stion are availa agency, state, f al Review: al Review: al Review: been reviewed university polic	grant is award ent transaction y that this provi y that this provident of the ms may subject listed is eligiblic listed is eligiblic bie and allocat coloral, and unit according to the	ed as a result of the is by any federal de posed project is my cuments related to i me to criminal, civil a to be a PI per UAE ed; (4) All space co versity policies & re- der 1045 Uniform Pro-	application; (5 partment or ag original work; this application t, or soministre Date: Date: Date: Date: Date: Date: Date: Date: Date: Date:	ency; (3) 1 (5) i Is true, the penakt naxemptic the projec (17/55		

Second Shares and second s second sec

Work Statement

Reason for Mobility Assignment

The USGS Alaska Volcano Observatory is working to characterize and document volcanic deposits produced during the recent eruptions of Redoubt (2009) and Augustine (2006) volcanoes. This includes elemental analysis of mineral and glass phases in rock and ash samples. Dr. Larsen has extensive experience in acquiring and interpreting data from microbeam techniques, including electron probe microanalysis and FTIR spectroscopy. Larsen and students will analyze Redoubt and Augustine samples with these instruments at the Advanced Instrumentation Laboratory at the University of Alaska Fairbanks. The resulting data will be used to ascertain the magmatic storage conditions that were in effect prior to the eruptions - information that can be directly tied to geophysical data collected at the time. This work will inform scientists during the next periods of unrest at these and other active Alaskan volcanoes. At the end of this assignment, we anticipate continued collaboration with Dr. Larsen and the Advanced Instrumentation Laboratory.

This assessment is being funded with ARRA funding allocated to Task 1.3 Alaska Volcano Observatory with the Volcano ARRA project RA0200V, account number RA02-00V13.

Position Description

In collaboration with the USGS, Dr. Larsen and students will prepare rock samples from Redoubt and Augustine for microanalysis and perform analyses of mineral and glass phases using the electron microprobe and the Fourier Transform Infrared (FTIR) spectrometer at the Advanced Instrumentation Laboratory at the University of Alaska Fairbanks (UAF). Resulting data will be provided in tabular format for use in current thermodynamic models to determine pre-eruptive magmatic conditions such as temperature, pressure, volatile content, and depth. This assignment will be intermittent over the period from 1/1/2010 to 9/30/2011 and will include Dr. Larsen's detail to the USGS office in Anchorage and Larsen and students under her direction working cooperatively with USGS colleagues from UAF.

Budget Justification

<u>Salary:</u> PI Larsen will administer the project. Her salary costs will be met by the UAF Geophysical Institute from sources other than the Mobility Assignment.

Travel:

Domestic: 1 trip is requested for travel to Anchorage (at \$330/trip, plus per diem and rental car) for Larsen to work with Michelle Coombs and Allison Payne on the Redoubt 2009 project. Per Diem (meals/incidentals/lodging) is \$194/day for Anchorage per UA Board of Regents regulations. An inflation rate of 10% per year has been included for all airfare.

Other Direct Costs:

The majority of requested funds are for electron microbe time (175 hours at \$45/hour) to perform the basic analyses of mineral phases within the Redoubt 2009 samples collected by AVO.

Indirect Costs:

Facilities and Administrative (F&A) Costs are negotiated with the Office of Naval Research. The predetermined rate for sponsored research is calculated at 45.1% (FY08 negotiated rate) of Modified Total Direct Costs (MTDC). MTDC includes Total Direct Costs minus tuition and associated fees, scholarships, subaward amounts over \$25,000, and equipment. A copy of the rate agreement is available at:

http://www.alaska.edu/controller/cost-analysis/negotiated_agreements.html.

UNIVERSITY OF ALASKA FAIRBANKS

PROJECT TITLE: PI: START: END:	RSA: The Mability Assignment: Cr Jessics Larsen 1/1/10 9/30/31	wracterisation of Volcanic Deposits Duri	GI 10- Bannet #S000-1330					
	, and a mark of the						#¥11 1/1/3©	END
			***				YEAR I]
SALASIES AND WADES				f¥10	FY1Q		hours -	Total Project
A: Salarios - Seniar Perso						Yearth		
Tale Conversions	Envision Name	Employee Exten		Housy Mage	Leave Rate			
0.695	Jensida Larden	PR Faulty Eleventy		\$42.65	1.2%	1 045	2.4 53	50
		I		Total Sentor P			\$0	\$0
				70	tal Balanics	ANUMAGES	10 C	50
C. PHINCE (STAFF) BENE		sector the sector			<u>EY13</u>		·:	
Service Parassissed	. Henrica Larger	FE-Faculty (UNAD)			<u>31,6%</u>		**	10
				Total Senior P			SU	50
			. د الشمالي سيد		TOTAL FRAM	the second construction of the second	10	J.C
C. DIAVEL	HILI HER			TOTA	l Galaries af	O BEMEFITS	50	30
1. Domestic Travel	Description.	¥. *				Yeariy		
Ainfare	HT FailbarksWhicherage AK	¥+3	Repease	Jean Stand	PY19 Com	matense		
Lodghigr	Andrewse AK	÷-		1	300	1.4	\$333	\$338
Mensis	AD CHIER SE, A.K.	2 8.			52		\$750	
CarRenta	Arithoroge, AN	** · ·		-1	48 25	1	\$233	\$ 320
		Г		Total Domest	***********************	<u> </u>	\$418	\$413
				10430-0206053	e travan		\$1,713	\$1,715
					49.4	TAL TRAVEL		\$1,713
G. CONTRACTUAL SERVI	CES FORMER Direct Costal	Destription				THE THEAT	31.753	22/13
Curitorical Bersite Gergiste	· Wearlichon'	manual incertify the states					\$7 575	\$7,876
				Total Other Contr	article first		\$7.875	\$7,675
					CONTRACTUA	LEEMACES	\$7,875	\$7.675
				7000900 00 00 00 00 00 00 00 00 00 00 00				
A. HTOC possi costs subje	nit to F&A)						14.548	20,536
	an a							
H d'actilités and Annuel su	alion (FAA)	Spensored R	examice			41 15	entration of the second	53,324
-								
C. Total Costs Exempt hoe	atta, uz zin en			different and the state			10 In 199	101
			<u></u>					
0. Told Direct Costs (A+C						1	\$2.585	24.538
5. Total Sponsov Regarati	(8-0)		******				\$3 4 53	515.911