

**REPORT DOCUMENTATION PAGE**

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<b>1. REPORT DATE (DD-MM-YYYY)</b> 03/31/2014	<b>2. REPORT TYPE</b> Final	<b>3. DATES COVERED (From - To)</b> 01-10-2011 to 31-12-2013
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<b>4. TITLE AND SUBTITLE</b> Final Report, Aging Systems Sustainment and Enabling Technologies	<b>5a. CONTRACT NUMBER</b> SP4701-11-C-0013
	<b>5b. GRANT NUMBER</b>
	<b>5c. PROGRAM ELEMENT NUMBER</b>

<b>6. AUTHOR(S)</b> Dr. Amy M. Dronberger Paul McDaniel	<b>5d. PROJECT NUMBER</b>
	<b>5e. TASK NUMBER</b>
	<b>5f. WORK UNIT NUMBER</b>

<b>7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)</b> OSU Enterprise Center, LLC 503 South Main Street Stillwater, OK 74074-4058	<b>8. PERFORMING ORGANIZATION REPORT NUMBER</b>
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<b>9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)</b> Defense Logistics Agency (DLA) Defense Technical Information Center 8725 John J. Kingman Road Fort Belvoir, VA 22060-6218	<b>10. SPONSOR/MONITOR'S ACRONYM(S)</b> DLA
	<b>11. SPONSOR/MONITOR'S REPORT NUMBER(S)</b>

**12. DISTRIBUTION/AVAILABILITY STATEMENT**  
Approved for public release; distribution unlimited.

**13. SUPPLEMENTARY NOTES**  
Not applicable.

**14. ABSTRACT**  
With the mission of decreasing unit costs and project lead times while providing a greater number of qualified sources for the government problem parts, the Aging Systems Sustainment and Enabling Technologies contract developed a consortium of member companies with manufacturing capabilities. A total of 24 subcontract projects were awarded. Six of these were DoD high priority projects while another 13 have submitted source approval requests and are awaiting feedback.

**15. SUBJECT TERMS**  
Not applicable.

<b>16. SECURITY CLASSIFICATION OF:</b>			<b>17. LIMITATION OF ABSTRACT</b>	<b>18. NUMBER OF PAGES</b>	<b>19a. NAME OF RESPONSIBLE PERSON</b>
<b>a. REPORT</b>	<b>b. ABSTRACT</b>	<b>c. THIS PAGE</b>			Dr. Amy M. Dronberger
Unclassified	Unclassified	Unclassified	UU	27	<b>19b. TELEPHONE NUMBER (Include area code)</b> 405-744-2330



Form Approved  
OMB No. 9000-0095  
Expires Aug 31, 2001

**REPORT OF INVENTIONS AND SUBCONTRACTS**  
(Pursuant to "Patent Rights" Contract Clause) (See instructions on back)

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1.a. NAME OF CONTRACTOR/SUBCONTRACTOR OSU Enterprise Center, LLC	c. CONTRACT NUMBER SP4701-11-C-0013	2.a. NAME OF GOVERNMENT PRIME CONTRACTOR	c. CONTRACT NUMBER
b. ADDRESS (include ZIP Code) 505 S Main Street Stillwater, OK 74074-4058	d. AWARD DATE (YYYYMMDD) 20110929	b. ADDRESS (include ZIP Code)	d. AWARD DATE (YYYYMMDD)
3. TYPE OF REPORT (X one)		4. REPORTING PERIOD (YYYYMMDD)	
a. INTERIM <input type="checkbox"/>		a. FROM 20111001	
b. FINAL <input checked="" type="checkbox"/>		b. TO 20131231	

**SECTION I - SUBJECT INVENTIONS**

5. "SUBJECT INVENTIONS" REQUIRED TO BE REPORTED BY CONTRACTOR/SUBCONTRACTOR (If "None," so state)		DISCLOSURE NUMBER, PATENT APPLICATION SERIAL NUMBER OR PATENT NUMBER		ELECTION TO FILE PATENT APPLICATIONS (X)		CONFIRMATORY INSTRUMENT OR ASSIGNMENT FORWARDED TO CONTRACTING OFFICER (X)	
a. NAME(S) OF INVENTOR(S) (Last, First, Middle Initial)	b. TITLE OF INVENTION(S)	c.		d.		e.	
		(1) UNITED STATES	(2) FOREIGN	(a) YES	(b) NO	(a) YES	(b) NO
None	None	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**SECTION II - SUBCONTRACTS (Containing a "Patent Rights" clause)**

6. SUBCONTRACTS AWARDED BY CONTRACTOR/SUBCONTRACTOR (If "None," so state)		9. ELECTED FOREIGN COUNTRIES IN WHICH A PATENT APPLICATION WILL BE FILED	
a. NAME OF SUBCONTRACTOR(S)	b. ADDRESS (include ZIP Code)	(1) TITLE OF INVENTION	(2) FOREIGN COUNTRIES OF PATENT APPLICATION

**SECTION III - CERTIFICATION**

7. CERTIFICATION OF REPORT BY CONTRACTOR/SUBCONTRACTOR (Not required if: (X as appropriate) SMALL BUSINESS <input checked="" type="checkbox"/> NON-PROFIT ORGANIZATION <input type="checkbox"/>		SUBCONTRACT DATES (YYYYMMDD)	
I certify that the reporting party has procedures for prompt identification and timely disclosure of "Subject Inventions," that such procedures have been followed and that all "Subject Inventions" have been reported.		(1) AWARD	(2) ESTIMATED COMPLETION
a. NAME OF SUBCONTRACTOR(S)	b. ADDRESS (include ZIP Code)		

8. NAME OF AUTHORIZED CONTRACTOR/SUBCONTRACTOR OFFICIAL (Last, First, Middle Initial) Dronberger, Amy	b. TITLE OSU Enterprise Center, Program Manager	c. SIGNATURE 	d. DATE SIGNED 2014 03 31
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<b>DOD PROPERTY IN THE CUSTODY OF CONTRACTORS</b> (DFARS 245.505-14) <i>(See Instructions on back before completing this form.)</i>	REPORT AS OF 30 SEP _____ OR 12/31/2013	<i>Form Approved</i> OMB No. 0704-0246 Expires Feb 28, 2006
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RETURN COMPLETED FORM TO THE ADDRESS IN ITEM 1.**


<b>1. TO</b> <i>(Enter name and address of property administrator)</i> Office of Naval Research San Diego Regional Office 140 Sylvester Road, Bldg. 140 San Diego, CA 92106-3501	<b>2. FROM</b> <i>(Enter full name, address and CAGE code of contractor)</i> OSU Enterprise Center, LLC 505 S Main Street Stillwater, OK 74074-4058 CAGE Code: 4FWV5
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**3. IF GOVERNMENT-OWNED, CONTRACTOR-OPERATED PLANT, ENTER GOVERNMENT NAME OF PLANT**

<b>4. CONTRACT NO. (PIIN)</b> SP4701-11-C-0013	<b>5. CONTRACT PURPOSE</b> A	<b>6. BUSINESS TYPE</b> <i>(Enter L, S, or N)</i> N	<b>7. OFFICIAL NAME OF PARENT COMPANY</b>
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<b>8. PROPERTY LOCATION(S)</b>	<b>9. PLANT EQUIPMENT PACKAGE (PEP No. and use)</b>
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a. PROPERTY <i>(Type or Account)</i>	b. BALANCE START OF PERIOD		c. ADDITIONS <i>(in dollars)</i>	d. DELETIONS <i>(in dollars)</i>	e. BALANCE END OF PERIOD	
	(1) ACQUISITION COST <i>(in dollars)</i>	(2) QUANTITY <i>(in units or acres)</i>			(1) ACQUISITION COST <i>(in dollars)</i>	(2) QUANTITY <i>(in units or acres)</i>
10. LAND						
11. OTHER REAL PROPERTY						
12. OTHER PLANT EQUIPMENT						
13. INDUSTRIAL PLANT EQUIPMENT						
14. SPECIAL TEST EQUIPMENT						
15. SPECIAL TOOLING <i>(Government Title Only)</i>						
16. MILITARY PROPERTY <i>(Agency-Peculiar)</i>						
17. GOVERNMENT MATERIAL <i>(Government-Furnished)</i>						
18. GOVERNMENT MATERIAL <i>(Contractor-Acquired)</i>						

<b>19. CONTRACTOR REPRESENTATIVE</b>		
<b>a. TYPED NAME</b> <i>(Last, First, Middle Initial)</i> Dronberger, Amy	<b>b. SIGNATURE</b> 	<b>c. DATE SIGNED</b> <i>(YYYYMMDD)</i> 20140331

<b>20. DOD PROPERTY REPRESENTATIVE</b>		
<b>a. TYPED NAME</b> <i>(Last, First, Middle Initial)</i>	<b>c. SIGNATURE</b>	<b>d. DATE SIGNED</b> <i>(YYYYMMDD)</i>
<b>b. TELEPHONE NUMBERS</b> <i>(Commercial and DSN)</i>		

**Final Report for the**  
**Aging Systems Sustainment and Enabling**  
**Technologies (ASSET)**

**Contract # SP4701-11-C-0013**

**March 31, 2014**

**Period of Performance from October 1, 2011 – December 31, 2013**

*Prepared for:*

**Defense Logistics Agency (DLA)  
Defense Technical Information Center,  
Attn: DTIC-O,  
8725 John J. Kingman Road,  
Fort Belvoir, VA 22060-6218**

*Submitted by:*

**OSU Enterprise Center, LLC  
503 South Main Street  
Stillwater, OK 74074-4058**

**Dr. Amy Dronberger, Principal Investigator  
(405) 744-2330; [amy.dronberger@okstate.edu](mailto:amy.dronberger@okstate.edu)**

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**UNCLASSIFIED**

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## EXECUTIVE SUMMARY

Since 1994, various teams within Oklahoma State University have directed efforts focused on the primary mission of addressing procurement issues of aging weapons systems. More recently, beginning in 2009 with contract SP4701-09-C-0002, and completing the initiative with this current contract, SP4701-11-C-0013, the Aging Systems Sustainment and Enabling Technologies (ASSET) program has been led directly by the OSU Enterprise Center, a not-for-profit 501(c)3.

Logistics challenges for maintaining a positive operational status of DoD systems can result in warfighter readiness concerns. Issues such as the lack of bid competition or simply no bids have been found to result in higher procurement costs, excessive production lead times, and stock outs. To combat these issues the ASSET team identified source approval projects that would maximize savings over time, created a wider base of qualified consortium companies to increase competitive bidding, and utilized a DLA Air Logistics Center (ALC) liaison to directly identify high priority DoD parts. Creation and modification of a web-enabled database and web site was also developed to implement the goals of this contract.

Upon completion of this contract, 24 reverse engineering projects were awarded to consortium companies. Forty-two new companies from across the nation joined ASSET resulting in a total of 284 companies from 2009 through the end of this contract. Of these 284, 141 companies completed all registrations and certifications to bid on government projects. Relationships were built at Tinker Air Force base, Warner-Robbins Air Force base, DLA Land & Maritime, and others. Finally, the ASSET team was joined by a web site specialist that developed further capabilities of data management, enhanced the capacity to data mine project parts, and created a legacy web site for the ASSET program. Further information regarding each of these areas of contract focus is included in the following final technical report.

## **Parts Management**

Upon identification of problem parts, the ASSET team would provide photographs, measurements and all other pertinent information via a bid board on the ASSET web site. Only companies which had joined ASSET as a member and were fully qualified to do business with the government could view these reverse engineering opportunities. The following is an example of the quote sheet used for each project part. Companies would review part information, then complete the following quote form for review by the ASSET team.

**ASSET FUNDED SOURCE DEVELOPMENT PROJECT QUOTE SUBMISSION FORM (Mechanical) rev 4.0**

<b>Project Description/Instructions</b>		<b>ASSET Project Number:</b>	1156
ASSET seeks to assist OLA in development of an additional source of supply for this part. Tasks 1-4, to be funded by ASSET, are required steps to become a source. Task 5 allows ASSET to evaluate the viability of funding this source development project.		<b>Part Name:</b>	Threaded Tapered Pin
Enter data only into the orange cells on this sheet. Replace the x's and 1's with your submissions.		<b>Part NSN:</b>	5315-01-461-3802
		<b>Estimated Annual Demand:</b>	550
		<b>Recently Supplied Price (EA):</b>	\$112.15
		<b>Current Production Lead Time (days):</b>	66
<b>Quote from:</b>	XXXXX	<b>Quote Prepared By:</b>	XXXXX
<b>Address 1:</b>	XXXXX	<b>Preparer Email:</b>	XXXXX
<b>Address 2:</b>	XXXXX	<b>Quote Number:</b>	XXXXX
<b>City:</b>	XXXXX	<b>Quote Submitted Date:</b>	XXXXX
<b>State:</b>	XXXXX	<b>Quote Expiration Date:</b>	XXXXX
<b>Zip:</b>	XXXXX	<b>Vendor FEI or EIN #:</b>	XXXXX
<b>Phone:</b>	XXXXX	<b>Quoter Cage Code:</b>	XXXXX
<b>FAX:</b>	XXXXX	<b>Quoter JCP Number:</b>	XXXXX
<b>Submitted to:</b> OSU-Enterprise Center, LLC		<b>Attention:</b>	ASSET
<b>Address 1:</b> 503 South Main Street		<b>Submit Proposal to this Email:</b>	assetwebsite@okstate.edu
<b>Address 2:</b> P. O. Box 512		<b>ASSET RFQ Debut Date:</b>	10/11/2013
<b>City:</b> Stillwater		<b>ASSET RFQ Expiration Date:</b>	10/15/2013
<b>State:</b> Oklahoma			<a href="#">LINK TO TDP MIL-STD-31000</a>
<b>Zip:</b> 74074			<a href="#">LINK TO RE MIL-HDBK-115A</a>
<b>Phone:</b> (405) - 744-4226			<a href="#">LINK TO PACKAGING MIL-STD-2073-1E</a>
<b>FAX:</b> (405) - 744-2329			<a href="#">LINK TO DSCR SAR GUIDE</a>



Task Number	Quantity to Quote	Member Company Name Performing the Task	Cage Code	Estimated Task Lead Time (Business Days)	Task Details	UM	Quoted Price for Task	Total
1	1	XXXX	XXXX	1	<p><b>Task 1 Title: Reverse Engineering and Technical Data Package</b></p> <p><b>Input your bid for the Lead Time (Cell G29) and Cost (Cell J29)</b> to deliver a full Level 3 (Production Level), Type 3D-b (3D models with associated 2D drawings) Technical Data Package (TDP) as defined by MIL-STD-31000, created as a result of a Reverse Engineering (RE) effort as defined by MIL-HDBK-115, using ASSET supplied sample parts and ASSET supplied partially completed technical data. The TDP should adhere to ASME Y14.100 Engineering Drawing Practices, and <u>may incorporate</u> Y14.5M Dimensioning and Tolerancing guidelines. Deliverable Notes: <b>COMPLETION BY 12/15/2013 IS REQUIRED</b></p> <p>1.1) Provide 3D models in native, .stl, .iges, and STEP214, CAD formats.                      1.2) Provide 2D drawings in .pdf, .dwg, and .dxf formats                      1.3) Perform any required additional material analysis (chemical and/or metallurgical), and indicate on the drawings as required.</p>	EA	\$1.00	\$1.00
2	2	XXXX	XXXX	1	<p><b>Task 2 Title: Fabrication of Prototypes &amp; Tooling</b></p> <p><b>Input your bid for the Lead Time (Cell G30) and Cost (Cell J30)</b> to manufacture prototypes, utilizing the TDP documentation created in Item 1. These parts will be used in support of First Article Testing and Comparison Testing (Item 3), and may be submitted to the Government as an element of the SAR package (Item 4). Amortize soft tooling costs, if any, over the quantity of prototypes indicated.</p>	EA	\$1.00	\$2.00
3	1	XXXX	XXXX	1	<p><b>Task 3 Title: First Article Inspection and Comparison Testing</b></p> <p><b>Input your bid for the Lead Time (Cell G31) and Cost (Cell J31)</b> to deliver: (1) An independently created <u>dimensional</u> First Article Inspection Report (FAIR) of the Item 2 prototypes, and (2) An independently created Comparison Testing Report comparing the <u>dimensions</u> of the ASSET supplied "existing" parts vs. the "prototypes" manufactured per Item 2. Use the Aerospace Inspection Requirement AS 9102, or equivalent, as a guideline. These reports must provide evidence that all engineering design and specification requirements are properly understood, accounted for, verified, and documented by the Item 1 TDP, and that the prototypes comply to the TDP and original part(s). Full material requirements must be called out on the TDP along with any material treatment (e.g. heat treatment). The Comparison Testing Report must verify the source and composition of the material utilized for manufacturing.</p>	EA	\$1.00	\$1.00
4	1	XXXX	XXXX	1	<p><b>Task 4 Title: Source Approval Request (SAR) Development</b></p> <p><b>Input your bid for the Lead Time (Cell G33) and Cost (Cell J33)</b> to deliver a Category III SAR, per the DSCR SAR Guide, which will be submitted to the Government in response to an approved Form 339 (Request for Engineering Support), or as an "Alternate Offer" in response to a future solicitation. The SAR should incorporate data created from the completion of Items 1-3, plus additional information as required per the SAR Guide.</p>	EA	\$1.00	\$1.00
<b>TOTAL COST OF ENGINEERING SERVICES</b>								\$5.00
5	1	XXXX	XXXX	1	<p><b>Task 5 Title: Individual Part Production Cost Estimate</b></p> <p><b>Input your bid for the Lead Time (Cell G35) and Per Part Cost (Cell J35)</b> to manufacture, and package for delivery, this part in the annual demand quantities indicated in the "Estimated Annual Demand" (Cell I6) shown at the top of this form. This quote must represent an honest estimate of your response to a Government solicitation using today's raw material prices. Any future Government award documentation will specify the specific MIL-STD-2073-1E compliant shipping packaging requirement. Your production quote should include the amortized cost to satisfy this packaging requirement, as well as any hard tooling requirement.</p>	EA	\$1.00	

After accepting quotes, those projects with multiple bids were evaluated by each Manufacturing Development Specialists on the ASSET team, independently of each other. These team members worked one-on-one with the companies and had a vast knowledge of their capabilities matching each project. After rating, the Contract Specialist would then compile all evaluation sheets and scores and determine the company in which the project was to be awarded. Below are the factors and scoring system utilized for selection.

*Evaluation of Experience and Capability Factors*

Technical evaluators will use the appropriate ratings, which are listed and defined below. Each proposal will be evaluated against the stated evaluation criteria (Experience and Capability) in the Terms and Conditions of the solicitation. Each proposal is evaluated using the same rating standards. Apply a rating to each category for each proposal received. The ratings standards for the Non-Price Factors for Experience and Capability are as follows:

<u>Rating</u>	<u>Definition and Criteria</u>
4 Points	Proposer has significant strength for the type of project being evaluated. Significant strength is evaluated using the knowledge by the technical evaluator of the proposer's experience or capability.
3 Points	Proposer has adequate strength for the type project being evaluated. Adequate strength is evaluated using the knowledge by the technical evaluator of the proposer's experience or capability.
2 Points	Proposer has some weaknesses for the type project being evaluated. Some weaknesses are evaluated using the knowledge by the technical evaluator of the proposer's experience or capability.
1 Point	Proposer has performance risks for the type project being evaluated. Performance risks are evaluated using the knowledge by the technical evaluator of the proposer's experience or capability.



### *Evaluation of Quoted Delivery*

The Contract Specialist will evaluate each proposer's delivery schedule and use a point-system based on how quickly the proposer can complete a project. The proposer with the least amount of days proposed for completion will receive 4 points, the next closest proposer 3 points, the next closest proposer 2 points, and all other proposers 1 point.

### *Evaluation of Price*

The Contract Specialist will evaluate each proposer's overall price and use a point system based on the lowest quoted overall price. The proposer with the lowest overall price will receive 12 points, the next lowest proposer 9 points, the next lowest proposer 6 points, and all other proposers 3 points.

## **Source Management**

Key efforts were directed toward supporting companies who desired to become members of the ASSET consortium. While a consortium foundation had already been established through a previous contract, after interfacing with companies throughout Oklahoma and the United States, at the end of this contract 42 new companies joined ASSET during this period of performance. Across both contracts, ASSET ended with 284 member companies with 141 of those companies having the required certifications to bid on DoD contracts. A final list of the consortium companies is included in Appendix A.

For many of these companies, the team's Manufacturing Development Specialists would provide one-on-one assistance in walking the company through the process of obtaining a DUNS number, a CAGE code and JCP registration. In many instances the ASSET team also provided guidance in the development of quality assurance systems for the small businesses. Developing this relationship within the companies also provided the Manufacturing Development Specialist the opportunity to view the facilities and gain an understanding of the companies' capabilities for future projects.

Beyond working one-on-one with new member companies, the ASSET team also utilized the position of DLA/ALC liaison to visit with various DoD personnel nationwide. This resulted in relationships with the Strategic Alternate Sourcing Program Office (SASPO) at the Oklahoma City Air Logistics Center; the Tinker Air Force Base Supply Chain Squadron; the Value Engineering Support Branch at DLA Land & Maritime; and the Support and Vehicles Division at Robbins Air Force Base. These relationships resulted in six of the 24 projects being DoD high priority projects in which ASSET team members worked directly with engineers from these entities and the awarded small business. Information on each of these projects are highlighted in blue below in a breakdown of all ASSET projects. An example of these high priority projects are door handles from DLA Land & Maritime that they needed prototypes without a locking mechanism. An ASSET consortium company was able to provide 3D prototypes, redesigned to fit the DLA Land & Maritime's specifications.

### **New and Creative Solutions, Technical Data and Computer Software**

During this contract, the ASSET team added a web site specialist to assist in a parsing of all of the data that could all be coded within the back-end capabilities of the web site. One such improvement was a tracking system for all awards listed on DIBBS for ASSET consortium companies. One of the Manufacturing Development Specialist used to spend hours sorting this information by hand, however, the web specialist created a 'web scraper' that resulted in a 5-minute process. The scraper ran through a common web browser and searched for awards through the specified time frame. This information was then run through a script generator that was written to gather the specific data for company names, awards, etc. Improvements such as this allowed for a more complete set of data with less human error and fewer needed labor resources to create such a report.

Further changes in this area include modifications to the ASSET website, found at <http://asset.okstate.edu>. In its current form, is a scaled down legacy website is hosted on a special division of the Oklahoma State University's server cluster geared towards supporting web applications. This legacy site clearly defines the purpose of the program, its history and will serve as a reference for others seeking information related to becoming a qualified bidder for government solicitations for parts for the DoD. However, while the site is now focused towards providing a review of information, all of the previous capabilities for parts and source management are still written in the back-end if it is ever needed for future projects.

### **Subcontract Project Results**

All of the above actions of identifying "problem" parts, developing a consortium base of qualified companies and relationships across various bases, and improvements to the web capabilities, were all activities completed to have the ability to successfully award and complete reverse engineering projects. Each awarded subcontract typically consisted of five line items including; 1) Reverse Engineering and Technical Data Package; 2) Fabrication of Prototypes and Tooling; 3) First Article Inspection; 4) Comparison Lab Testing, and 5) Source Approval Request Development. Some projects were awarded with less than five line items depending upon solicitation requirements and needs for the DoD high priority projects. Below is a review of each of the projects. Those highlighted in blue were DoD high priority projects (6), projects in green have had Source Approval Requests submitted to DLA for consideration and are awaiting feedback (13), and those highlighted in red had to be terminated due to either the company going out of business or a change in the cost of material and engineering needs changed so drastically, that it became cost ineffective to complete the project.

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
1021-B	NSN	5315-01-461-3802	RE/TDP	COMPLETE
	Description	Tapered Pin		
	AMC/AMSC	3/D	Fab Prototypes	COMPLETE
	Type	DLA Approved		
	Awardee	Mustang Manufacturing	First Article Inspection	COMPLETE
	City	Sapulpa		
	State	OK	Lab Comparison Analysis	Complete - Mustang did not elect to become source qualified. Re-opened as Project 1156
ASSET PO Issued	\$6,950	SAR		
1045 (B)	NSN	5985-01-220-8918	RE/TDP	None currently required
	Description	Antenna Bracket		
	AMC/AMSC	2 / G	Fab Prototypes	Complete - Finished prototypes sent to Tinker AFB as requested by Roderick Diehl of Tinker AFB Supply Chain Management
	Type	DoD Priority		
	Awardee	Green Country Aircraft	First Article Inspection	Air Force will FAT
	City	Tulsa		
	State	Oklahoma	Lab Comparison Analysis	None required
ASSET PO Issued	\$46,070	SAR		
1050-B	NSN	3120-01-461-8835	RE/TDP	COMPLETE
	Description	Bearing Sleeve		
	AMC/AMSC		Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	COMPLETE
	City	Webb City		
	State	MO	Lab Comparison Analysis	COMPLETE
ASSET PO Issued	\$11,681	SAR		

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
1060	NSN	5340-01-557-6344	RE/TDP	COMPLETE
	Description	Bracket, Mounting Assy		
	AMC/AMSC		Fab Prototypes	Subaward terminated.
	Type	Alternate Offer		
	Awardee	Allen and Associates	First Article Inspection	Subaward terminated.
	City	Glenpool		
	State	OK	Lab Comparison Analysis	Subaward terminated.
	ASSET PO Issued	\$7,500 for TDP		
		SAR	Subaward terminated.	
1118	NSN	4510-00-410-1062	RE/TDP	COMPLETE.
	Description	C-5 Latrine Pump		
	AMC/AMSC	3 / L	Fab Prototypes	Costs from original bid to time of fabrication increased significantly. Total prototype completion not affordable or timely under this contract. Terminated.
	Type	DoD		
	Awardee	Gavco Plastics	First Article Inspection	Terminated
	City	Broken Arrow		
	State	OK	Lab Comparison Analysis	Terminated
	ASSET PO Issued	\$134,445		
		SAR	Terminated	
1124	NSN	3040-01-437-5635	RE/TDP	COMPLETE
	Description	Rigid Connecting Link		
	AMC/AMSC		Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Gavco Plastics	First Article Inspection	COMPLETE
	City	Broken Arrow		
	State	OK	Lab Comparison Analysis	COMPLETE
	ASSET PO Issued	\$15,079		
		SAR	COMPLETE. Revisions sent to DLA. Awaiting feedback.	

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
1125	NSN	5310-00-921-8634	RE/TDP	COMPLETE
	Description	Washer, Recessed		
	AMC/AMSC		Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Gavco Plastics	First Article Inspection	COMPLETE
	City	Broken Arrow		
	State	OK	Lab Comparison Analysis	COMPLETE
ASSET PO Issued	\$6,938	SAR	COMPLETE. Revisions sent to DLA. Awaiting feedback.	
1126	NSN	5340-01-448-1536	RE/TDP	COMPLETE
	Description	Clevis, Rod End		
	AMC/AMSC		Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Allen and Associates	First Article Inspection	COMPLETE
	City	Glenpool		
	State	OK	Lab Comparison Analysis	COMPLETE
ASSET PO Issued	\$13,099	SAR	COMPLETE	
1132	NSN	3120-01-480-1129	RE/TDP	COMPLETE
	Description	Bearing, Sleeve		
	AMC/AMSC		Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	COMPLETE
	City	Webb City		
	State	MO	Lab Comparison Analysis	COMPLETE
ASSET PO Issued	\$8,785	SAR	COMPLETE.	

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
1135	NSN	5315-01-351-8711	RE/TDP	COMPLETE
	Description	Key, Machine		
	AMC/AMSC	3 / P	Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Redhawk EMS	First Article Inspection	COMPLETE
	City	Broken Arrow		
	State	OK	Lab Comparison Analysis	
	ASSET PO Issued	\$9,787	SAR	
1136	NSN	5306-01-564-2960	RE/TDP	COMPLETE
	Description	Bolt, Machine		
	AMC/AMSC		Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Fairchild Controls	First Article Inspection	COMPLETE
	City	Fredrick		
	State	MD	Lab Comparison Analysis	
	ASSET PO Issued	\$16,488	SAR	
1139	NSN	5307-01-185-3077	RE/TDP	COMPLETE
	Description	Stud, Self Locking		
	AMC/AMSC	3 / P	Fab Prototypes	COMPLETE
	Type	Alternate Offer		
	Awardee	Redhawk EMS	First Article Inspection	Company went out of business. Project cancelled and re-bid.
	City	Broken Arrow		
	State	OK	Lab Comparison Analysis	
	ASSET PO Issued	\$10,502	SAR	

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
<b>1139 (B)</b>	NSN	5307-01-185-3077	RE/TDP	COMPLETE
	Description	Stud, Self Locking		
	AMC/AMSC	3 / P	Fab Prototypes	COMPLETE
	Type	DLA Approved		
	Awardee	Advanced Machining Solutions, LLC	First Article Inspection	COMPLETE
	City	Oklahoma City		
	State	OK	Lab Comparison Analysis	COMPLETE
	ASSET PO Issued	\$4,977		
<b>1146</b>	NSN	5365-01-097-3144	RE/TDP	COMPLETE
	Description	Spacer, Sleeve		
	AMC/AMSC	3 / P	Fab Prototypes	COMPLETE
	Type	DLA Approved		
	Awardee	Redhawk EMS	First Article Inspection	COMPLETE
	City	Broken Arrow		
	State	OK	Lab Comparison Analysis	COMPLETE
	ASSET PO Issued	\$8,964		
<b>1147</b>	NSN	2530-01-111-5156	RE/TDP	COMPLETE
	Description	Arm, Steering Gear		
	AMC/AMSC	Unknown	Fab Prototypes	COMPLETE
	Type	DoD Priority		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	COMPLETE
	City	Webb City		
	State	Mo	Lab Comparison Analysis	Both prototypes and TDP forwarded to: Carl Eddy, Robbins AFB
	ASSET PO Issued	\$14,000		



**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
1148	NSN	2540-01-376-3999 / 3998	RE/TDP	COMPLETE.
	Description	Door Handle, Vehicle (Pair)		
	AMC/AMSC	4 / B	Fab Prototypes	COMPLETE
	Type	DLA Approved		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	COMPLETE
	City	Webb City		
	State	Mo	Lab Comparison Analysis	Two SLA prototypes of left (& 2 of right) have been shipped to DLA Land & Maritime with TDP. 1 prototype of each is in pieces, 1 assembled. COMPLETE
ASSET PO Issued	\$29,250	SAR	Not Required	
1150	NSN	5930-01-063-0320	RE/TDP	COMPLETE
	Description	Switch, Push		
	AMC/AMSC	3 / L	Fab Prototypes	COMPLETE
	Type	DoD Priority		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	COMPLETE
	City	Webb City		
	State	Mo	Lab Comparison Analysis	None required
ASSET PO Issued	\$12,000	SAR	None required	
1152	NSN	3120-01-120-5572	RE/TDP	Complete
	Description	Bearing, Sleeve		
	AMC/AMSC	3 / Q	Fab Prototypes	Complete
	Type	DLA Approved		
	Awardee	Advanced Machining Solutions, LLC	First Article Inspection	Complete
	City	Oklahoma City		
	State	Oklahoma	Lab Comparison Analysis	Complete
ASSET PO Issued	\$1,875	SAR	First edition of SAR sent during August 2013. Project considered complete. Awaiting feedback from DLA.	

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status	
1153	NSN	2530-01-111-5156	RE/TDP	COMPLETE	
	Description	Pitman Arm			
	AMC/AMSC	1 / G	Fab Prototypes	COMPLETE	
	Type	DoD Priority			
	Awardee	Wyandotte Precision Pro.	First Article Inspection	Two Prototypes with FA and Comparison received at ASSET. Both prototypes and TDP forwarded to: Carl Eddy Engineer Support Equipment & Vehicles Division Robins AFB, GA 478-222-1617 Project is complete	
	City	Webb City			
	State	Mo	Lab Comparison Analysis		
	ASSET PO Issued	\$15,800	SAR		Not required
1154	NSN	2540-01-557-0056	RE/TDP		COMPLETE
	Description	Coupler, Drawbar, Ring (Hitch)			
	AMC/AMSC	3 / D	Fab Prototypes		COMPLETE
	Type	DLA Approved			
	Awardee	ETI Inc	First Article Inspection	COMPLETE	
	City	Tulsa			
	State	OK	Lab Comparison Analysis	COMPLETE	
	ASSET PO Issued	\$15,006	SAR	COMPLETE. Awaiting DLA Feedback	
1155	NSN	5306-01-170-2865	RE/TDP	COMPLETE	
	Description	Bolt			
	AMC/AMSC	3 / Z	Fab Prototypes	COMPLETE	
	Type	DLA Approved			
	Awardee	Advanced Machining Solutions, LLC	First Article Inspection	COMPLETE	
	City	Oklahoma City			
	State	Oklahoma	Lab Comparison Analysis	COMPLETE	
	ASSET PO Issued	\$5,300	SAR	COMPLETE. Awaiting DLA Feedback	

**Status of Awarded Source Development Projects  
ASSET IV - Final Project Status**

Project Number	Project Particulars		Project Elements	Project Status
1156	NSN	5315-01-461-3802	RE/TDP	COMPLETE
	Description	Pin, Tapered, Threaded		
	AMC/AMSC	3 / D	Fab Prototypes	COMPLETE
	Type	DLA Approved		
	Awardee	Advanced Machining Solutions, LLC	First Article Inspection	COMPLETE
	City	Oklahoma City		
	State	Oklahoma	Lab Comparison Analysis	COMPLETE
	ASSET PO Issued	\$5,375		
1157	NSN	1095-01-571-7309	RE/TDP	COMPLETE Sent to DLA Land and Maritime
	Description	Small Storage Rack		
	AMC/AMSC	3 / D	Fab Prototypes	Not Applicable
	Type	DLA Approved		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	Not Applicable
	City	Webb City		
	State	Mo	Lab Comparison Analysis	Not Applicable
	ASSET PO Issued	\$15,840		
1158	NSN	2530-01-234-3420	RE/TDP	COMPLETE. Sent to Tyler Shoman, Principal Engineer MMHE
	Description	Brake Adjuster		
	AMC/AMSC	Unknown	Fab Prototypes	Not Applicable
	Type	DoD Priority		
	Awardee	Wyandotte Precision Pro.	First Article Inspection	Not Applicable
	City	Webb City		
	State	Mo	Lab Comparison Analysis	Not Applicable
	ASSET PO Issued	\$9,360		
			SAR	Not Applicable

The following spreadsheet depicts the projected 5-year dollar savings and average production lead time (PLT) from the above projects. Projections indicate that problem parts acquisition costs should be lowered by 26 percent and that production lead time reductions will exceed 50 percent.

Project #	Items Completed	Current Price(CP)	New Source Price(NSP)	ADV Qty.	5 Year CP Total	5 Year NSP Total	5 Year Savings	PLT-Days Savings
1021(B)	1-4	\$112.55	\$75.00	550	\$309,512.50	\$206,250.00	\$103,262.50	65
1045(B)	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1050(B)	1-4	\$240.09	\$235.00	4000	\$4,801,800.00	\$4,700,000.00	\$101,800.00	399
1060	1	\$976.87	\$900.00	45	\$219,795.75	\$202,500.00	\$17,295.75	80
1118	1-2	\$12,026.07	\$7,200.00	40	\$2,405,214.00	\$1,440,000.00	\$965,214.00	23
1124	1-5	\$101.06	\$69.45	28900	\$14,603,170.00	\$10,035,525.00	\$4,567,645.00	23
1125	1-5	\$19.59	\$14.05	15150	\$1,483,942.50	\$1,064,287.50	\$419,655.00	15
1126	1-4	\$118.81	\$93.00	1350	\$801,967.50	\$627,750.00	\$174,217.50	370
1132	1-5	\$158.35	\$117.00	1977	\$1,565,289.75	\$1,156,545.00	\$408,744.75	175
1135	1-4	\$31.68	\$23.76	4692	\$743,212.80	\$557,409.60	\$185,803.20	140
1136	1-4	\$43.72	\$32.00	10128	\$2,213,980.80	\$1,620,480.00	\$593,500.80	44
1139	1-2	\$105.98	\$79.50	1300	\$688,870.00	\$516,750.00	\$172,120.00	480
1139(B)	1-4	\$65.82	\$44.80	684	\$225,104.40	\$153,216.00	\$71,888.40	510
1146	1-4	\$112.98	\$84.74	333	\$188,111.70	\$141,092.10	\$47,019.60	35
1147	1-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1148(B)	1-3	\$221.46	\$175.00	1193	\$1,321,008.90	\$1,043,875.00	\$277,133.90	50
1150	1-3	\$18.30	\$14.00	650	\$59,475.00	\$45,500.00	\$13,975.00	44
1152	1-4	\$397.00	\$380.00	151	\$299,735.00	\$286,900.00	\$12,835.00	210
1153	1-3	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1154	1-3	\$2,177.00	\$1,863.25	43	\$468,055.00	\$400,598.75	\$67,456.25	6
1155	1-4	\$201.47	\$115.50	684	\$689,027.40	\$395,010.00	\$294,017.40	58
1156	1-4	\$112.15	\$108.77	550	\$308,412.50	\$299,117.50	\$9,295.00	6
1157	1	\$785.66	\$750.00	61	\$239,626.30	\$228,750.00	\$10,876.30	16
1158	1	N/A	N/A	N/A	N/A	N/A	N/A	N/A
							\$8,513,755.35	137.5

## **Budgetary Overview**

The ASSET contract was awarded in the amount of \$2,043,162.35 on September 28, 2011 for a beginning period of performance of October 01, 2011 and had an approved no-cost extension period of performance to December 31, 2013. Total expended dollars for the ASSET contract is \$2,040,999.79. The amount expended equals approximately 99.8% of total available not-to-exceed contractual funding. A summary of the major categories of expenditures is as follows: Salaries and Wages-31.6%, FICA and Employee Benefits-13.1%, Other Directs and Travel-2.0%, Sub Contracts-23.5%, and Overhead (Facilities and Administrative)-29.5%.

## **Deliverables**

Page 19 of the initial technical proposal listed the required contract deliverables including a quarterly conference agenda (15 days before the event), conference minutes (ten days after the event), program plans (start date and then 15<sup>th</sup> business day of the month), a progress, status and management report (15<sup>th</sup> working day of the month), and the final technical report within 90 days after contract closure. The ASSET program met all of the required deliverables and timelines. Submission of this final report satisfies the delivery of the only remaining contract deliverable.

**APPENDIX A**  
**MEMBER CONSORTIUM COMPANIES**

<b>Company Name</b>	<b>City</b>	<b>State</b>
A-1 Machine Shop	Tulsa	Oklahoma
A-1 Machine Works	Bristow	Oklahoma
A.G.H. Industries, Inc	Fort Worth	Texas
A.O. Inc.	Okemah	Oklahoma
A.W. Brueggemann Co., Inc.	Enid	Oklahoma
Able Tool Corporation	Cincinnati	Ohio
Ace Manufacturing Company	Cincinnati	Ohio
ACRS 2000 Corp	Oklahoma City	Oklahoma
Action Group Inc.	Blacklick	Ohio
Advance Aero Tech	Cumming	Georgia
Advanced Composites Group	Tulsa	Oklahoma
Advanced Machining & Fabricating, Inc.	Owasso	Oklahoma
Advanced Machining Solutions	Oklahoma City	Oklahoma
Advanced Manufacturing Technologies PLL	Xenia	Ohio
Advanced Plastics Inc	Owasso	Oklahoma
AE Frame Mfg Inc	Broken Arrow	Oklahoma
Aero-Dynamics Inc	Broken Arrow	Oklahoma
AeroGen Turbine Services	Jupiter	Florida
Aeron Group LLC	Broken Arrow	Oklahoma
Aerosock Inc	Enid	Oklahoma
Aerospace Defense Coatings	Macon	Georgia
Aerospace Fabrication of Georgia	Dallas	Georgia
Aerospace Technologies Inc	Lilburn	Georgia
AGRI Dynamics Inc	Albany	Georgia
Alektronics, Inc.	Beavercreek	Ohio
All Right Steel, LLC	Cushing	Oklahoma
Allegra Print & Imaging (Holder and Smith INC)	Tulsa	Oklahoma
ALLEN and ASSOCIATES, Inc.	Tulsa	Oklahoma
Alpha Machining & Manufacturing Inc.	Tulsa	Oklahoma
American Manufacturer Network	Lewiston	Idaho
American Panel Corp	Alpharetta	Georgia
American Precision Machining LLC	Tulsa	Oklahoma
Ameriglo LLC	Atlanta	Georgia
Amron Enterprises	Sapulpa	Oklahoma
Applied Fiber Telecommunications	Albany	Georgia
ARC Technology Solutions	Nashua	New Hampshire
ARINC Engineering Services LLC	Oklahoma City	Oklahoma
ASIC	Enid	Oklahoma
Athena Mfg	Austin	Texas
Atlanta Tool & Abrasives Co Inc	Alpharetta	Georgia
Augusta Machine Welding	Augusta	Georgia
Aurora Bearing Company	Montgomery	Illinois

Auto-Turn Mfg	Broken Arrow	Oklahoma
Autoquip Corp	Guthrie	Oklahoma
Avery Barron Industries	Tulsa	Oklahoma
Aviall Services, Inc.	DFW Airport	Texas
Aviation Turbines International	O'Fallon	Missouri
B & C Machine	Oklahoma City	Oklahoma
B-W Mfg Inc	Oklahoma City	Oklahoma
Barnes Aerospace	West Chester	Ohio
BL Smith Enterprises	Wellston	Oklahoma
Black Hills Nano Systems	Rapid City	South Dakota
Bleicher Machine & Tool LLC	Byron	Georgia
Boyd Machining Inc	Tulsa	Oklahoma
BT Machine Inc	Tulsa	Oklahoma
C&C Equipment Specialist INC	Oklahoma City	Oklahoma
C.O.R.E. Aviation Services, INC.	Gilbert	Arizona
Camtronics MRO	Tulsa	Oklahoma
Cannon Spring Company	Oklahoma City	Oklahoma
Cascade Aviation Services Inc.	Muskogee	Washington
Cdsmachine	Coweta	Oklahoma
Central Expanded Metal, Inc.	Chandler	Oklahoma
Central Specialties Manufacturing Co Inc	Tulsa	Oklahoma
Cherokee Nation Red Wing Products Inc	Kellyville	Oklahoma
Cheyenne Innovations Inc	Stillwater	Oklahoma
Chipsco Precision Services	Meadville	Pennsylvania
Citizen Poawatomi Community Development Corporation	Shawnee	Oklahoma
CleanNG LLC	Tulsa	Oklahoma
Cline Machine Co Inc	Tulsa	Oklahoma
Conley Corporation	Tulsa	Oklahoma
Copeland Machining Corporation	Tulsa	Oklahoma
Corpair Supply Inc.	O'Fallon	Missouri
Custom Components & Logistics	Catoosa	Oklahoma
Custom Metal Parts, Inc.	Palmdale	California
D-J Engineering, Inc.	Augusta	Kansas
Da/Pro Rubber Inc	Broken Arrow	Oklahoma
Daniel South West Quality Screw Products, Inc.	Tulsa	Oklahoma
Davis Machine Shop Inc	Lindsay	Oklahoma
DB Paint and Drywall, LLC	Lawton	Oklahoma
Del Nero Manufacturing Co., Inc.	Norman	Oklahoma
Delavan Inc d/b/a Turbine Fuel Technologies	West Des Moines	Iowa
Diamond Manufacturing Inc	Atoka	Oklahoma
Disan Engineering Corporation	Nowata	Oklahoma
Dixie Diamond Manufacturing Inc	Lilburn	Georgia
Dixon and Sons Inc	Vinita	Oklahoma
DOC-Lite, LLC	Tulsa	Oklahoma



DowAero Logistics	Oklahoma City	Oklahoma
Downing Mfg Inc	Tulsa	Oklahoma
Drake Air Inc	Tulsa	Oklahoma
Dutch Valley Supply Co	Lawrenceville	Georgia
Dyna-Turn Of Oklahoma Inc	Elk City	Oklahoma
Dysol, Inc.	Fort Worth	Texas
E-Z Drill Inc	Stillwater	Oklahoma
Electro Mechanical Specialists LLC	Norwich	Connecticut
Electronic Design Corporation	Tucker	Georgia
Elevate Systems	San Antonio	Texas
Elite Aero	Largo	Florida
Engatech	Tulsa	Oklahoma
Epitech	Vista	California
EssTech Engineering	Louisa	Virginia
ETI INC	Tulsa	Oklahoma
ETI INC.	Tulsa	Oklahoma
Everett Machine LLC	Owasso	Oklahoma
F. A. Creations LLC	Owasso	Oklahoma
Fabrication Dynamics Inc	Tulsa	Oklahoma
Factory Ten Composites Inc	Catoosa	Oklahoma
FAIRCHILD CONTROLS	Frederick	Maryland
Falcon Mfg Corp	Covington	Georgia
Fastenal Company	Chickasha	Oklahoma
Fiber Pad Incorporated sub Of Teledyne Inc	Tulsa	Oklahoma
Fisher Products LLC	Tulsa	Oklahoma
Fluid Technologies Inc	Stillwater	Oklahoma
Fokker Aerotron	Lagrange	Georgia
Formcrete Fiberglass Products, Inc.	Seminole	Oklahoma
Frontier Electronic Systems CORP	Stillwater	Oklahoma
G Designs dba	Sapulpa	Oklahoma
G-N Manufacturing Co	Broken Arrow	Oklahoma
Gary Key Enterprises	Oilton	Oklahoma
Gate Industries	Long Beach	California
Gavco Plastics	Broken Arrow	Oklahoma
Gem City Engineering	Dayton	Ohio
General Machine Diecron Inc	Griffin	Georgia
Genesis Metal Corporation	Beggs	Oklahoma
Green Country Aircraft Exhaust Inc	Tulsa	Oklahoma
Greene Machine	Macon	Georgia
H. F. Webster	Rapid City	South Dakota
H. F. Webster Engineering Services Inc.	Rapid City	South Dakota
H3 Business Development	Mannford	Oklahoma
Hawks Logistics, inc	Edmond	Oklahoma
Heart of GA Metalcrafters	Eastman	Georgia
Heico Aerospace Corporation	Hollywood	Florida

Hill Manufacturing Inc	Broken Arrow	Oklahoma
Hoel Machine Mfg Inc	Broken Arrow	Oklahoma
ICES Corp	Cleveland	Oklahoma
ICX Technologies	Stillwater	Oklahoma
Industrial Enterprise Corp	Chouteau	Oklahoma
Industrial Machine Co Inc	Oklahoma City	Oklahoma
Industrial Tube Company, LLC / Hartzell Aerospace	Perris	California
Ingenium Aerospace	Roscoe	Illinois
InnovationOne LLC	Marietta	Oklahoma
Institute for Defense Analyses	Alexandria	Virginia
Interactive CAD Services Inc	Broken Arrow	Oklahoma
Interad Limited, LLC	Melfa	Virginia
Interface Displays & Controls, Inc.	Oceanside	California
InterWorks, inc.	Stillwater	Oklahoma
J &S Stabilization Inc.	OKC	Oklahoma
J and D Machine Inc	Tulsa	Oklahoma
J and J	Okmulgee	Oklahoma
J-M Machine Shop Inc	Henryetta	Oklahoma
J. S. Curtiss Aviation Consulting LLC	Tulsa	Oklahoma
Janeway Machine	Sapulpa	Oklahoma
Johnson Machine Inc	Collinsville	Oklahoma
JP PRECISION MACHINING L.L.C.	Broken Arrow	Oklahoma
K & K Manufacturing Inc	Tulsa	Oklahoma
kachina aircraft supply	San Diego	California
KING AEROSPACE	Addison	Texas
L-3 Communications Corporation	Alpharetta	Georgia
L. E. F. Inc	Tulsa	Oklahoma
Labarge Inc	Tulsa	Oklahoma
Landco Eng	Dayton	Ohio
LE Schwartz & Son, Inc	Macon	Georgia
Limco-Airepair Inc	Tulsa	Oklahoma
Linear Motion LLC dba Thomson Aerospace and Defense	Saginaw	Michigan
LUCAS FINISHING, INC.	Tulsa	Oklahoma
Lumatech Corporation	Okemah	Oklahoma
M & M Manufacturing	Tulsa	Oklahoma
M & M Manufacturing, Inc	Tulsa	Oklahoma
Machine Laboratory, LLC	Lenexa	Kansas
Magee-Gould Energy, LLC	Perkins	Oklahoma
Malone's CNC Machining Inc.	Grove	Oklahoma
Manufactured Assemblies Corp	Suwanee	Georgia
Maverick Technologies LLCSSST DIV	Oklahoma City	Oklahoma
Maxi Adhesive Products INC	Greenfield	New Hampshire
Maxima Technologies	Lancaster	Pennsylvania

MC Machining, Inc.	Bixby	Oklahoma
Metal Dynamics Corporation	Tulsa	Oklahoma
Metal Form Inc	Tulsa	Oklahoma
Miami Valley Punch & Manufacturing Inc	Dayton	Ohio
Micron Design Inc	Oklahoma City	Oklahoma
Mid America Machining, Inc	Pryor	Oklahoma
Mid America Technologies LLC	Tulsa	Oklahoma
Mid South Tooling	Macon	Georgia
Midwest Industrial Metal	Huntington	Indiana
Mil-Spec Packaging	Macon	Georgia
Military Parts Plus	Broken Arrow	Oklahoma
Mingo Aerospace	Owasso	Oklahoma
Mission Support	Clearfield	Utah
Multi-Power Products Llc	Duncan	Oklahoma
Mustang Manufacturing	Sapulpa	Oklahoma
Nation Grinding Inc.	Dayton,	Ohio
NAVCOM Defense Electronics	Warner Robins	Georgia
NECO INDUSTRIES	Oklahoma City	Oklahoma
Neosource Inc	Tulsa	Oklahoma
Newton Design	Catoosa	Oklahoma
NewView Oklahoma	Oklahoma City	Oklahoma
NLS Specialties Inc	Acworth	Georgia
Non-Ferrous Castings Co	Dayton	Ohio
Northeast Oklahoma Mfg Inc	Tulsa	Oklahoma
Oaviation Corp	Princeton	New Jersey
Ohio Valley Goodwill Industries	Cincinnati	Ohio
Oklahoma Aeronautics Commission	Oklahoma City	Oklahoma
Oklahoma Custom Coating	Seminole	Oklahoma
Oklahoma Tool & Machine	El Reno	Oklahoma
Packer Manufacturing	Tulsa	Oklahoma
Padgett Machine Shop	Tulsa	Oklahoma
Parker Hannifin Corporation	Dublin	Georgia
Pattison Precision Products Inc	Broken Arrow	Oklahoma
Pelco Products, Inc.	Edmond	Oklahoma
Phoenix Engineering Inc	Norcross	Georgia
Plane Plastics Ltd	Alva	Oklahoma
Planet Products Corportation	Cincinnati	Ohio
Polycraft Products, Inc.	Cincinnati	Ohio
Port City Metal Services	Tulsa	Oklahoma
Power Dyne Inc	Tulsa	Oklahoma
Precise Machining & Manufacturing	Tulsa	Oklahoma
Precision Products	Sapulpa	Oklahoma
Prince Service & Mfg Inc	Macon	Georgia
PRO-FAB, INC.	Oklahoma City	Oklahoma
Projects Unlimited	Dayton	Ohio

PRYER Machine & Tool Co. Inc	Tulsa	Oklahoma
PSI Repair Services Inc	Livonia	Michigan
Qual-Tron	Tulsa	Oklahoma
Quality Machining of Broken Arrow Inc	Broken Arrow	Oklahoma
Quest One LLC	Roswell	Georgia
rackley welding	mountain view	Oklahoma
RCL Components Inc	Bogart	Georgia
Redhawk EMS, Inc.	Broken Arrow	Oklahoma
Ren Corporation	Stillwater	Oklahoma
Rite Track Equipment Services Inc	West Chester	Ohio
RNP Custom Machine Works	Lawrenceville	Georgia
Roy's Transmission Shop Inc.	Bethany	Oklahoma
Russell Machine & Fab, LLC	Stillwater	Oklahoma
Ryan Mfg. Inc	Haskell	Oklahoma
RZ Industries	Tulsa	Oklahoma
Sackso Enterprises, LLC	Westlake	Ohio
Safety Training Systems Inc	Tulsa	Oklahoma
Sands Portable Welding Service, Inc.	Sands Springs	Oklahoma
SAS Marketing Group	Shawnee	Kansas
SBS Industries, Inc.	Tulsa	Oklahoma
Schuler Machine Inc	Tulsa	Oklahoma
Scorpion Custom Firearms	Tulsa	Oklahoma
Seal Company Enterprises, Inc.	OKC	Oklahoma
SEAM Aero, LLC.	Norman	Oklahoma
Seaport Machine Inc.	Clarkston	Washington
SGW Designworks, LLC	Boise	Idaho
Shantelle Powell Agency, Inc.	New York	New York
Sherry Laboratories	Broken Arrow	Oklahoma
Sherry Laboratories of Indiana, LLC	Daleville	Indiana
Sherry Laboratories of Oklahoma, LLC	Broken Arrow	Oklahoma
Sherry Labs	Broken Arrow	Oklahoma
Siemens Energy & Automation Inc	Alpharetta	Georgia
Simplified Dynamics, Inc.	Mustang	Oklahoma
SMC Technologies, Inc.	Oklahoma City	Oklahoma
Snook Industrial	McKinney	Texas
South Dakota School of Mines and Technology	Rapid City	South Dakota
Southwest United Industries, Inc.	Tulsa	Oklahoma
SSI Technology, Inc.	Madison Heights	Michigan
Steel Fabricators International LLC	Oklahoma City	Oklahoma
Stone's Machine & Tool	Jeffersonville	Georgia
Stout Manufacturing, LLC	Collinsville	Oklahoma
Sun Manufacturing, Inc.	Coweta	Oklahoma
Surface Mount Depot Inc	Oklahoma City	Oklahoma
Swearingen Machine Shop	Beggs	Oklahoma
Swish Product Design	Tulsa	Oklahoma

T & D Fabrication, INC.	Cushing	Oklahoma
Talent Sport Inc	Norman	Oklahoma
Team Tooling and Design Inc	Shawnee	Oklahoma
Tech Inc	Perkins	Oklahoma
TECHcetera	Wichita	Kansas
Technology Development Group, Inc	Shawnee	Oklahoma
Techsolve MEP	Cincinnati	Ohio
Techtrol Inc	Pawnee	Oklahoma
TECT Aerospace	Park City	Kansas
The Railroad Yard	Stillwater	Oklahoma
Thermocontrol, Inc.	Houston	Texas
Thomas Instrument & Machine Co. INC	Boerne	Texas
Thomas Instrument, Inc.	Brookshire	Texas
Thrush Aircraft Inc	Albany	Georgia
Topps Powder Coating, LLC	Moore	Oklahoma
Tribal Solutions Inc	Frisco	Texas
Trident Precision	Dayton	Ohio
Triman Industries INC	West Berlin	New Jersey
Tucker Technologies	Tucker	Georgia
Turbine Engine Components Technologies Corporation	Thomasville	Georgia
TW Design and Manufacturing LLC	Montello	Wisconsin
United Space Alliance, LLC	Houston	Texas
USUT Labs Inc	Tulsa	Oklahoma
Valco Manufacturing Company, Inc	Oklahoma City	Oklahoma
Valley Technologies	St. Louis	Missouri
Vantage Associates	Gardena	California
Vantage Associates Inc. (National City facility)	National City	California
Veracity Technology Solutions, LLC	Tulsa	Oklahoma
Virtual Technology Services, LLC	Midwest City	Oklahoma
Vision Composites Inc	Marietta	Georgia
Volumatic	Macon	Georgia
Walden's Machine Inc	Tulsa	Oklahoma
Walker & Sons Enterprises Inc	Newcastle	Oklahoma
Wall Colmonoy Corporation	Oklahoma City	Oklahoma
Wayne Burt Machine	Grove	Oklahoma
Werco Manufacturing	Broken Arrow	Oklahoma
Western Industries	Oklahoma City	Oklahoma
Western Plastics	Oklahoma City	Oklahoma
Westland Technologies, Inc.	Modesto	California
WestOak Industries Inc	Erick	Oklahoma
Wilco Custom Machining	Drumright	Oklahoma
Wildcat Machine Inc.	Kellyville	Oklahoma
Williamson Machine Co	Broken Arrow	Oklahoma
WIN-TECH INC	Kennesaw	Georgia

Witten Company  
World Manufacturing, LLC  
World MFG LLC  
Wulco Inc  
Wyandotte Precision Products  
Yates Precision Machining, LLC

Owasso  
Mannford  
Mannford  
Cincinnati  
Webb City  
Mooresville

Oklahoma  
Oklahoma  
Oklahoma  
Ohio  
Missouri  
North Carolina