

## CHI OFFERS:

- A broad range of technical support services experience in:
  - Engineering/ Technical Services
  - Building/Equipment Maintenance/Repair
  - Electrical/Electronic
     Systems O&M
  - Environmental and Laboratory Services
  - Fire/Rescue and Security Services
  - Management and Administration Services
  - Medical Services
  - Recreation/Food Services
  - Supply/Logistic Services
  - Transportation Services/Vehicle Maintenance
  - Utilities O&M
  - Airfield Operations
  - Property/Asset Management Services
  - Work Management System/Services
  - Finance/Accounting/ Procurement
  - Computer System Services/Information Management

## TECHNICAL SUPPORT SERVICES EXPERIENCE

Call Henry, Inc. (CHI) management and technical team has over 40 years of continuous experience in the commercial, aerospace, and government technical and support service fields related to:

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- Government Installation Operation and Maintenance
- Manufacturing Processes
- Product Testing
- Missile Launching
- Research and Development
- Business Development
- Management and Technical Consulting

CHI's key personnel management and technical team has worked together ranging from 15 to 40 years. It is a key management and engineering team designed with the strategic mix of functional capabilities and experience necessary for the successful startup and operation of large and diverse organizations. A team that has proven itself over and over on many and varying assignments and contracts. A team that you can trust to do what they say they will do.

CHI's technical service ability is demonstrated in our manager's past involvement in starting from scratch four different successful technical service companies including CHI:

**Boeing Services International** – Boeing, a company that became the largest and most successful government technical and O&M services company in the world, where most of CHI personnel were key managers in starting up the company and the operations and management of the service contracts that were acquired. We employed over 10,000 employees worldwide.



- Saudi Services Operation Company Ltd (SSOC) a company that grew from \$0 sales to over \$110M in 2 years, with a backlog of over \$400M. SSOC's technical support services company was under the leadership of Mr. Foster, CHI's President, as the Managing Director (President) and his present CHI key personnel team. We employed over 3,000 employees.
- United Airlines O&M Services Mr. Foster, as the O&M Service Division Director with full profit and loss responsibilities, and his current CHI team built United's Government O&M Technical Services Division which grew from \$0 sales to over \$80M per year in 2 years with over \$400M in backlog of technical support service work. Our team employed over 2,500 personnel on three major Government contracts.
- Call Henry, Inc. (CHI) In 1990 Henry Foster and his team of key technical support services managers (who had successfully worked together over the past 30 plus years for the companies noted above, performing a wide range of Government services contracts for various DOD and NASA customers), formed Call Henry, Inc. (CHI). The first six years of CHI's history was dedicated to providing technical and management consulting services to aerospace company's. In 1997 CHI redirected its efforts to successfully bidding and performing Government technical support services contracts on its own behalf. Each of CHI awarded contract is summarized in the following pages.

The major contracts/programs that the CHI managers and technical personnel have managed and successfully accomplished over the past 40 years include some of the largest and most diversified contracts in the technical support services arena, as illustrated in figure 1. Figure 2 provides customer references of our past performance.

In achieving the above, CHI key managers have been responsible for phasing in and establishing operating services organizations in support of 30 technical operations (contract) around the world.

- United States
- Spain
- Greece
- Turkey
- Saudi Arabia
- Philippines

In addition, CHI key managers, in support of their past contract/program operational and management responsibilities, have developed four very large operations and management automated systems for the companies we have worked for:

 Maintenance Management System (MMS) – supported manufacturing and technical support services. – *Boeing*

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						Т	ypi	cal	SO	wı	Req	luir	em	ent	s				
Call Henry, Inc.'s Managers' Experience Managing Technical Contracts/Programs	5		ring/Tech. Services	quip. Maint/Rpr	omm./ O&M	oratory Services	cue & Security Svcs	Admin. Svcs	Services	od Services	ogistics Services	vcs./Veh. Maint.	D&M	Dperations	/Asset Mgmt. Svcs	jmt. System Svcs	ccounting/Procur.	ys. Svcs./Info. Mgmt.	ance Rating
CONTRACTS/	Scope	Contract	leer	%Ec	r./O	Lab	Ses	t. &	g	/Fo	ly/L	Ś	es (	D PI	erty	Mg	٩.	s. S	E
PROGRAMS	(Square Feet)	Value	Engir	Bldgs	Elect	Env./I	Fire/F	Mgm	Medi	Recr.	Supp	Trans	Utiliti	Airfie	Prope	Work	Finar	Comp	Perfo
Civil Engineering and O&M Services	1 M	\$85 M	x	x	x	x	x	X			X		x		x	x	x	X	G
Mission Support/Utilities O&M	5 M	\$10 M	×		×								×			x	X		G
Basewide Janitorial Services	3.5 M	\$12 M						X											G
Lest Operation and Inst. Services, NASA/PB	2.0 M	\$70 M	X	X	X	×	x	X			x	x	x		x	X	X	x	E
Institutional Facilities Operations, Repair & Maintenance (IFORM), NASA/GRC	0.3 M 2.0 M	\$2.2 M \$50 M	x	× ×	x x	×		x x			x	×	×		x	x x	x x	×	E
Engineer, Mod., Repair, & Logistic Support for (SF) Equip. Special Forces (SF) Command, Tampa, FL	N/A	\$1.3 M	x	x	x	x	x	X	x	x	x	X	x	x	X	x	X	×	Е
Base-Wide Custodial Services, NASA/GRC	2.0 M	\$5 M		x				х								х	х		E/S
Provide a Wide-Range of Technical Services, Relly AFB	VAR	NTE \$475 M	×	×	×			X										×	IP
Base Operational Services, NASA, Kennedy Space Center, FL Subcontractor to EG&G	VAR	\$1.5 M	x	×	×	×	x	x	x	x	x	x	x	x	x	x	x	×	Е
Logistic/Personnel Support Services, Air Force Logistic Group, Riyadh, Saudi Arabia	0.6 M	\$65 M	x	×	×		×	×		x	X	×	×		X	×	X		Е
Maint./Support Services, Onizuka AF Base, CA	N/A	\$0.6 M	x	x	x			x			х		x		х	х	х	x	Е
Base Operational Support Services, Navy Pacific Missile Range, Barking Sands, Kauai, Hawaii	N/A	\$0.9 M	×	×	×		×	x		x	×	x	×	×	×	×	×	×	S
Maintenance, Construction, and Support Services, NASA Ames Research Center, CA	1.5 M	\$100 M	x	×	×			×			x		x		X	x	X	×	Е
Ground Support Operational Services, NASA Kennedy Space Center, FL	6.2 M	\$650 M	×	×	×	×	x	X	x		X	X	x	x	X	×	X	×	E
Installation Support Services, NASA, KSC, FL	7.5 M	\$750 M	x	x	x	x	x	X	x	x	X	X	x	x	x	x	x	X	Е
Manufacturing Equipment Maintenance, NASA Michoud Assembly Facility, New Orleans, LA	1.5 M	\$30 M		×	×			X			x		×		X	×	X		E
Base Maintenance and Management Services, NASA MSFC Huntsville, AL	3.5 M	\$220 M	x	×	×	×		×			x	×	×		x	x	x	×	E
Installation and Support Services, NASA Michoud Assembly Facility, New Orleans, LA	3.0 M	\$130 M	×	×	×	×	×	×	×	x	X	×	×		X	x	X	×	E
Saturn Design, Manufacturing and Test, NASA Michoud Assembly Facility, MSFC, NSTL, KSC	2.5 M	\$2,000 M	x	×	×	×		×			x	×	×		x	x	x	×	E
Static Firing Stand Maintenance Services NASA Stennis Space Center, Bay St. Louis, MS	0.5 M	\$36 M	×	×	×			×			x	x	×		x	x	x		E
Base Operation, Maintenance, and Support Services, Army, Ft. Irwin, CA	1.5 M	\$300 M	x	×	×	×	×	×		x	x	×	×	x	X	x	X	×	E
Base Operation, Maint., and Support Services, Navy, Trident Submarine Base, Bangor, WA	5.7 M	\$255 M	×	×	×	×	×	×		x	x	x	×		x	x	x	×	S
Base Operation, Maint., and Support Services, Navy, Trident Submarine Base, Kings Bay, GA	5.0 M	\$235 M	×	×	×	×	×	×			X	×	×		X	x	X	×	S
Facilities Maintenance and Support Services, Navy Research Center, China Lake, CA	4.8 M	\$90 M		×		×	×	×			X	×	×		X	x	X	×	S
Base Maintenance Services, Air Force Services, Throughout the Country of Turkey	7.0 M	\$340 M	x	×	×	×	×	×		x	x	×	×	x	X	×	X	×	S
Base Maintenance Services, Air Force Services, Throughout the Country of Spain	2.5 M	\$135 M	×	×	x	×	×	X		x	x	X	x	×	X	x	X	×	E
In Country Support to AWACS Airplane Operation, Air Force, Riyadh, Saudi Arabia	0.5 M	\$800 M	x	×	×			×	×	x	X	×	×	x	X	x	X	×	S
Strategic Petroleum Reserve O&M and Support Services, DOE, New Orleans, LA	1.0 M	\$1,000 M	x	×	×	×	x	x			x	×	×		x	x	x	×	E
Research and Facilities O&M, DOE, Bruceton, PA	0.5 M	\$75 M	×		x	x		x							х	х	х	×	E
Facilities Operation, Maintenance, and Support Services Bureau of Mines, Bruceton, PA	1.2 M	\$105 M	×	×	×		×	×			X	×	×		×	×	×	×	E
Test Center Operations, Maintenance, and Support Services, DoT, Pueblo, CO	1.3 M	\$120 M	×	×	×	×	×	×	×	×	×	×	×		×	×	×	X	E
Base Maint., Operation, and Support Services, Saudi Royal Air Force, Dhahran, Saudi Arabia	11.0 M	\$750 M	×	×	×	×	×	×	×	x	×	×	×	×	×	×	×	×	E
. = Excellent S = Superior IP = In Progress G = Good																			

Figure 1: LIST OF CALL HENRY, INC.'s KEY MANAGER's RELATED EXPERIENCE



Contract Number	Program Title/ Contracting Agency	Contractual Person, Address, and Telephone Number	Technical Personnel Address, and Telephone No.	Contr. Type	Contr. Period	Place(s) of Perfor- mance	Method of Acquisition	Perfor- mance
FA 2550- 02-C-0005	Civil Engineering/ Base Services	Ed Garcia, Contracting Officer (408) 752-3608	Vinne Gate (408) 752-3608	CP/FF	2002 – 2009	Onizuka Air Station, Sunnyvale, CA	Competitive Bid	IP
NAS- 901057	Center Operations Support Services	Mike Dallas (281) 483-8367	Terry Oswald (281) 483-3875	СР	2002 – 2008	NASA Johnson Space Center	Competitive Bid	IP
AC10627N/ DE-AC09- 96SR18500	Base Wide Janitorial Services	Diane Still (803) 952-6173	N/A	FP	2002 – 2005	DOE's Savanna River Site	Competitive Bid	IP
NAS3- 00123	Test Operation Inst. Services Plums Brook Test Fac., NASA-GRC	James Askew, 110 Boggs Lane Suite 325 Cincinnati, OH 45246, (513) 772- 4447, ext. 18	James Askew, Plum Brook Station, 6100 Columbus Ave. Sandusky, OH, 44870, (419) 621-3385	CPFF	2000 – 2009	NASA Plumbrook Test Facility, Sandusky, OK	Competitive Bid	IP
NAS 300100/ NAS 301196	Electrical/Mechanical System Modifications, NASA - Glenn Research Center (GRC)	Angel Pagan, 21000 Brook Park Rd. Cleveland, OH 44135 (216) 433-2791	Joseph Saggio, Technical Manager, 216-433-3455	FP	2000 – 2001	NASA GRC, Cleveland, OH	Competitive Bid	
NAS3- 98030	Institutional Facilities Operations, Repair & Maintenance (IFORM), NASA-GRC	Mark Manthey, 21000 Brookpark Road, Cleveland, OH 44135	Philip Kall, NASA Tech. Repr., 21000 Brookpark Road, Cleveland, OH (216) 433-3138	Fix Price/ IDIQ	1998 – 2002	NASA Lewis Research Center, Cleveland, OH	Competitive Bid	E
Purchase Order	Eng., Mod., Repair, & Logistic Support for (SF) Eqp. Spec. For. (SF) Command, Tampa, FL	Dave Merriam, Raytheon–E Syst., Dir. Of Business, (606) 293-3777	E. Gloviak, Raytheon–E Syst., Project Director (606) 293-3777	Time/ Mat.	1995 – 1997	Special Ops Forces Sup. Activity, Lexington, KY	Past Record Experience	S
NAS3- 98111	Base-Wide Custodial Services	Jean Rogers, 21000 Brookpark Road, Cleveland, OH 44135	Patrica C. Fordosi NASA Tech. Rep, 21000 Brookpark Road, Cleveland, OH (216) 433-6759	IDIQ	1998 – 2000	NASA Lewis Research Center, Cleveland, OH	Competitive Bid	E
F81608- 97-D-0102	Provide a Wide-Range of Technical Services	Mitch Mitchell, 143 Bill Mitchell Blvd., Bldg 43, Ste 1, Kelly AFB, TX (210) 425-9248		IQ	1977 - 2002	Kelly AFB, TX and McClellan AFB, CA	Competitive Bid	IP
Purchase Order	Base Operational Services, NASA, KSC, FL Subcont. to EG&G	J. Dubay, 498 Indian Creek Dr., Cocoa Beach, FL (407) 784-2005	J. Dubay, 498 Indian Creek Dr., Cocoa Beach, FL (407) 784-2005	Fix Price/ Time/ Mat.	1991 – 1994	NASA – KSC Florida	Past Record Experience	E
F33600- 93-C-0059	Logistic/Personnel Support Services, Air Force Logistic Group, Riyadh, Saudi Arabia	J. Parker 011-01-492-6632	J. Parker 011-01- 492-6632	CPFF	1993 – Present	Riyadh, Saudi Arabia	Competitive Bid	S
F04689- 96-C-0001	Maint./Support Services, Onizuka AF Base, CA	David Williams, E- Syst., Bluegrass Station, Bldg. #3, Lexington, KY 40511, (606) 293-4253	David Williams (606) 293-4253	FFP/ Time/ Mat	1996 – Present	Onizuka Air Station and Moffett Field California	Past Record Experience	E
N62742- 92-D-0509	Base Operational Support Services, Navy Pacific Missile Range, Barking Sands, Kauai, Hawaii	J. Smith, Baker Sup. Serv., 2511 Deepsea Dr., Freeport, TX 77541, (800) 259-9652	M. Mullen, Baker Sup. Serv PMRF, Bldg. 291 PMRF, Kekaha, HI (808) 335-4353	FFP/ Time/ Mat	1993 – Present	Barking Sands PMRF, Kauai, HI	Past Record Experience	S

Figure 2: CALL HENRY, INC.'s MANAGERS CONTRACT/PROGRAM EXPERIENCE (sheet 1 of 3)



Contract Number	Program Title/ Contracting Agency	Contractual Person, Address, and Telephone Number	Technical Personnel Address, and Telephone No.	Contr. Type	Contr. Period	Place(s) of Perfor- mance	Method of Acquisition	Perfor- mance
NAS 2- 13421	Maintenance, Construction, and Support Services, NASA Ames Research Center, CA	Carolyn LaFollette, ARC, M/S 241-1, Moffett Field, CA 94035-1000 (415) 604-5772	Philip Facciola, ARC, M/S 19-11, Moffett Field, CA 94035-1000 (415) 604-1122	CPAF/ LOE	1990 – 1997	NASA – Ames Research Center, CA	Competitive Bid	E
NAS10- 9200	Ground Support Operational Services, NASA KSC, FL	R. L. Robold (407) 867-7207	J. H. Williams (407) 867-4201	CPAF	1978 – 1983	NASA – KSC Florida	Competitive Bid	S
NAS10- 7444	Installation Support Services, NASA, KSC, FL	A. F. King (407) 867-7207	W. M. Lohse (407) 867-7210	CPAF	1971 – 1978	NASA – KSC Florida	Competitive Bid	S
Not Known	Manufacturing Equipment Maintenance, NASA Michoud Assembly Facility, New Orleans, LA	Randy Tassin (504) 257-3817	Randy Tassin (504) 257-3817	CPFF	1973 – 1986	NASA Michoud Assembly Fac., No. LA	Competitive Bid	E
Not Known	Base Maintenance and Management Services, NASA MSFC Huntsville, AL	(Not Known)	(Not Known)	CPAF	1987 – 1997	NASA MSFC Huntsville, AL	Competitive Bid	S
NAS 8- 31304	Installation and Support Services, NASA Michoud Assembly Facility, New Orleans, LA	B. Aldridge (504) 255-3443	Paul Lagarde, R. Littlefield, J. Dennis (504) 255-3443	CPAF/ CPFF	1973 – 1978	NASA Michoud Assem. Fac., No. LA	Competitive Bid	S
NAS 8- 5808	Saturn Design, Manufacturing and Test, NASA Michoud Assembly Facility, MSFC, NSTL, KSC	B. Aldridge (504) 255-3443	Paul Lagarde, R. Littlefield, J. Dennis (504) 255-3443	CPAF	1962 – 1973	NASA Michoud Assembly Facility, No. LA	Competitive Bid	Ш
NAS 8- 5808	Static Firing Stand Maintenance Services NASA Stennis Space Center, Bay St. Louis, MS	B. Goodrich (Not Known)	B. Mix/J. Roger (601) 688-2004	CPFF	1964 – 1968	NASA Stennis Space Center/Bay St. Louis MS	Contract Add.	Е
DAKF04- 81-C- 0006	Base Operation, Maintenance, and Support Services, Army, Ft. Irwin, CA	Marcia Cruz, AFCJ- DC, P.O. Box 10039, Ft. Irwin CA 92310-0039 (760) 380-3888	Marcia Cruz, P.O. Box 10039, Ft. Irwin CA 92310-0039 (760) 380-3888	CPFF	1981 – 1985	Fort Irwin, CA	Competitive Bid	E
N62474- 86-1400	Base Operation, Maint., and Support Services, Navy, Trident Submarine Base, Bangor, WA	Tom Sabbadini (415) 254-3002	T. Clauson (206) 396-4450	FFP	1987 – 1992	Bangor Submarine Base, Bangor, WA	Competitive Bid	G/E
N62467- 86-0095	Base Operation, Maint., and Support Services, Navy, Trident Submarine Base, Kings Bay, GA	Minter Garvin, Contracting Officer, Kings Bay, GA, (912) 573-4609	Minter Garvin, Contracting Officer, Kings Bay, GA, (912) 573-4609	FFP	1987 – 1992	Navy Trident Submarine Base, Kings Bay, GA	Competitive Bid	E
N62474- 86-4527	Facilities Maintenance and Support Services, Navy Research Center, China Lake, CA	Carl Kelly, Public Works Officer, NWC, China Lake, CA – Tom Sabbadini (415) 254-3002	Bart Parker, Contracts Officer, Naval Weapons Center, China Lake, CA	FFP	1987 – 1992	Naval Weapons Center, China Lake, CA	Competitive Bid	G/E
F01355- 77-70013	Base Maintenance Services, Air Force Services, Throughout the Country of Turkey	G. Hillman, Address/Phone Unknown	Maj. Gen. W. C. Moore, Address/ Phone Unknown HQ TUSLOG	FPAF	1973 – 1984	Turkey, Numerous Locations	Competitive Bid	E

## Figure 2: CALL HENRY, INC.'s MANAGERS CONTRACT/PROGRAM EXPERIENCE (sheet 2 of 3)



Contract Number	Program Title/ Contracting Agency	Contractual Person, Address, and Telephone Number	Technical Personnel Address, and Telephone No.	Contr. Type	Contr. Period	Place(s) of Perfor- mance	Method of Acquisition	Perfor- mance	
F61817- 83- C00024	Base Maintenance Services, Air Force Services, Throughout the Country of Spain	H. G. Campbell, Address/Phone Unknown	Col. H. N. Wills, Address/Phone Unknown	FP	1973 – 1984	Spain, Numerous Locations	Competitive Bid	S	
Not Known	In Country Support to AWACS Airplane Operation, Air Force, Riyadh, Saudi Arabia	Information No Longer Available	Information No Longer Available	CPAF	1987 – 1990	Riyadh, Saudi Arabia	Competitive Bid	E	
DE- AC96- 85PO214 31	Strategic Petroleum Reserve O&M and Support Services, DOE, New Orleans, LA	Charles Bellam, DOE, Bryan Mound Site, Freeport, TX, (409) 233-0257	C. Bellam, DOE Site Eng., Bryan Mound Site, Freeport, TX, (409) 233-0257	CPAF	1983 – 1993	DOE Petr. Reserve Site, Bryan Mound, TX	Competitive Bid	S	
J0333956	Research and Facilities O&M, DOE, Bruceton, PA		Dr. P. Yavorsky, (412) 258-7048	CPAF	1980 – 1985	Bruceton, PA	Competitive Bid	E	
S0308050	Facilities Operation, Maintenance, and Support Services Bureau of Mines, Bruceton, PA	Joseph Gilcrest, NISH, P.O. Box 1020, Pittsburgh, PA 15236-0700B, (412) 892-6428	R. Poling (Retired), C.O. M. L. Nowicki, NIAS, P.O. Box 1020, Pittsburgh, PA 15236 (412) 892-6427	CPAF	1978 – 1983	Bruceton, PA	Competitive Bid	E	
DTFR-62- 80-C- 20015	Test Center Operations, Maintenance, and Support Services, DoT, Pueblo, CO	Joseph Kerner, (202) 755-1367	(Not Known)	CPAF	1980 – 1982	Pueblo, CO	Competitive Bid	E	
N/A	Base Maint., Operation, and Support Services, Saudi Royal Air Force, Dhahran, Saudi Arabia	Maj. Amir Bin Abduilah Slaiham, 966-3-891-0882	Maj. Amir Bin Abduilah Slaiham, 966-3-891-0882	Fixed Price	1982 – 1997	Dhahran, Saudi Arabia	Competitive Bid	E	
Note: • C	ote: • CHI corporate experience indicated by the bolded contract number E = Excellent G = Good								

• Other contract experience is attributed to CHI's key corporate managers.

#### S = Superior IP = In Progress

#### Figure 2: CALL HENRY, INC.'s MANAGERS CONTRACT/PROGRAM EXPERIENCE (sheet 3 of 3)

- Base Operation Support System (BOSS) supported military installation technical services. - Boeing
- Advanced Facilities Support System (AFOSS) supported military installation technical services. - United Airlines Services
- CHI recently completed a comprehensive enterprise wide automated system that supports 23 business processes that can support a wide range of customers and industries. This system is marketed to other companies and government operations as well as used to support CHI's contractual requirements. CHI's system, which we call Capella, provides total integrated management and operations capabilities consisting of: (1) Financial Control, (2) Human Resources, (3) Contract/Subcontract Management, (4) Property Management, (5) Customer Service, (6) Program Visibility and Management, (7) Engineering, (8) Production/Maintenance Planning and Estimating, (9) Production/ Maintenance Scheduling, (10) Work Center Support, (11) Material Management, (12) Purchasing, (13) Warehouse Operations, (14) Vehicle/Equipment Operations and



Maintenance, (15) Quality Control, (16) Safety, (17) Environmental, (18) Timekeeping, (19) Job Cost Accounting, (20) Performance Measurement, (21) Customer and (22) Project Management and (23) Accounting Interface/Incorporation.

In the following paragraphs we discuss CHI's corporate and its key corporate managers experience while working for the four organizations noted above as it relates to each contract/program listed on figure 1, as well as the functional requirements, services performed, and challenges overcome on each contract/program. We also note the customers performance rating achieved.

CALL HENRY, Inc. ®

## Call Henry, Inc. (CHI) EXPERIENCE ON CONTRACTS/PROGRAMS WORLDWIDE

# LAUNCH OPERATIONS SUPPORT, 30<sup>th</sup> SPACE WING, VANDENBERG AFB, CALIFORNIA

Call Henry, Inc. (CHI) on a cost plus award fee contract bases provides mission infrastructure support for the Launch and Test Range System (LTRS), Western Range operations, which is designated as a Major Range and Test Facility Base (MRTFB). The goal is to ensure the high performance confidence levels required for Range support of equipment and facilities is maintained for a variety of ballistic missile, space, guided weapon, and aircraft test and evaluation missions in support of Air Force, Navy, Army, National Reconnaissance Office, Missile Defense Agency, Federal Aviation Administration, Department of Energy, Defense Advanced Research Projects, National Aeronautics & Space Administration, and a variety of commercial, allied nations, and governmental agencies. CHI provides maintenance, modification, and modernization for the aging facility, property, and Western Range support equipment to ensure successful performance during tests, operations, and launch. It is the role of CHI to have the experience, resources, and agility to support the 30<sup>th</sup> Space Wings key role in assuring access to space. CHI provides for a rapid, reliable, economical, and secure maintenance and operation service. Services that include periodic maintenance, operation, and repair of various infrastructure, and mandatory certification, maintenance, and operations of facility property and equipment (e.g. alarms, cranes &

CALL HENRY, INC.'S	Contract/Program				
MANAGERS' EXPERIENCE MANAGING TECHNICAL SERVICE CONTRACTS	Launch Operations Support, Vandenberg AFB,				
SOW Requirements	California				
Facilities Maintenance and Repair, RP, RFIE AGE and PE Properties Consist of:	×				
– Security Systems	x				
– Fire Protection System	x				
– Cranes and Hoist	x				
– <u>– – – – – – – – – –</u>	x				
– Generators	x				
– HVAC System	x				
– Electrical Systems HV/LV	x				
– Pressure Vessels	x				
– Structures/Buildings	x				
– Towers	x				
– Utilities, All Types	x				
– Corrosion Control Program	x				
– Reliability Center Maint. Program	n X				
Engineering	x				
Inspection, Testing, Certification	x				
Power Plant Operations	x				
Launch Support	x				
Customers Other Services	x				
Minor Facilities Alterations	x				
• Support	x				
– Coordination	x				
– Scheduling	x				
– <u>– Estimating</u>	x				
- CMMS Operation/Updating	x				
– <u> </u>	x				
– Energy Conservation	x				
– Environmental	x				
– Quality Control	x				
– Safety	x				
– Security					

#### CHI'S LAUNCH OPERATIONS SUPPORT SERVICES PERFORMED



hoists, elevators, generators, mechanical, pressure vessels, structural, towers, utilities) which support critical mission requirements. CHI provides a capability of shifting labor and schedules to meet Government launch requirements.

The scope of this contract applies to the Western Range launch, operation, and test facilities, Pillar Point, Anderson Peak, Hawaiian sites, Vandenberg Air Force Base (VAFB), and VAFB surrounding areas, and their infrastructure, property, and equipment.

### Following We Provide Further Detail of Our Responsibilities

CHI maintains and repairs all Real Property (RP), Real Property Installed Equipment (RPIE), Aerospace Ground Equipment (AGE), infrastructure, and equipment [Real Property & Equipment - hereafter "P&E"] that are part of the properties listed in the contract and identified in the Property/Equipment Responsibility List. Maintenance & Repair (M&R) are subject to all applicable regulations. The outcome of M&R is to maintain and repair the P&E within manufacturer's operating specifications and/or design/engineering specifications over the P&E design life [hereafter "Specifications"]. Design specifications, regulations imposed by agencies, and user requirements as with manufacturer's specifications are subject to change, and CHI is responsible to manage these changes to a level consistent with industrial uniform practices.

M&R includes maintenance, repair, replacement, engineering, inspecting, testing, and certifying as follows.

- **MAINTENANCE:** The work required to preserve P&E within specifications to include:
  - *Reliability Centered Maintenance Program:* CHI develops, implements, and maintains a Reliability Centered Maintenance (RCM) program to improve reliability of P&E.
  - *Corrosion Control:* CHI plans and implements an approved corrosion prevention and control program within Specifications, excluding the exterior sides of the RP buildings on VAFB being accomplished by Civil Engineer's protective coating contractor.
- **REPAIR:** CHI provides a 24/7 day capability to provide repair service to facilities and equipment on the range.
- **ENGINEERING:** CHI provides all engineering services in support of all work within the scope of this contract, to include ensuring work on P&E will maintain or return the P&E to within Specifications.
- INSPECTIONS/TESTING/CERTIFICATION: CHI inspects at least annually all P&E to determine their condition (within or without Specifications) and any utilization or user change. Inspection includes P&E on Oahu, Hawaii (i.e. Ewa, Kaena, Wheeler) and cranes & hoists maintained by others in facilities listed in the contract.



- CHI performs periodic inspections and functional validations, testing, and certification of cranes & hoists according to all applicable ANSI Standards, EWR 127-1 Chapters 3, 5, & 6, AFOSH 91-46, AFOSH 91-501, CFR 29 1910 and 1926, State of California General Industry Safety Orders for Cranes & Hoists, and National Fire Protection Association Standard 70.
- CHI performs Non-Destructive Inspection (NDI) on P&E requiring NDI by a Level II Inspector or above, qualified and certified according to the American Society of Non-Destructive Testing.
- CHI inspects and tests pressure vessels and boilers with certified inspectors per ASNT-TC1A, ANSI/NB-23, and ASME Boiler & Pressure Vessel Code.
- CHI performs, where required by any regulation, certification of active P&E. The Contractor shall post re-certification on the unit prior to expiration of the previous certificate.
- OPERATIONS: CHI operations includes the activating, monitoring, configuring, or standing by on-site to run equipment such that Operation Directive/user requirements, processing and launching operations, and technical and operational support for operating equipment are met to include south power plant.
  - Operation support can start and stop at any time of the day or year, 24 hours a day, 7 days a week. Operations can last from a few hours to many weeks with long dry periods between support. Support is subject to the number of launches in a fiscal year and when operations begin and end. The estimated operation hours for each pre to post-launch periods will vary each year.
  - *Operation support is required:* during all SLC-3 and SLC-4 launch periods, during Civil Engineer DCC and 30 SW Command Post response to natural disasters or exercises, and as required by the Program Manager or Designated Government Representative.
- LAUNCH SUPPORT: CHI reports on-site to provide operations, emergency corrective actions, and or standby support during pre-launch, launch, and post-launch operations.
  - CHI supports VAFB launches for; 1) building 8510 generators and Heating, Ventilation, & Air Condition (HVAC) in support of launches controlled from this building to include 100KW generator (i.e. Government or rental) installation into building 8510 electrical system to support communication system loads during power outages at building 8510 lasting for more than one hour, 2) generators and HVAC at one or more Communication Transmitter sites, 3) Attachment 1A1 P&E responsible-for at SLC-3 & 4 in support of launches from SLC-3 & 4, 4) building 780 Pump House in support of SLC-3 launches, 5) Attachment 1A1 P&E responsible-for at building 7000 and or 7025, 6) standby support in the Civil Engineer Disaster Control Center (DCC) in order to be sent out to perform emergency corrective action for various facilities, property, and equipment, and 7) SVPP.



- OTHER SERVICES: CHI performs the following Other Services deemed necessary to support the contract upon receipt of a Task Assignment. These Other Services do not include services CHI provides as "support for others" in order to meet M&R, Operations, and Support contract performance requirements.
  - CHI performs corrosion control services upon receipt of a Task Assignment according to applicable health, environmental, safety standards, The Society for Protective Coatings (SSPC), National Association of Corrosion Engineers (NACE), and The American Society of Testing and Materials standards. The corrosion control effort includes: application of protective coating on ferrous and non-ferrous P&E; the washing-down of Mobile Service Tower and Umbilical Tower, replacement and or repair of the ablative coating, blast and heat resistant coating on launch transporters, flame buckets, and auxiliary equipment after each launch. The Contractor shall obtain Program Manager and customer prior approval on the type of ablative coating used.
- FACILITY ALTERATION: CHI performs minor alteration including upgrade, demolition, and renovation to facilities in support of mission requirements when required by the Government upon receipt of a Task Assignment or Contract Work Request.
- SUPPORT: CHI provides management and administrative resources to ensure that all planning, scheduling, and execution of the tasks identified in this SOW are accomplished and are within the expected performance thresholds identified in the Service Delivery Summary.
  - *Coordinating:* CHI schedules all work with the customer (i.e. Facility Manager, occupants, organizational Facility Manager) and affected parties (e.g. Civil Engineer, Environmental, Safety, Fire, Security Force, utility companies, contractors) to ensure coordination is obtained prior to start of work.
  - *Estimating:* CHI provides estimated cost and schedule for Task Assignments, Contract Work Requests, damaged P&E, and P&E utilization change.
  - *Inputting/Updating:* CHI inputs all contract work effort and documentation data into its CCMS. The CCMS collects, tracks, schedules resources, and processes all work requirements and data. The Contractor shall input and update only RP and RPIE work effort information into the Civil Engineer's IWIMS, or its latest version, directly and through the Civil Engineer Production Management Unit (PMU) for VAFB assigned installations.
  - *Maintaining:* CHI maintains and continuously updates the as-built drawings, central data library, manuals, procedures, listings, records, warranties, and CCMS as it fulfills its tasks under this contract.
  - *Customer Service Desk:* 1) CHI receives, processes, schedules, inputs, tracks, and provides real time status on all work requirements and operations; 2) support for others; 3) Program Management Reviews (PMRs); and 4) regularly scheduled

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status meetings to resolve any potential concerns on projects. The service desk functions during VAFB day-shift duty hours and will receive and respond to emergency requests, 24 hours a day, 7 days a week.

- ENERGY CONSERVATION: CHI develops and maintains an overall program for the energy management of Government facilities the Contractor is assigned and occupies under this contract. The Contractor shall develop and maintain a program to use energy efficient replacement parts or units on Government facilities under the Contractor's responsibility.
- ENVIRONMENTAL: CHI ensures that all work comply, with all applicable and latest Federal, State, county, and local environmental laws and regulations including: general and specific permit conditions; AFIs, policies, guidelines, compliance documents, management plans, and similar compliance documents.
- QUALITY SYSTEM: CHI maintains a Quality Management System that complies with ISO 9001:2000 techniques/methodology or equivalent. There is no requirement for registration.
- SAFETY: CHI complies with all applicable Federal and State laws, regulations, management plans, and requirements regarding occupational safety and health. CHI also conforms to Range Safety requirements as tailored. In the event safety laws, regulations, or requirements change during the term of this contract.
- SECURITY: CHI complies with all applicable Federal, State, and local laws, regulations, codes, directives, and local requirements regarding security and as outlined in DD Form 254.

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## CIVIL ENGINEERING SUPPORT, WRIGHT-PATTERSON AIR FORCE BASE, OH

Call Henry, Inc. (CHI) provides level of effort support on a time and material contract basis to 11 major research and development complexes. Each with different research and development focus. The 11 complex comprise of over 3 million square feet of space. The service provided generally can be classified as facilities operations and maintenance and quick turn-around construction/alteration services plus administrative support to some of the most advanced research equipment and facilities in the world. Summary of the support and service provided to each of the laboratory complexes are as follows:

- Preventive Maintenance
- HVAC Operations and Maintenance
- Water Treatment Operations and Maintenance
- Electric Systems Operations and Maintenance
- Steam and Hot Water Operations and Maintenance
- Shop Services
- Painting Services
- Carpenter Services
- Structure Services

In support of the maintenance program CHI develops, maintains and schedules preventive maintenance instructions required to support the thousands of pieces of equipment located in the 11 laboratory complexes. CHI schedules and executes over 70,000 PM actions per year through dedicated crews.

 Corrective Maintenance Services: CHI manages a 24/7 day per week Trouble Call Center to respond to corrective maintenance actions in support of each of the 11 laboratory complexes. We plan, schedule and execute over 10,000 trouble calls per year.

CALL HENRY, INC.'S	Contract/Program			
MANAGERS' EXPERIENCE MANAGING TECHNICAL SERVICE CONTRACTS	Civil Engineering Support			
SOW Requirements	WPAFB, OH			
Preventive Maintenance Services	×			
– — — — — — — — — — — — — — — — — — — —	x			
– Water Treatment O&M	x			
<ul> <li>Electric Systems O&amp;M</li> </ul>	×			
- Steam/Hot Water Systems O&M	x			
<ul> <li>Shop Services (Sheet Metal/ Welding)</li> </ul>	x			
- Painting Services	X			
– Carpenter Services	X			
– Structure Services	×			
<ul> <li>Building Security/Utility Systems</li> <li>O&amp;M</li> </ul>	×			
Corrective Maintenance to Above     Systems	×			
Construction Services	×			
Related Contract Support	×			

#### CHI'S CIVIL ENGINEERING AND FACILITIES O&M TECHNICAL SERVICES PERFORMED



### • Construction Services:

CHI plans, estimates, schedules and executes over 2-5 million of construction/alteration work in support of the laboratory complexes. These activities are performed with-in house and some subcontractor support. These services require the service of professional engineers.

- Related Contract Support Included
  - Quality Control Program
  - Conservation of Utilities
  - Contract Record Management and Reporting (DRL)
  - Supply Support
  - Procurement
  - Environmental Program
    - Environmental Coordinator
    - Permits Management
    - Solid Waste, Refuse and Recycling
    - Protection of Natural Water Resources
    - Refrigerant Recovery
    - Hazardous Material Management
    - Contaminated Soils
    - Asbestos
    - Spill Prevention and Response Plans
    - Lead Base Paints
    - Solid and Hazardous Waste Management
  - Physical Security
  - Key Control
  - Material Inventory

## FACILITIES MAINTENANCE AND SUPPORT SERVICES (FM&SS) EPA – RESEARCH TRIANGLE PARK, NC

Call Henry, Inc. (CHI) provides on a level of effort basis full maintenance, construction and support services in support of all EPA research facilities of over 1.5 million square feet at multilocations at the Research Triangle Park. These responsibilities include providing:

- Shop Facility and Central Supply Warehouse
  - CHI furnishes and operates a shop facility and a central supply activity at an off-site location for storage of supplies and equipment for the performance of this contract. Responsibility includes a computerized inventory control procedure to account for all supplies, materials, and equipment procured by the Contractor or furnished by the Government.
  - A complete and clean audit trail from procurement of materials through use are maintained by CHI.
- Facilities Support Services Responsibilities Include:
  - Alterations, Modifications and Repair of Buildings, Equipment, and Mechanical/Plumbing Systems (Construction)

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL SERVICE CONTRACTS	Contract/Program FM&SS, EPA Research Triangle Park,
SOW Requirements	NC
Shop Facility & Supply Operations	×
Facilities Support Services	X
Construction	x
Work Planning, Estimating and Scheduling	x
Engineering/As Build	x
• Shop Service	x
Preventive/Predictive Maintenance	x
Electrical Systems O&M	x
Electronic Security Systems O&M	x
• Fire Extinguishers - M	x
• Fire Alarm/Sprinkler System	x
Building Control System	x
Closed Circuit O&M Television Security System	x
Food Service Equipment	x
Elevator Maintenance	x
Locksmith Services	x
• Sign Services	×
Environmental Compliance	×
Snow Removal Services	x
Road Ways, Parking Lot, etc.	x
Shuttle Services	×

#### CHI'S FACILITIES MAINTENANCE AND SUPPORT SERVICES PERFORMED

- The work ranges from very minor to large, complex alterations and modifications. Examples of minor jobs are: repair room light switches, door closures, and electrical outlets, unstop drains, rest room fixture repairs, install telephone outlets, pour concrete pads for gas cylinders, etc. Major jobs may range from relocating wall partitions and equipment and modifying laboratories to the installation of complete laboratories or transformation of offices to laboratories or laboratories to offices.
- Planning, Estimating and Scheduling of Work Orders



- CHI plans, estimates and schedules each Work Order reviewed from the PO, and issued by the CO before any work is performed. The requirement includes complex electrical, mechanical and structural work. CHI prepares complete technical specifications and drawings for all work requests where needed.
- Utilizing an EPA provided network station, CHI utilizes AUTOCAD, ARCHIBUS, and FREDS (Facility Real Estate Data Base) EPA licensed software, provide drafting services in support of EPA facilities changes.
- Review of Proposed Changes to EPA RTP Facilities
  - CHI reviews EPA projects which involve extensive new work or modifications to existing electrical, mechanical, or structural services/designs within EPA RTP facilities. These review services include analysis of studies, reports, designs, and drawings of projects involving extensive electrical or mechanical work related to EPA facilities equipment. The types of projects may include: modifications and additions to the Computer Center UPS Systems, computer equipment electrical requirements, electrical/mechanical requirements of HVAC equipment, and electrical distribution center design/ modification and redesign of facility utility services.
- Shop Services: Carpenter, Machine, and Metal
  - CHI provides shop facilities and complete fabrication shop support services in the area of sheet metal work, carpentry, machine work welding of all types, plumbing, heating, painting, electrical, refrigeration, and equipment controls. The main purpose of the shop is to support the work that is being performed by CHI in the modification, alteration, and repair of facilities and equipment. The Contractor may also be required to fabricate small items of equipment.
- Preventive/Predictive Maintenance (PM) Inspections and Repairs
  - CHI administers the existing Data Stream MP-2 comprehensive PM program for EPA facilities and equipment. CHI implements a preventive/predictive maintenance program for EPA facilities and equipment.
  - CHI prepares PM repair orders for all equipment repairs that are not accomplished at the time of the PM inspection. All PM work is performed expeditiously.
  - CHI reviews PM equipment to determine when replacements are necessary due to any of the following reasons: high energy use, age, frequent PM repairs, obsolescence or any other reason that tends to make the equipment too costly to operate.
  - CHI maintains a suitable bench stock of parts and components for equipment on the PM program to insure quick reaction to emergencies and to insure that timely repairs are made to all the equipment on the program. The parts and supply inventory shall be predominately maintained in the Contractor's offsite facility.



- Procurement of all supplies and materials required to service and maintain the PM program equipment is the responsibility of CHI.
- Electrical Safety Inspections and Maintenance of Electrical Services/Panels and Substation Switchgear
  - CHI is responsible for ensuring the electrical safety of the facilities. CHI performs electrical safety inspections, maintenance and repair on a continual basis throughout the EPA facilities. During the inspections, CHI accomplishes minor repairs such as frayed wire and plug/receptacle replacements. A need for major repairs is accomplished as work orders are issued. All electrical work is done in accordance with the National Electrical Code.
- Electronic Security System Maintenance
  - CHI provides inspection, maintenance, and repair of the electronic intrusion alarm systems at various locations throughout the EPA facilities.
- Fire Extinguisher Inspections and Maintenance
  - CHI furnishes all labor, materials, services, supplies, and shall do all things necessary for and incident to: fire extinguisher inspection, recharging, repainting, and repair; and inspection and testing of dry chemical and CO2 fire suppression systems.
- Inspection, Maintenance, and Repair of Government-Owned Fire Alarm Systems and Sprinkler Systems
  - CHI schedules and perform three quarterly and one annual inspection on Government-owned fire alarm systems located at the EPA campus.
- Chapel Hill Building Management and Control System Maintenance
  - CHI is responsible for the maintenance and day to day operations of the Andover SX8000 Building Management and Control System for the EPA HSF at Chapel Hill, North Carolina.
  - The system incorporates DDC interfacing directly with sensors, actuators and environmental delivery systems (i.e., HVAC. Units, etc.). CHI maintains a PC Database Archive of the two latest software databases resident in the PC workstation to protect the EPA from catastrophic loss of memory and loss of local database archives.
- Building Automation System (BAS) Operation and Maintenance
  - CHI is responsible for the day-to-day operation of the Controls System Incorporated (CSI) BAS for the EPA main campus.
  - CHI provides calculations for operational changes to the system as required to provide maximum energy conservation for EPA facilities. CHI modifies BAS software as necessary to operate facility equipment and systems at an optimum level providing required occupant services economically and energy



conservatively. Utilizing BAS software, CHI compiles charts and graphs to project electrical consumption for current and future years to be submitted to the PO on a quarterly basis.

- CHI is responsible for adjustment to critical equipment set points and for creating and assigning alarm messages to the set points. CHI adds critical equipment monitoring/set points to the BAS as directed by the PO. The PO shall provide written directions for set point adjustment limits and alarm message text.
- Picture Perfect Rusco Card Access System Operation and Maintenance
  - CHI provides the necessary labor, parts, and equipment to maintain the Card Access Security System at the following EPA-RTP facilities:
    - @ Main Campus
    - @ Page Road Facility
    - ⓐ Chapel Hill Human Studies Facility
    - @ NHEERL Facility
  - Operation of Rusco Card Access System and Facility Trouble Desk
    - CHI staffs a Facility Trouble Desk to accept any type of facility problem telephone call from facility occupants. The Facility Trouble Desk hours are Monday through Friday, 7:00 a.m. - 4:30 p.m. hours, excluding official holidays.
- Closed Circuit Television Security Systems Maintenance
  - CHI provides the design, installation, and maintenance of CCTV equipment located at the EPA Campus Complex and Chapel Hill facilities; intrusion alarm system located in the Human Studies Facility; and for the Public Address/Intercom System located in the EPA Campus Complex facilities and Human Studies Facility.
- Food Service Equipment Maintenance
  - CHI provides maintenance and repair of all cafeteria food service equipment in the EPA Main Campus Facility. The type of equipment includes gas oven/ ranges, refrigeration/freezers, walk-in freezers, dishwashers, disposals, hood ventilation systems and fire extinguishing systems.
- Elevator Maintenance
  - CHI provides maintenance and repair of elevators in the EPA Main Campus Facilities and Chapel Hill facility. There are sixteen (16) traction elevators and two (2) electric wheel chair lifts in the EPA Main Campus Facility building, and four (4) hydraulic elevators in the High Bay and National Computer Center. There are three (3) traction elevators in the Chapel Hill facility.



- Locksmith Services
  - CHI provides the necessary labor, materials, and tools to perform locksmith services for locks located in the 109 Alexander Drive Main Campus and HSF. CHI also provides a computerized key control and issue system for all lockable space within 109 Alexander Drive EPA Main Campus Facilities and the Human Studies Facility in Chapel Hill.
- Sign Services
  - CHI provides signage/nameplates as requested in service calls or work orders issued in accordance with the established procedures.
- Environmental Compliance
  - The EPA Main Campus is identified as one of the "greenest" facilities to date. Everything possible has been undertaken during construction to manage waste, manage a recycling program for construction by-products, and the use of recycled materials during construction. Construction materials have been reviewed and tested to ascertain IAQ.
  - General Contract Requirements:
    - CHI defines the procedures required to insure purchased materials are low in VOC. This will form the basis for handling any construction and demolition wastes generated during this contract.
    - CHI maintains the facility HVAC system in accordance with ASHRAE
       62-1989 or the latest version for indoor air quality. CHI is responsible for all IAQ testing in order to test the levels of indoor air contaminants. A minimum of five (5) years experience in IAQ testing is required of CHI.
- Snow Removal Service
  - CHI removes snow and ice from main drives and parking lots of the following facilities:
    - @ Main Facility, National Computer Center, and Proposed FEELC
    - @ Parking Decks (North and South)
    - (a) Old Jenkins Road Mobile Lab and Storage Area
    - @ Chapel Hill Human Studies loading dock area
- Roadway, Surface Parking Lot, Parking Deck and Sidewalk/Walkway Maintenance
  - CHI maintains all EPA Campus roadways, surface parking lots, parking decks and sidewalk/walkway. The maintenance of these areas shall include any required re-striping of these areas to control vehicular traffic and minimal repairs/restoration to surrounding landscaped areas.



- CHI provides all necessary labor, equipment, and materials to provide for any repairs to the surfaces of roadways, parking lots, parking decks and sidewalk/ walkway. Repair considerations are, but not limited to, pot hole repair, replacement of concrete deck sections with stress cracks, replacement of drainage pipe, replacement of storm drain grating and graveling of temporary parking lots and storage areas. CHI utilizes environmentally friendly materials whenever possible in accomplishment of any repairs. We also use recycled aggregate whenever possible in accomplishing roadway repairs.
- Shuttle Service
  - CHI provide personnel to drive two 21-passenger buses or similar vehicles provided by the Government. CHI employees have a valid North Carolina driver license and a Commercial driver license for operating the passenger shuttle. The hours of the campus shuttle operation is Monday through Friday, excluding holidays, from 5:00 a.m. until 6:00 p.m. (operation of two shuttle vehicles is required from 7:00 a.m. until 9:00 a.m. and from 3: p.m. until 6:00 p.m.).

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## FACILITIES OPERATIONS, REPAIR, AND MAINTENANCE (FORM) NASA GLENN RESEARCH CENTER, OH, SITE WIDE SERVICES

CHI's provides, on a fixed-price with variation in quantity type contract with a workforce of over 100 personnel, a wide-range of facilities/equipment, preventive maintenance, predictive maintenance, repair, utilities operations, and major facilities/equipment installation services in support of NASA's on-going research projects/programs. Reference figure depicts the systems, equipment, and services CHI provides at GRC.

The FORM contract requires CHI to support some of the most advance research facilities and equipment in the world.

The FORM Contract is a 10 year contract, where CHI can earn continuous contract performance periods through award term provision of the contract by meeting specific performance objectives.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL SERVICE CONTRACTS SOW Requirements	Contract/Program Facilities Operations, Repair, and Maintenance - GRC, Cleveland, Ohio NASA-GRC			
Life Safety Systems	×			
Electrical Distribution Systems				
Communication Systems	x			
• Personnel and Mtl Handling System				
Surface Areas and Grounds	x			
Buildings and Structures	x			
Heating Plants O&M	x			
• HVAC & Energy Mgmt Control Sys.	x			
Utilities Distribution Systems	x			
Related Environmental Services	x			
Program Analysis & Control	x			
• Planning, Scheduling & Work Integ.	×			
IDIQ Services	×			
Performance Rating	Excellent to date			

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

The FORM Contract from a technical performance statement of work basis is the same/similar as to our prior IFORM Contract at GRC. It is simply a recompetition of the IFORM Contract, with a new name and some minor quantity changes to the Scope of Work.

For details of the type work we perform on the FORM Contract please refer to our IFORM contract description that follow in this section.

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## CHI PERFORMANCE ON THE LAAFB CIVIL ENGINEERING SERVICES CONTRACT

Los Angeles Air Force Base (LAAFB) Mission – Los Angeles Air Force Base is home to the Space and Missile Center (SMC). SMC is the Acquisition Center of Excellence for requiring space systems for Department of Defense and civilian agencies of the US Government as well as friendly foreign nations. The daytime work tome is comprised of approximately 3500 military and civilian business, scientific and technical professionals. The business conducted at SMC draws senior level visibility from civilian federal agencies, the Department of Defense, politicians from all levels of Government and aerospace industry executives. Approximately 2500 residents from all DoD services live in military family housing located in the San Pedro area. The LAAFB mission also includes providing appropriately trained military personnel to support Air Force deployments to foreign nations. Emergency operations at LAAFB are manned by a mix of military and civilian employees, as well as contractor personnel.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program USAF Los Angeles Air Force Base Technical Services
Maintenance Master Planning	×
Real Property Maintenance	x
Work Control System	x
Planning, Programming, Design and Execution	x
Information Technology	x
Real Property Management	x
Housing Management	x
Emergency Services	x
Environmental Services	x
Financial Planning Administration	x
Ground Maintenance and Landscaping	x
Pest Management	x
Computer Services	x
IDIQ Support	x

#### CHI'S CIVIL ENGINEERING AND FACILITIES O&M TECHNICAL SERVICES PERFORMED

CHI's responsibilities include providing all personnel, equipment, tools, materials, vehicles, supervision, except government-furnished property and services, and other items and services necessary to perform all CE services, tasks and functions for Los Angeles AFB (LAAFB) as defined in the contract Statement of Work (SOW). LAAFB includes industrial areas A&B-El Segundo, Lawndale Annex-Hawthorne, Sun Valley Annex, and housing annexes 20 miles south at Fort MacArthur, Pacific Heights, and Pacific Crest-San Pedro. Service includes providing guidance and coordination for Base Civil Engineer (BCE) functions to ensure effective and economical operation of all activities. Work includes customer support services; real property maintenance, operations and management services; engineering services; environmental protection services; construction planning, programming, design, and execution services; and emergency services. Most work is typical to commercial industry standards.



### Following we Describe in Further Detail, CHI LAAFB Responsibilities

*Maintenance Master Planning* – Develop maintenance master plan to ensure facilities and equipment maintenance, operations and capital improvement planning are practiced so as to reduce the life cycle cost of facility ownership while maintaining industry, Air Force, and base standards. Included is the mechanical, civil, environmental and electrical maintenance engineering expertise needed to perform capital improvement reviews, facility and system assessment, infrastructure program management, historical data collection, work analysis and a Predictive/ Preventive Maintenance (PPM) program. The function also included a facility commissioning process to ensure new and renovated facilities are effectively commissioned.

*Real Property Maintenance* – CHI operates and maintains all facilities, systems and equipment located at LAAFB real property including office buildings, support buildings, housing, utilities, electrical distribution, cathodic protection and corrosion control systems, lighting protection systems and various types of life and safety alarm systems. The facilities consists of over 1.5 million square feet of usable space and associate real installed property/equipment such as; fences, swimming pools, storm water system, emergency generators, playgrounds and various other infrastructure systems. The services also include utilities plant Operation and Maintenance (O&M).

The real property maintenance services also include locksmith service for the total base, as well as asbestos abatement, lead-based paint abatement. Operating a self-help store is also a part of the real property services.

*Work Control System* – CHI work control system supports over 17,000 PM/PT&I actions per year, 5,000 service requests and over 800 specialized task orders as well as over \$1 million dollars of large IDIQ requirements. These services include work planning, estimating, and schedule, tracking and reporting work progress. The service also includes customer coordination, base permit processing, work schedule compliance, supporting emergency work and conducting weekly work order review board meetings.

*Planning, Programming, Design and Execution (PPDE)* – On behalf of the Air Force, CHI performs the necessary LAAFB facilities and infrastructure planning by developing and maintaining an investment plan to allow the base leadership to make informed decisions on how to invest limited capital funds. Duties also include maintaining base general plans and facility excellence plan on an annual bases including updating all utility drawings.

*The Programming* – Maximize the capital investment funds available to LAAFB by clearly defining project requirements and properly aligning projects with HQ AFSPC funding guidelines. In support of the programming effort includes clearly define projects using AF form 332 included



scope and funding required. All MILCOM projects over 2 Million, an economic analysis information report is required that compares relevant alternatives including cost estimates. Programming also includes project siting location, environmental issues and land use requirements. Programming also includes a 5 year construction plan with prioritized list of recommended projects including facilitating the Facilities Working Group (FWG) meeting to review planning efforts. A project folder is created and maintained for each project

*Design and Engineering Support Services* – CHI performs as the lead design agent for all non-MILCOM design. One hundred percent design effort for all projects under 25K and 35% design for all projects over 25K. The design effort supports \$6 million dollars per year in projects. The services provided also included construction management for both in-house and outside construction projects.

*Information Technology (IT)* – CHI provides a wide range of IT services including: 1) Administer and maintain GIS database from updated record drawings; 2) Accomplish computer aided drafting design (CADD) in support of designs, as-built drawings and general map plans; 3) Administer and maintain Automated Civil Engineering System (ACES) to ensure corporate data are properly recorded and available to LAAFB and higher headquarters; 4) Maintain AF Computer Maintenance Management System (CMMS) of all work activities; 5) Ensure required reports are available and easy to locate; 6) Maintain a suspense tracking system.

*Real Property Management* – CHI is responsible for the real property management activities to ensure LAAFB real property management activities to ensure LAAFB real property assets are properly inventoried and accounted for, that legal instruments affecting LAAFB real property are correctly executed, and that the best use is made of available real property assets CHI serves as LAAFB Real Property Officer (RPO). Activities include; maintaining accountability, inventory, facility use, changes management, real estate transactions, prepare transaction packages and maintain facility records in accordance with AFMAN 37-139 to include up-to-date automated real property records, facility acceptance, real property studies, annual compliance inspections and providing real property reports.

*Housing Management* – CHI in support of over 600 family housing units, a housing management program designed to provide quality housing with maximum utilization. The services perform include, occupancy management, asset management, change of Occupancy Maintenance (OM), guidance and counseling and off-base housing leases.

*Emergency Services* – CHI serves as the Disaster Control Group (DCG) CE representative to advise/assist the on-scene commander and support senior leadership in response actions. CHI responsibilities include developing and managing the base disaster preparedness program per AF 110-2501. This includes the necessary emergency preparedness planning, prepare and provide



training for the base population, disaster response force training, respond to preparedness exercises, manage and maintain emergency equipment and support emergency response for major accidents and disasters 24 hours/7 days per week. Emergency services include the Unit Control Center (UCC) operation during any major accident and/or disaster.

Responsibilities also include Hazardous Material (HAZMAT) program training NBC&EOR training.

*Fire Prevention and Protection* – CHI provides all management, supervision and operations of fire protection and prevention program for all LAAFB facilities and structures. The services include providing base fire chief responsible for fire prevention publication, fire Incident reporting, fire prevention briefing, fire prevention inspections, fire hazards reporting, pre-fire plans, familiarization tours and fire protection reviews.

*Environmental Services* – CHI's environmental services provides an environmental protection program that ensures that the LAAFB complies with all federal, state, and local laws and regulations as well as the most current MAJCOM environmental guidance. Environmental protection service programs include restoration, compliance, pollution prevention, conservation, and community relations. The contractor shall facilitate the Environmental Protection Committee (EPC) meeting to include preparing agendas and briefing materials, recording and distributing minutes, and submitting responses to quarterly EPC data calls. Provide the EPC recommendations, status updates, and technical advice.

The Program Covers:

- Environmental Compliance Assessment and Management Program (ECAMP)
- Air quality
- Wastewater management
- Oil/Water separator inspections
- Storm water management
- Hazardous waste program
- Storage tanks inspection
- Asbestos program
- Lead-based paint program
- Polychlorinated Biphenyl (PCB)



- Conservation program (site resources)
- Pollution prevention
- Integrated solid waste management
- Non-hazardous solid waste diversion
- HAZMAT program
- Installation restoration program
- Environmental impact analysis process
- Environmental baseline surveys
- Open enforcement actions

*Financial Planning Administration* – CHI provides civil engineering, financial planning and budgetary information to ensure the long-term viability of LAAFB and track expenditure to ensure funds have been used properly including track costs, prepare expenditure reports, prepare funding requests and provide data for budget submission. These services also include billing customers for utility bills and sales, work order tracking, lease cost, furnishings and appliance expenses and prepare a quarterly cost report.

*Ground Maintenance and Landscaping* – CHI provides all ground maintenance and landscaping services at all of LAAFB locations, main base, housing areas and satellite locations.

*Pest Management* – CHI provides an integrated pest management program to protect public health, and base property by controlling insects, rodents, termites and other pests or organisms while minimizing the use of pesticides.

*Computer Services* – CHI ensures CE desktop and related computer systems meet the needs of users and are properly maintained. Service also includes software application, training, inventory management and troubleshooting and repair.

*IDIQ Requirements* – CHI provides task order project work to support the base rehabilitation and construction activities. The activities include all types of work, electrical, mechanical, environmental, structural, etc. Currently the IDIQ effort is over 1 million per year.

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### CHI'S PERFORMANCE ON THE USAF ONIZUKA AIR STATION CIVIL ENGINEERING AND BASE MAINTENANCE SERVICES JOINT VENTURE CONTRACT

In a joint venture business relationship, Call Henry, Inc. (CHI) performs base operations contract services at the USAF Onizuka Air Force Station, CA. The Station is the home of the 21<sup>st</sup> Space Operations Squadron (21 SOPS) and numerous tenant unit organizations. CHI's contract requires the Company to perform a wide range of engineering, maintenance, repair and IDIQ-type work in support and services to both the Squadron and tenants. We discuss the services in the following paragraphs.

### **Real Property Maintenance and Repair**

CHI operates and maintains all on-site buildings, structures, utility systems and equipment, as well as environmental services, fire protection management, custodial, pest control services, in addition to provide site wide engineering services.

**Recurring Work Program** – We have developed, implemented and maintained a sound maintenance and repair program that support extension of the useful life of Onizuka Air Station facilities, systems and equipment as we discuss below.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program USAF Onizuka Air Force Station				
SOW Requirements	Technical Services				
Recurring Work Program	×				
Engineering Services	x				
Work Control	x				
Resource Management	x				
Real Property Management	x				
Energy Management Control, Life, Safety and Security System O&M	x				
Electrical Distribution System	x				
• Pers. & Material Handling System	x				
Grounds and Surfaced Areas	x				
Buildings and Structures	x				
Central Heating Plant/Hot Water	x				
HVAC System	x				
Utilities Distribution Systems	x				
- Chilled Water Disribution	x				
- Steam Water Disribution	x				
- Cooling Water Disribution	x				
	x				
– Natural Gas Disribution	x				
- Compressed Air Disribution	x				
- Portable Water Disribution	x				
- Sewage/Storm Water Disribution	<b>x</b>				
– Environmental Services	X				

#### CHI'S CIVIL ENGINEERING AND FACILITIES O&M TECHNICAL SERVICES PERFORMED

**Engineering Services** – This effort includes site facilities planning studies and analysis, development and updating of a base comprehensive plan and facility investment matrices. We provide program services to include development of project performance information required for the annual financial plan. Engineering services includes the development of current integrated 5-year plan for maintenance, repair, renovation for the improvement of facilities and real property (capital expenditures). We provide design services in support of on-site construction and IDIQ projects. Other areas of our engineering responsibility include maintenance engineering, corrosion control engineering, energy management program, roof system management and warranty, and recurring work.



**Work Control** – CHI provides a comprehensive work control and management program to plan, estimate, schedule, and track work progress, as well as report on all work performed by our workforce. This work control program is supported by our proprietary automated ERP system.

**Resource Management** – These services are in direct support of the Air Force's real property accountability functions. Our responsibilities include:

*Real Property Management* – These responsibilities involve physical inventories and accounting of real property and real property installed equipment. We manage real property leases, permits, and rights of entry, easement and licenses. We manage all real estate acquisitions, vouchering, accounting, reporting, facility-use and disposition. We perform facility surveys/ inspections, space utilization actions, boundary surveys and compliance inspection. We update RP records for changes in use and other designated codes. Facility space utilization changes are also reflected in facility drawings and reports.

These responsibilities also include the maintenance of the Air Force real property database file using Government provided software. We also maintain databases consisting of in-work and completed job orders including cost of material, labor and equipment.

**Energy Management Control, Life Safety, and Security Systems** – The EMCS is Government operated and maintained.

Life safety systems included in our contract for maintenance focus on fire safety. There are 17 fire alarm systems, four fire alarm panels, and 13 fire detection systems serving the major OAS real property facilities. Components of the system include CO2 and Halon extinguishing systems. Emergency lighting systems and the fire alarm systems are maintained by our Electricians and Electronic Technicians. Fire hydrants and fire mains are maintained by our Plumbers and serve to protect personnel and property. Overall fire safety is under the direction of CHI's designated Fire Chief assisted by Fire Technicians.

Installed security systems encompass an alarm control center and the intrusion and surveillance equipment comprising the system. System elements include a card reader entry system, nine surveillance cameras, and two surveillance monitors. Security/intrusion alarm systems are maintained by CHI technical personnel and include sensors, remote transmitter units, transponders, etc. Maintenance requirements are similar to GRC FORM requirements differing in quantity of components maintained.



**Electrical Distribution Systems** – Includes operation and maintenance of the high voltage system from the 5kv switchgear to all step down transformers serving low voltage requirements in all areas of the Station. Seven substations and 32 transformers up to 750KV have a combined capacity of 7,175KV. There is a total of 33,750 lineal feet of power distribution, both above and below ground, under our responsibility.

High voltage system equipment subject to preventive maintenance includes: substations, oil filled and dry transformers, circuit breakers, switches, batteries, relays, capacitors, etc. PT&I, infrared thermography, is used to inspect and assess batteries, transformers, substations, and power distribution lines especially at insulators, control points, and terminals.

Low voltage components include: circuit breakers, panels, motors, lighting, switches, portable generators and other equipment supporting OAS customers 7 days per week, and 24 hours per day.

Maintenance and operations of the power distribution systems and associated equipment is conducted by our qualified Electricians in accordance with Federal, state, and local standards and safety procedures.

**Communications Systems** – CHI is not responsible for communication systems maintenance at OAS.

**Personnel and Material Handling Systems** – These systems and equipment are subject to intensive preventive maintenance due to the potential for causing injury to personnel and damage to property. CHI maintains one crane rated at 1000lbs, eight hoists certified up to 20,000lbs, and four 3500lbs elevators at OAS in accordance with Federal, state, and local regulations. A total of eight power operated overhead doors are also our responsibility for preventive and corrective maintenance. Maintenance personnel are trained and certified for the work.

**Grounds and Surfaced Areas** – CHI is responsible for approximately 35 acres of grounds for maintenance. Services include mowing, irrigation, policing, applying pesticides and weed killers as necessary, maintaining shrubs, fertilizing lawns and shrubs, and maintaining plant beds. We are also responsible for maintaining about 25,000 SY of parking areas and roads. We are tasked to maintain OAS curbs, sidewalks, and fence lines free of debris, cuttings, leaves, etc. We use Laborers to maintain the appearance of the grounds and Plumbers to maintain the irrigation systems.

**Buildings and Structures** – These responsibilities include the maintenance and repair of 80 various type buildings of approximately 500,000 sq. ft. of space and installed and attached equipment. The type of M&R work performed includes carpentry, painting, sheet metal work, electrical, HVAC, plumbing, electronics, lock smithing, alarm systems, woodworking and roofing.



Work is accomplished by our work force in accordance with the OAS work priority system. Custodial services are provided by our trained staff in accordance with the schedules and specifications required by our contract.

Examples of equipment maintained and repaired by our crafts personnel are: doors, cranes and hoists, motors, motor control centers, lighting and associated wiring and controls, interior utility distribution systems such as water, power, gas, steam, compressed air and the hardware and fittings in the systems and served by the systems. Flooring, wall systems, roofing, stairs, masonry, sheet metal ducts, structural systems, and similar capabilities are used in the maintenance of OAS buildings and structures.

**Heating Plants and Hot Water Boilers** – The OAS Central Energy Plant, building 1004, is not included in our Civil Engineering and Base Services Contract at this time. We are, however, responsible for the operation and maintenance of two compressed air systems which distribute air to user locations at 100 psig. Our Maintenance Mechanics are assigned O&M Trouble Calls and preventive maintenance work orders.

**Heating, Ventilating, Air Conditioning and Refrigeration** – While the OAS contract excludes O&M of Central Energy Plant equipment, boilers, chillers and RPIE contained in the plant for steam and chilled water generation, CHI is responsible for all utility distribution systems, as discussed immediately below, and all equipment served by these distribution systems. We also operate and maintain one chiller and cooling tower not associated with the central plant.

Examples of end use equipment include: 25 air conditioning units, 130 air handling units, fan coils, 109 fans of various kinds, 41 heaters, pumps of many sizes, etc. The equipment is subject to preventive as well as corrective maintenance by our staff of qualified Maintenance Mechanics.

**Utility Distribution Systems** – In addition to the electrical distribution system, discussed above under C9, CHI is tasked to operate and maintain each of the utility systems listed and discussed below.

*Chilled Water Distribution* – Chilled water for environmental uses is generated by the 590 ton and 1,000 ton chillers in the central plant. The chilled water is distributed at up to 5000 gpm to end users on Station. CHI maintains and operates the system of about 7000LF of piping, valving, pumps and controls to supply the chilled water and to return the water to the Central Plant cooling towers.

*Steam Distribution* – Steam boilers in building 1004-1 generate the steam for use throughout the OAS. The distribution system to end users includes over 1,600 LF of steam lines operated at 15 psig. It is used in food preparation areas and for converting potable cold water to hot water.



*Cooling Water Distribution* – Includes the O&M of the cooling water distribution system, excluding the pumps in buildings 1004 and 1004-1. O&M of the system. Our Plumbers are assigned O&M responsibilities for the system.

*Liquid Fuel Distribution* – Includes O&M of the fuel distribution system from and return to the pumps in building 1008. O&M of the system closely parallels that of the previously mentioned chilled water and cooling water distribution systems. Safety is in accordance with pertinent regulations and O&M personnel are trained and certified to work on the system.

*Natural Gas Distribution* – Includes the O&M of the 2,400 LF of natural gas distribution piping from the output of the local gas utility to the various areas within the base complex. O&M of the system closely parallels that of the liquid fuel distribution system mentioned above.

*Compressed Air Distribution* – Consists of the O&M of compressed air system and from the air compressors in building 1004 to the end users.

*Potable Water Distribution* – Potable water is purchased from the local government. CHI is responsible for the distribution at 80 psig throughout the Station. Elements of the system subject to our maintenance efforts include 4,200 LF of piping, pumps, valving, backflow preventers and similar items. Plumbers are used to perform maintenance and are trained in their responsibilities to maintain water quality and safety.

*Sanitary and Storm Water Distribution* – These two systems are of 3,800 LF and 5,100 LF respectively. Both are discharged off Station after treatment to meet regulatory agencies' discharge requirements.

**Maintenance Related Environmental Services** – We are responsible for implementing and maintaining a comprehensive program for environmental compliance, conservation and pollution prevention program in support of the Onizuka Air Force Station. The services we provide are both management and technical related covering all aspects of a sound environmental management program. The types of activities we perform include:

*Spill Response* – We are required, during non-compliance situations, to take immediate action in accordance with OAS directives.

*Notification to Regulatory Agencies* – Responsibilities include maintaining and updating regulatory permits and submitting an annual report summarizing all current environmental issues of the site and how they may or may not relate to permit, regulatory citation, etc. Duties also include preparing other necessary reports, chairing the OAS Environmental Enforcement Action team and the Environmental Protection Committee.



*Environmental Compliance Assessment and Management Program* – These responsibilities are met in accordance with Air Force regulations.

*Hazardous Waste Program* – We manage the central accumulation points, including the characterization and electronic tracking of waste containers to final disposal. We prepare waste for shipment and the hazardous waste manifests, certification of destruction and other shipment documents as required by current regulations.

Types of hazardous waste we manage and control are: oil, unusable liquid petroleum, polychlorinated biphenyl's, asbestos, lead based paint.

*Water Quality Program* – We are responsible for management of the site water quality program which includes waste water, storm water and drinking water.

*Air Quality Program* – CHI manages the on-site Air Quality Program in accordance with state, federal and Air Force regulations.

*Solid Waste* – We manage the site solid waste program, including recycling.

*Hazardous Material Program* – This program includes the management and operation of the Hazmat pharmacy, spill prevention and response, as stated above, and acquisition and dissemination of Material Safety Data Sheets.

*Environmental Impact Analysis Program* – We manage the Environmental Impact Analysis Program IAW AF 1-3 2-7061 and other regulations as required by state and federal agencies.

#### **Fire Prevention and Protection**

Services include a comprehensive management program of fire protection and prevention. They are carried out by our full-time certified fire chief and fire technicians. Responsibilities include planned reviews, training, mutual aid, fire inspections, including fire extinguishers, emergency response, code compliance, the oversight of the fire detection and suppression system M&R. Our Fire Chief works closely with local fire suppression forces in pre-fire planning, fire drill coordination and all related activities.

#### **Custodial Services**

We provide custodial services for over 80 buildings with approximately 1M sq. ft. of floor space. The services include all aspects of custodial services; i.e., floor care, general cleaning, trash removal and restrooms cleaning. Service is performed on a periodic scheduled basis and in response to special requirements.

#### **Grounds Structures and Unsurfaced Areas**

CHI is responsible for grounds maintenance and related structures maintenance. Services include mowing, policing, applying pesticides and weed killers as necessary, maintain shrubs, fertilize lawns, shrubs, and plant beds, maintain parking areas, roads, curbs, sidewalks, and fence lines.

## \_\_\_\_\_CALL #ENRY, <u>#nc.®</u>\_\_\_

## CHI'S NASA JSC COSS UTILITY SYSTEMS O&M SUBCONTRACT RESPONSIBILITIES TO THE NASA JSC COSS CONTRACT

Since April 2002, Call Henry, Inc. (CHI) has been under subcontract to DynCorp Technical Services, LLC to perform the operations and maintenance, coordination and planning of a broad range of Center facilities and utilities systems as well as Mission Control Center support utility and heating, ventilation and air conditioning systems at NASA's Johnson Space Center. Additionally, CHI provides support to construction projects involving facility and utility systems at the center from providing input to design, to coordinating scheduling, operational support and support for the actual construction. Our Operation Mission Support Engineers provide technical systems expertise during launch and the shuttle mission 24 hours per day.

Included are the following systems subcontracted to CHI: electrical, cooling, heating, compressed air, ventilation, utility controls, natural gas, potable water, and sanitary and storm sewers. Each system for which CHI has operational responsibility is described in the following:

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program NASA Johnson Space Center Technical Services
Mission Support Engineering	x
Mission Power Plant Operations	x
Central Heating and Cooling Plant	x
• EMC, Life and Security System	x
Electrical System	x
Standby Generator and UPS	x
Communication Systems	x
Heating Plant and Hot Water	x
• HVAC System	x
Utilities Distribution Systems	x
– Potable Water System	x
- Chilled Water System	x
– Sanitary Sewer System	x
– Storm Serge System	x
– Natural Gas System	×
– Fuel System	×
_ Environmental	X

#### CHI'S MISSION SUPPORT AND UTILITIES O&M TECHNICAL SERVICES FUNCTIONS PERFORMED

**Mission Control Power Plant** – CHI manages the Mission Control Power Plant (MCPP) and all Mission Control Center utilities and ventilation systems for the Johnson Space Center, including planning and coordinating all maintenance and construction, writing all system operational procedures, and performing all operations, training, and chemistry control operating the MCPP, CHI:

- Provides the alternative of feeding mission control from the site electrical grid or from five diesel generators with a combined 9800-kilowatt capacity. Additionally, there are four 400-KW uninterruptible power supplies providing stability on critical busses for the Mission Control Center.
- Provides the alternative of cooling mission control from the site chilled water distribution system or from four electric chillers with a combined capacity of 3400 tons of cooling, which are cooled by cooling towers located at the MCPP.

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Provides additional equipment such as air compressors, such that the Mission Control Center can be independent of all outside utilities except potable water and diesel fuel deliveries in order to provide for reliability in the event of a disaster such as a hurricane.

**Central Heating and Cooling Plant, Auxiliary Cooling Plant, and Utility Tunnel System** – CHI manages the Central Heating and Cooling Plant (CHCP) and Auxiliary Cooling Plant (ACP) for the Johnson Space Center, including planning and coordinating all maintenance and construction, writing all procedures, and performing all operations, training, and chemistry control. Managing the CHCP/ACP, CHI:

- Provides the primary site cooling systems for the Johnson Space Center. Located within these facilities are six 2,000-ton electric chillers and three 2,000-ton steam driven chillers for a total capacity of 18,000 tons of cooling, with an average loading of about four million ton-hours per month. These chillers provide chilled water to a 3.5-mile long underground utility tunnel system, which connects the major buildings on the space center. The chilled water is then used for both process use and space cooling. These chillers are cooled by cooling towers located at both plants providing a closed loop cooling water system.
- Provides the primary heating system for the Johnson Space Center. There are three 60,000-lb/hr. superheated steam boilers located in this facility, which provides 150 psi saturated steam to the utility tunnel system for distribution to the center. Approximately 15 million lbs of steam is used per month to drive steam-powered chillers, for domestic water heating, ventilation heating, and humidity control.
- Provides the primary source of compressed air for the Johnson Space Center. There are four air compressors with a total capacity of 7,000 SCFM, as well as smaller air compressors to provide back-up for plant loads. These compressors provide compressed air to the utility tunnel system, which is used for both HVAC controls and for process use.
- Operations Control Center CHI manages the Johnson Space Center Operations Control Center (OCC). This includes writing all procedures, training the operators, and managing the site control system.
- OCC is the central control station for the site Energy Management Control System (EMCS). The EMCS provides the ability to monitor most site utilities throughout the campus of over 1,600 acres, and remotely start, stop, and adjust much of the HVAC equipment and lighting in site facilities, which encompass over 3 million square feet of space. This system monitors and controls over 15,000 points, and actuates around 5,000 alarms under abnormal conditions.



- OCC is the central control station for the Sonny Carter Training Facility (SCTF) HVAC systems. SCTF is a 170,000 square foot building on a 12 acre campus about five miles from the JSC campus, used for light industrial work and office space as well as enclosing the largest indoor swimming pool in the world, which is used for weightless simulation for astronaut training.
- OCC is the coordinating station for many of the center safety procedures, including lockout/tagout and confined space entry.
- OCC is primarily responsible with implementing and monitoring many of the energy saving efforts for the Center, including seasonal system adjustments, nighttime cooling load reductions, providing weekend support for lighting and HVAC.
- OCC is the central coordinating point for all emergencies involving center facilities, including water leaks, hurricane preparations, and preparing for freezing conditions in the winter.

**Energy Management Control, Life Safety, and Security Systems** – CHI operates the EMCS to control large portions of the electric power, steam, chilled water, and building HVAC systems at JSC. The system provides the means to achieve efficient energy control, monitor and modify/correct environmental conditions throughout the Center. The system uses over 18,000 set points to support conservation of utilities, maintain designated facility environmental conditions, and, to support Center shuttle launch operations at an average of six missions per year. The system is manned 24 hours per day and 7 days per week. Up to 12 system work stations are used to effect daily operations including 400 inquiries per day about system status. Emergency calls are received on the Hot Line for fire, ambulance, security, flooding and other situations. CHI is responsible for maintaining all system software up to date. Reporting requirements are extensive and include those essential to utility support of launch operations.

CHI is not responsible under this contract for life safety and security systems.

### **Electrical Distribution Systems**

*Site Electrical System* – CHI inspects daily and operates the NASA Center's 138 KV electrical substation. Qualified HV Electricians perform all switching required to meet operational needs. Additionally, CHI operates the three power systems, A, B, and D, serving the Center from commercial 138KV power substation. During launch operations, CHI assigns, continuously, an operations engineer to ensure system reliability at these critical times.

The primary power system distribution is 15KV stepped down from the 138KV feed. The associated equipment we operate includes: relays, metering, AC and DC power, 4,000 capacitors, more than 200 switches, 1,300 breakers, batteries, chargers, 200 plus power panels, and other related equipment. Primary elements are visually checked daily for anomalous conditions.



Street and exterior lighting is provided by 38 circuits and about 1,200 poles. The EMCS system is programmed to change on-off times at the beginning and end of Daylight Saving Time.

*Standby Generators and UPS* – 16 power generators serving power systems B, and D are checked daily for status. Likewise the Uninterruptible Power System (UPS) serving system A is checked on a daily basis by qualified and certified personnel.

During preflight periods, the three Center power systems are subject to inspection and certification at launch minus 12 hours.

CHI provides, in addition to power system operations, first level maintenance of system hardware, i.e., operator maintenance.

**Communications Systems** – CHI operates the base radio communications systems comprised of three base stations. Approximately 400 calls are processed on a daily basis. Nine sets of tapes are used to record transmissions on the systems.

**Heating Plants and Hot Water Boilers** – The Central Energy Plant includes three power boilers which are operated by CHI Boiler Operators around the clock. An additional 12 boilers are operated to serve local demand. The boilers provide steam for operational and environmental purposes throughout the Center. The central plant steam generators are fired on both gas and oil. Prior to launches, the fuel is switched to and the boilers fired on oil. Both steam exported from and condensate returned to the plant are treated as specified by NASA. Feed water systems, in plant condensate return system, deaerater tanks, condensate tanks, and associated pumps, fans, controls, fittings, valves, alarms, etc. are operated by the Boiler Operators. Operator maintenance is performed on all equipment and systems as needs are identified during operations.

The three air compressors located in the Central Plant are the operational responsibility of CHI HVAC personnel. We operate the system at 125 psig.

**Heating, Ventilating, Air Conditioning and Refrigeration** – The JSC chilled water system consists of a large central plant, building 24, with seven chillers (up to 2,000 tons). Seven chilled water pumps, eight cooling tower cells, and nine condenser water pumps comprise the major elements of the central plant. Another plant, building 28, houses an additional two chillers, two chilled water pumps, two cooling tower cells, and two condenser water pumps. CHI operates these units to support Center demand for environmental as well as operational needs. During launch periods, 6 per year, the plants are manned by qualified operators on a 24 hour basis. Other HVAC equipment includes 100 plus package air conditioners and over 400 VAV boxes. Our HVAC personnel are trained and certified to operate the chilled water plant and all associated equipment.


#### **Utility Distribution Systems**

**Potable Water System** – CHI operates and maintains this system to produce, pressurize, treat and distribute potable water to JSC users. The Center's water source consists of a purchased water with back up provided by two on Center wells which have a 2,500 gpm total flow capability. We maintain the system at 68 psig for distribution throughout the Center. As necessary, water is treated with sodium hypochlorite, aqueous ammonia, and a corrosion inhibitor. Our trained and certified operators ensure the system is operable on a 24 hour basis. Wells and five potable water pumps are tested on a weekly basis.

Distribution of potable water is through a series of loops and valves to minimize outages in the event of a failure. Fire hydrants are used to periodically flush the system as well as for fire protection. There are 120,000 LF of piping including that for the attached irrigation systems included in our O&M responsibilities.

Pumps, meters, backflow preventers, valves, and other items are operated to ensure adequate supply of water to all customers at the designated pressure and quality. Operating personnel test the water for adherence to regulated standards and treat as necessary to meet the standards on a continuing basis.

*Chilled Water System* – The chilled water distribution system consists of: supply and return piping, valves, fittings, insulation, instrumentation, gauges, and ancillary components necessary to distribute the product to the end users. The Central Energy Plant chilled water system is operated to furnish and pump the chilled water to JSC customers.

*Sanitary Sewer System* – CHI operates and maintains this system which provides removal of wastewater from the point of origin through the Center's interconnected system of gravity lines and manholes to the lift stations. It is routed through the interconnected system of force mains, gravity lines and manholes to the JSC property line. Effluent is treated off station but must meet stipulated restrictions as to contaminates. Rate of flow to the treatment facility is restricted to 1,400 gpm peak, and 910,000 gpd. Lift stations, pumps, wet wells, 13 oil water separators and manholes are parts of the system we operate.

*Storm Sewer System* – CHI operates this system collecting storm water through a system of roof and surface drains conveying it to the final drainage ditch system that delivers the storm water off-Site.



*Natural Gas System* – Included in CHI's systems responsibility is the Center's distribution system for natural gas from the point of entry at 78 psig to the Center to metering and reducing stations for use in the following types of equipment: space heaters, hot water heaters, boilers, gas engines, cafeteria equipment, test and laboratory equipment. The distribution system consists of 4,700 lf of pipe with associated valves, regulators, meters, and cathodic protection.

*Fuel System* – CHI is responsible to provide a continuous supply of diesel fuel for all users. Fuel is ordered and received on a schedule adjusted as necessary to have full storage tanks, 4 tanks totaling 128,000 gallons, prior to each launch. CHI distributes the fuel to all operators of diesel fueled equipment including MSE, five CTS generators, stationary generators at three buildings and numerous mobile items of equipment as needed.

**Maintenance Related Environmental Services** – Our JSC utility systems operations and maintenance subcontract responsibilities encompass accountability for the environmental effects of our operations. The systems we operate and maintain involve such substances as oil, grease, paint, refrigerants, solvents, and other materials presenting potential adverse effects on the environment and on persons employed at or visiting the Center. CHI is directed to conduct its activities with regard to hazardous substances in accordance with Federal, state, and local regulations. Our operators and mechanics are trained to recognize and, if possible, to safely prevent a release or discharge of hazardous materials through operations or inadvertent spills while handling or storing products. We respond to spills we are responsible for and report same in accordance with JSC procedures. Clean up and disposal of waste material is also in accordance with regulations. Our people are trained to use proper methods, materials, tools, and protective clothing for specific substances encountered in conducting our assigned responsibilities.



### WESTINGHOUSE DOE SAVANNAH RIVER JANITORIAL SUBCONTRACT

Call Henry, Inc. was awarded a competitive bid contract to provide complete site wide janitorial services in support of over 600 buildings and over 3.5 M square feet of space. The contract was awarded by Westinghouse Savannah River Company who is DOE's prime contractor for the operations of the Savannah River Nuclear Site.

The type areas supported includes executive offices, computer rooms, medical facilities, lunch rooms, mail rooms, rest rooms, drafting/engineering room, laboratories, conference rooms, training rooms, security areas, printing and numerous other type of areas.

The service includes floor maintenance, building service maintenance and building/equipment maintenance to a prescribe frequency by types of areas. Type areas includes carpet, tile and concrete floors. In addition to providing scheduled/routine service we provide IDIQ services to include stripping and sealing floors, special cleaning of equipment, systems and other project type support.

CALL HENRY, INC.'S CALL HENRY, I	ontract/Program Savannah River Nuclear Site DOE/ Westinghouse
Floor Maintenance	x
– Spray Buff	x
– Damp Mop	x
– Dust Mop, Sweep Floor	x
– Vac./Detail Carpets & Entry Rugs	x
– Spot Clean Floors, Carpets, Rugs	x
- Clean/Extract Rugs and Carpets	x
- Machine Scrub Floors	×
- Strip, Seal, Wax, and Buff Floors	x
<ul> <li>Sweep, Vacuum, Damp Mop Stairs, Landings and Entry-ways</li> </ul>	X
Building Surfaces Maintenance	x
	x
- Clean Window Blinds	
- Clean/Polish Metal Surf., Hardware	
- Clean Bldg Surfaces, Walls, & Door	rs X
- Clean Glass And Windows	x
- Clean Safety/Eyewash Stations	x
- Clean Lens Cleansing Stations	x
• Furnishings/Equipment Maintenance	x
– Spot Clean Furnishings	x
– Clean, Damp Wipe Furniture	x
- Clean Upholstered Furniture	×
<ul> <li>Clean Conference Room Tables an Medical Furniture</li> </ul>	d X
- Clean Drinking Fountains/Stock Cu	ps 🗴
- Clean and Polish Mirrors	×
Clean Smoke-a-dors (Butt Cans     Outside of Buildings)	×
– Remove Trash and Replace Liners	X
<ul> <li>Clean Vents and Grilles (i.e., Wall, Exhaust, A/C, Etc.)</li> </ul>	×
- Clean Blackboards and Trays	x

#### CHI'S SITE WIDE JANITORIAL SERVICE FUNCTIONS PERFORMED



# CHI'S PERFORMANCE ON TWO FACILITIES MODIFICATION CONTRACTS AT NASA GLENN RESEARCH CENTER

Call Henry, Inc. has performed two fixed-price Davis-Bacon facilities modification contracts (competitively won) at GRC.

# Building 106 Mechanical and Electrical Modification

The first of our two contracts was NAS3-00100, an 18-month GRC Building 106 electrical/ mechanical modification and rehabilitation contract that was a fixed price contract with an incentive bonus for on-time completion and high-quality workmanship. CHI was awarded the \$1.5M contract in early January 2000 and completed the effort in July 2001. GRC's Material Research Lab,

CALL HENRY, INC.'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	NASA John Glenn Research Center
SOW Requirements	Technical Services
Electrical System Removal	×
• Building Exhaust System Removal	x
Electrical System Installation	x
Building Exhaust System Installatio	n <u>x</u>
Management and Administration	X
Logistic/Procurement	X
• Work Planning/Management	X
<ul> <li>Performance Rating</li> </ul>	Excellent

#### CHI'S TECHNICAL SERVICE FUNCTIONS PERFORMED

located in Building 106, required ongoing effort be continued in the Building while this modification work was in process. Our work required removal and replacement of forty-two 120/208-volt electrical panels, two master control centers, the entire ventilation system and system alarms/ monitoring devises serving dozens of scientific laboratories. We implemented this contract on a floor-by-floor, off-shift basis in such a way it would not interfere with critical aerospace research ongoing on the remaining floors of the Building. At the conclusion of this contract, NASA awarded CHI a \$50,000 bonus for performing the work on schedule to quality specifications. This contract demonstrates CHI's capability to repair electrical and mechanical systems in a highly sensitive facility, coordinate shut downs and work extremely well with the customer under stringent time-lines, all requirements of the MSFC COSS contract. At the conclusion of the contract, the NASA Technical Manager who oversaw our efforts stated "CHI performed the best work of its kind we have had at this Center for a long time".

### **Building 54 Electrical Modification**

The second of the two contacts was NAS3-01196, a one-year fixed price GRC Building 54 electrical modification contract awarded in the spring of 2001 and performed at \$1,110,000. The contact was completed in mid-2002. This complete rehabilitation of NASA Building 54 included removal and replacement of the electrical systems in this research facility. The contract demonstrates CHI's capability to perform exacting electrical distribution system work within a highly sensitive research facility while meeting stringent technical, quality and timeliness contract requirements. It demonstrates how we can work closely with our customer while at the same time maintain an "on-schedule" work plan. At the conclusion of this contract, the NASA technical manager that oversaw our work stated that "CHI was an excellent contractor to work with".



# JANITORIAL SERVICES, NAVAL AIR STATION, PATUXENT RIVER, MD

The Naval Air Station at Patuxent River, MD is the home of the Naval Air Warfare Center and the Naval Air Systems Command, plus 50 other smaller tenants. Situated on 7,800 acres on the shore of Chesapeake Bay, its 18,000 member population of Navy, civil service, and contractor personnel occupy 935 buildings with 8.7 square feet of office, shop, laboratory, warehouse and computercenter space. The CHI janitorial contract provides service to 2.4 million square feet located in over 100 primary-use facilities. CHI pursued and won this contract because we were aware that the work was scheduled to be folded into a new 5-year Base Operating Support Contract in August 2001.

CALL HENRY, INC.'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Base Wide Janitorial Services Patuxent River NAS
Floor Maintenance	X
– <u> </u>	
– Damp Mop	
– Dust Mop, Sweep Floor	
- Vac./Detail Carpets & Entry Rugs	
- Spot Clean Floors, Carpets, Rug	s
- Clean/Extract Rugs and Carpets	
- Machine Scrub Floors	<b>x</b>
- Strip, Seal, Wax, and Buff Floors	
- Sweep, Vacuum, Damp Mop Stairs, X Landings and Entry-ways	
Building Surfaces Maintenance	x
Dusting	x
- Clean Window Blinds	x
– Clean/Polish Metal Surf., Hardware	
– Clean Bldg Surfaces, Walls, & Doors 🛛 🗶	
– Clean Glass And Windows	
– Clean Safety/Eyewash Stations	
Clean Lens Cleansing Stations	
• Furnishings/Equipment Maintenance	e X
<ul> <li>Spot Clean Furnishings</li> </ul>	X
_ Clean, Damp Wipe Furniture	X
_ Clean Upholstered Furniture	X
Clean Conference Room Tables and X Medical Furniture	
- Clean Drinking Fountains/Stock	Cups 🗴
<ul> <li>Clean and Polish Mirrors</li> </ul>	x
<ul> <li>Clean Smoke-a-dors (Butt Cans Outside of Buildings)</li> </ul>	x
<ul> <li>Remove Trash and Replace Line</li> </ul>	ers X
<ul> <li>Clean Vents and Grilles (i.e., Wa Exhaust, A/C, Etc.)</li> </ul>	li, X
<ul> <li>Clean Blackboards and Trays</li> </ul>	X

# CHI'S BASE WIDE JANITORIAL SERVICE FUNCTIONS PERFORMED

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### NASA PLUM BROOK TEST OPERATIONS AND INSTITUTIONAL CONTRACT RESPONSIBILITIES, SANDUSKY, OHIO

Call Henry, Inc., as a joint venture partner, provides operational services in support of NASA's Plum Brook Station Research and Testing Facilities. The operational services includes the planning and implementing of test programs, operations and maintenance of test facilities, management and maintenance of the site infrastructure, and providing a broad range of institutional support services.

NASA's Plum Brook Station (PBS), located in Sandusky, Ohio, is a field station of the Glenn Research Center (GRC) in Cleveland, Ohio. It consists of four, large, world-class test facilities that support national and international aerospace test programs. PBS encompasses 6,400 acres of land, over 200 buildings and structures, and various above and below ground utilities.

Plum Brook Station's mission is to provide aerospace testing facilities and services, which are used to gather research and performance data for space-bound hardware. Customers include NASA, other government agencies, and the private sector. PBS works with these customers to develop the test approach and to define the specific test requirements to meet the program objectives as depicted in reference figure.

#### The contract work scope includes:

### **Major Test Facilities Operations**

We provide test and research support services for aerospace test facilities located at Plum Brook. These services are required when test facility operations or test programs are being planned, developed, and performed at Plum Brook Station. Our responsibilities include program planning, cost

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program NASA Research and Testing Facilities - Plum Brook Station, Sandusky, Ohio
SOW Requirements	Technical Services
Test & Research Support Services	×
<ul> <li>Test Program Development and Management</li> </ul>	x
<ul> <li>Test Preparation, Operations and Shutdown</li> </ul>	x
– Test Facilities Maintenance	x
Infrastructure and General Institutional Support Services	x
– Infrastructure System O&M	x
– <u> </u>	x
– <u> </u>	x
- Security and Plant Protection	×
– Plum Brook Reactor Facility Supp	port 🗴
Performance Rating	In Progress

#### CHI MANAGER'S EXPERIENCE MANAGING TECHNICAL SERVICE FUNCTIONS

estimating, scheduling, reporting, design, procurement of hardware and services, facility operation, repair and maintenance, staffing, and specialized training. We provide research support, which includes on-going interaction with the customers to assure that research objectives are met or exceeded. Plum Brook Station operates in an extremely competitive environment. Test facility activities vary depending on the need. The four major aerospace test facilities at Plum Brook Station are described below.



### Space Power Facility (SPF)

The Space Power Facility is the world's largest space environment simulation chamber - 100 ft. in diameter by 122 ft. high. In this chamber, large space-bound hardware can be ground-tested in a severe environment similar to that encountered in space: the chamber air can be removed to simulate the vacuum conditions of space up to an altitude of about 145 statute miles; charged argon gas can be added to the chamber while it is at vacuum, to simulate the actual space plasma environment of low earth orbit.

The very cold temperatures of space can be duplicated by means of a cryogenic cold wall; the very hot temperatures, by means of a quartz lamp heater. Even the actual sunlight experienced in space can be simulated with an existing 400-kilowatt arc lamp.

### Spacecraft Propulsion Research Facility (B-2)

Another of Plum Brook's world class facilities is the Spacecraft Propulsion Research Facility. Here, large upper stage rocket vehicles can undergo complete integrated system testing, including engine firing, in a simulated space environment.

A 38-foot diameter by 55-foot high stainless steel vacuum chamber is capable of simulating pressures of 1x10-6 Torr, or about 115 statute miles altitude. A full-sized launch vehicle, up to 400,000 pound thrust capability, can be loaded in the chamber. A cryogenic cold wall simulates the cold temperatures of space; a quartz lamp heater array simulates the heat from the sun. The facility was designed and built to safely handle the large quantities of liquid hydrogen and oxygen carried on a fully fueled cryogenic upper stage.

# Cryogenic Propellant Tank Facility (K-Site)

The third space environment chamber at Plum Brook, the 25-foot diameter Cryogenic Propellant Tank Facility, is used to develop the technology for generating and utilizing densified liquid hydrogen and oxygen in space.

# Hypersonic Tunnel Facility (HTF)

In addition to its 3 large space environment chambers, Plum Brook also has a large hypersonic wind tunnel capable of performing flow tests at Mach 5, 6, or 7. High pressure nitrogen gas, stored in a high volume tank adjacent to the facility, is released and flows through a 3-megawatt electrical heater that raises its temperatures to nearly 2,500 degrees Kelvin. Then sufficient oxygen is added to the hot nitrogen to produce an air composition. The heated air flows through a 42-inch diameter hypersonic flow nozzle and past the model. A large steam ejector also pulls a vacuum on the test chamber to help establish the flow pattern and to simulate a high altitude condition.



#### **Test Program Development and Management Responsibilities**

#### Test Program Development and Planning

We provide test program development support such as engineering analysis, ROM (rough order of magnitude) cost estimates, preliminary designs, and participate with the Government in technical discussions with potential test customers to refine test to include all safety and environmental aspects of the project in the planning process.

#### Test Program Management

When a customer commits to test at Plum Brook, we develop a written work plan. The plan includes test requirements, work breakdown structure (WBS), final detailed cost estimates, expenditure projections, description of work effort, manpower loading, detailed schedules, and test procedures. We document any changes to a test program by revising the work plan as often as required. A separate work plan is developed for each new program.

We manage and perform all work required for test preparation, test operations, and facility shutdown, in accordance with the approved test work plan. Typical support activities include planning, scheduling, issuing work tasking orders, coordination of work, cost control, generating reports, supporting reviews, and resource utilization.

#### Test Facility Preparation, Operation, and Shutdown

We prepare all test facilities for testing operations which include design, engineering analysis, safety analysis, procurement, buildup of new systems, refurbishment of existing systems, installation and removal of test hardware, inspection services, systems preparations and checkout. As part of our test operation responsibilities we operate a B-boiler steam plant as well as a component cleaning facility in support of test operations.

#### **Test Facility Maintenance**

We provide complete test facility inspection, preventive maintenance, and emergency repairs. This support includes maintenance of all test facility systems that directly support test facility operations.

### Infrastructure Systems Responsibilities

We operate, maintain and repair all infrastructure systems, structures at the Plum Brook Station. They consist of the following systems/equipment.

**Energy Management Control, Life Safety, and Security Systems** – While the Plum Brook Station has not installed an EMCS, it has installed life safety systems for smoke and low oxygen detection. CHI has responsibility for maintaining the systems and their component elements.



There are over 100 devices in the life safety systems. Preventive maintenance is scheduled on a monthly basis for low oxygen and semi annually for the smoke detectors. We maintain, on a preventive and corrective action basis, all emergency and exit lighting.

Security systems include access control and intrusion alarms on one system with 6 facilities on the system. Six CCTV are maintained by CHI technical personnel. They are certified to maintain these systems.

Life Safety systems we have maintenance responsibility for encompass the following:

- Automatic sprinkler systems serving 4 facilities
- Combustible gas detection systems 2
- Emergency and exit lighting systems 19
- Fire extinguishers 340
- Fire hydrants 75
- Fire pumps
- Low oxygen/toxic gas detectors 17
- Smoke detectors -400 +
- Standpipe system 1

**Electrical Distribution Systems** – Plum Brook receives all of its electrical power through a 138 KV feeder from Ohio Edison. It is further reduced to 34.5 KV at a substation on the NASA installation. Power is distributed to the four major test facilities and the Engineering building at either 7,200 volts or 34.5 KV for the largest loads. Approximately 45 miles of distribution, high and low voltage, is a major component of our electrical distribution maintenance responsibilities. Fifty high voltage transformers are a part of the overall system as are six uninterruptible power systems. CHI insures that maintenance is performed in a timely manner by qualified Electricians on all parts of the system. We use PT&I methodologies to inspect the system on a periodic basis. CHI has replaced a direct buried 7,200 V feeder and installed a 2,500 foot alternate feed to the Engineering building. CHI in-house engineering personnel performed the design engineering for this work, saving the Government approximately \$350,000. CHI maintains all components of the HV and LV systems at the Station. Typical ancillary equipment includes: 100 plus relays, metering, AC and DC power, 118 capacitors, switch gear, circuit breakers (42), batteries, chargers, power and lighting panels, disconnects, and other related equipment all of which are operated and maintained by CHI Electricians certified and trained for the work.

**Communications Systems** – Six intercom/paging systems serve primary facilities. These systems are maintained on a Trouble Call basis by our Electronic Technicians.



**Personnel and Material Handling Systems** – CHI provides preventive and corrective maintenance services to: five elevators, ten cranes to a capacity of 25 tons, 74 hoists to six tons capacity, 200 plus slings and 27 overhead power operated doors. Maintenance personnel are trained and certified to perform maintenance and repairs on the subject equipment. The 200 + slings are tested and recertified on a four year cycle.

**Grounds and Surfaced Areas** – At NASA's Plum Brook Station, we are responsible for the continuing maintenance of improved and unimproved grounds, as well as 50 miles of roads, eight acres of parking, sidewalks and curbs on this 6,400 acre facility. Improved grounds account for a fraction of total acreage. Grass areas are mowed regularly during the growing season; leaves are removed on a regular basis; debris is regularly removed from open ditches, culverts and storm catch basins. During the winter, snow and ice removal become important tasks for our roads and grounds workforce.

**Buildings and Structures** – CHI's responsibilities include the maintenance and repair of 200 various type buildings plus installed and attached equipment. The types of maintenance work performed include carpentry, painting, sheet metal work, electrical, HVAC, plumbing, electronics, lock smithing, alarm systems, masonry and roofing. Work is accomplished by our qualified work force in accordance with the Plum Brook Station work priority system.

Examples of equipment maintained and repaired by our crafts personnel are: doors, cranes and hoists, motors, motor control centers, lighting and associated wiring and controls, interior utility distribution systems such as water, power, gas, steam, compressed air plus the hardware and fittings associated with the systems Flooring, wall systems, roofing, stairs, masonry, sheet metal ducts, structural systems, and similar elements of real property are also maintained.

Maintenance work is accomplished under approved work orders and Trouble Calls by the CHI work force. Our staff of craft personnel is well qualified and, where required, each member is certified for the tasks he or she is assigned to perform.

**Heating Plants and Hot Water Boilers** – We operate and maintain six steam, up to 30,800 KBTU and 16 hot water boilers and the condensate return systems to serve, among primary facilities, each of the four Plum Brook major test facility complexes and the Stations' Engineering/ Headquarters building for environmental purposes. Each boiler is rated at between 15 and 125 HP. In addition, CHI also operates and maintains two large high-pressure steam plants, B and B2, without condensate return to produce large amounts of steam for the operation of two of the test facilities, the Hypersonic Test Facility and the Rocket Engine Space Simulator Test Facility. Both of these facilities require large volumes of steam for simulating upper atmospheric and space conditions. To achieve the volumes of high pressure steam needed during test, steam is generated in the two plants. It is accumulated and stored in an accumulator pending use during research test-



ing. The boilers supplying this steam operate at 500 psig and generate steam flows of 28,000 lb./ hr. It takes several shifts of steaming at full power to charge up the accumulator for one test. All of these systems are operated and maintained by certified operators on the CHI staff.

### Heating, Ventilating, Air Conditioning and Refrigeration

HVAC/R – We operate and maintain 13 building air conditioning centers ranging in size from 2.5 tons to 650 tons. The majority of these systems are in the 25 ton to 130 ton range. These are used to cool test facilities, control rooms and the Station's Engineering Building. Because these systems are employed extensively, an aggressive preventive maintenance program has been installed. 45 air handling units and 90 fan coil units are installed as elements of the HVAC/R system.

*Chiller/Chilled Water System* – CHI operates and maintains chillers and chilled water systems at Plum Brook Station. The largest are two 650 ton units that are used to chill 1.7 M gallons of water in a tank at the lower end of the B-2 facility. Six cooling towers have a capacity of 2,000 gpm. Chilled water is sprayed at the discharge of a rocket engine being tested to absorb the energy from the engine. This spray is driven by four 56,000-gpm pumps that are powered by 4,160 VAC motors. Until CHI took over this contract, there was little organized preventive maintenance performed on this system. PM has now been established and the reliability of the chillers has improved.

# **Utility Distribution Systems**

*Potable Water Systems* – Potable water is supplied entirely from a municipal system, which feeds into a buried million-gallon reservoir. The distribution system, pumping station, chlorination system, two 60,000 gal water towers and the cathodic protection systems on Plum Brook Station are operated and maintained by CHI personnel. When one considers the 6,400-acre size of Plum Brook Station, the utility distribution systems are comparable in size to that of a moderate city. All 200 buildings are served by the potable water distribution system complete with related installed equipment.

*Compressed Air Systems* – The decentralized compressed air system on Plum Brook Station consists of smaller compressors in each of the major test facilities and the Engineering Building. Compressed air is delivered locally to specific equipment and connection points in each location served. Compressors range in size from 7.5 hp to 175 hp, and from 30 cfm to 650 cfm at 100 psi. The largest compressors and systems we maintain are used in the major test facilities.

*Fuel Distribution System* – Plum Brook Station has two buried 7,000 gal fuel tanks with environmental monitoring systems. These systems are used to fuel equipment and vehicles and they are operated, maintained, and licensed by CHI.



*Natural Gas Distribution System* – Plum Broom Station receives 50,377 KCF of natural gas, on average, from two major pipelines each year. The gas distribution system services facilities on this 6,400-acre reservation and is maintained by CHI mechanics trained and certified for the maintenance and operational work involved.

*Raw Water System* – CHI maintains a pumping station at the edge of Lake Erie within the boundary of the city of Sandusky. The station pumps lake water through an approximate five mile buried 24" pipe to two reservoirs on Plum Brook Station. Water is pumped and piped throughout the Station to supply fire fighting water to an extensive system of fire mains and hydrants. It is also piped to the major facilities on the Station as a heat sink for various facility air conditioning systems.

**Maintenance Related Environmental Services** – Under the guidance of the Glenn Environmental Management Office, CHI developed and maintains the Plum Brook Environmental Management Program. Responsibilities include: monitoring air and, water quality in compliance with the NPDES permits, operating and maintaining satellite waste sites, a waste recycling program and responding to small chemical/oil spills. The environmental staff is trained and certified as required by Federal, state, and local regulations.

#### Cathodic Protection System

We operate and maintain the cathodic protection system that protects the natural gas, domestic and raw water distribution lines.

### Aircraft Warning Lights

Operate and maintain the aircraft warning lights. Aircraft warning lights exist on the B-3 Test Stand (Building 3311) at 250 feet, the SPF Water Tower (Building 1452) at 205 feet, and the SPF Stack (Building 1451) at 200 feet.

#### **General Institutional Services**

#### Vehicle/Equipment Maintenance and Repair

Provide preventive and emergency maintenance and repair services on passenger vehicles, construction equipment, mobile crane, materials handling equipment, cryogenic and gas handling vehicles, as well as all portable tools and equipment used for grounds maintenance.

#### **Custodial Services**

Provide routine, emergency and special custodial services in the office buildings and research areas at Plum Brook Station to assure a safe, healthy, and attractive work environment.



#### Procurement and Logistic Support Service

These services include purchasing, receiving, inspection, delivery, managing accounts receivable and accounts payable, mail services, shipping and moving of material and equipment and supplies.

#### Warehousing and Storage

Manage the Plum Brook Station warehousing and storage facilities, including maintaining accurate inventories of items stored at Plum Brook Station; receive, unload, process and store material; assign and record the storage location; retrieve and load items from storage; secure material for transportation, and; remove and ship obsolete records to the National Archives when instructed by the Government.

#### **PBMO** Support Services

Provide clerical and administrative support to the operation of the Plum Brook Management Office (PBMO). Clerical support includes the use of word processing and computer applications programs for generating letters, minutes, reports, viewgraphs, spreadsheets, tables, charts, graphs and databases.

Administrative support includes: executing Plum Brook license and lease agreements; scheduling and coordinating tenant activities; compiling and distributing data packages; taking and transcribing minutes; receiving, screening and directing incoming telephone calls; filing; receiving and distributing facsimiles and mail; scheduling conference rooms; and ordering supplies.

Also included is maintaining the Plum Brook Records Library. The work includes receiving, storing, shipping, issuing, and retrieving various records, including operation manuals, standards, codes, and specifications, reports, references, test records, Plum Brook Reactor Facility records, Station standby records, photographs, negatives, viewgraphs, videotapes and historical files.

### Engineering, Drafting and Construction Management

These services include the mechanical, structural, electrical, civil, and architectural disciplines. The work requires a working knowledge of AutoCad and Work Center systems and ability to interface with the Glenn-Cleveland engineering and drafting systems.

Provide construction management for construction projects including: specification writing, field inspection, evaluating change cost estimates; maintaining construction files; documenting and assuring drawings are changed to the "as-built" condition, performing facility change documentation, and; chairing pre-construction conference and construction status meetings.



### Computer Support Services

Operate, maintain, and provide user support to assure reliable specialized computer service support to all areas of the Station. These specialized computer services include off the shelf and custom software and hardware in support of fire, security and operations monitoring and alarm systems; custom systems required by Station operations; custom systems required by test programs; and other computer services not addressed in the following paragraph.

# Environmental Compliance Program

Manage an Environmental Compliance Program which ensures that Plum Brook Station's activities are carried out in a manner which complies with all applicable federal and state laws, NASA policies, and active permits.

# **Security and Plant Protection**

Provide Security and Plant Protection services to safeguard the personnel (including researchers and visitors), the physical facility, national security information and materials, and intellectual property. These services are provided 24 hours per day, 7 days per week. These services include access control, patrol, lock/key, traffic, communications center operation, and emergency planning.

# Plum Brook Reactor Facility (PBRF) Support

Monitor and maintain the PBRF to assure that no items of noncompliance are detected during routine GRC and NRC license audits. Services include radiological surveys and monitoring, maintenance and decommission support.



# BASE-WIDE CUSTODIAL SERVICES, NASA GLENN RESEARCH CENTER, CLEVELAND, OH

NASA Glenn Research Center awarded a fixed-price contract to Call Henry, Inc. to provide installation-wide custodial services for over 2.1 M square feet of office, laboratory, research facilities, shops, hangers, and warehouse/storage space. In addition to routine custodial services, CHI maintains 11 large class I and IV cleanrooms plus specialized services such as floor sealing, carpet installation, industrial cleaning, light fixture cleaning, drapery installation, and other similar type services as depicted in reference figure. The contract employs over 65 people. A successful phase-in was accomplished in 2 weeks. The challenges CHI faced with on this contract included the re-education of the incumbent workforce to comply with CHI's exacting time and performance standards, along with revamping the work schedule from mostly first shift operation to mostly a second shift operation. These changes caused considerable revision to the way the job had been managed in the past and thus, re-education of the total workforce. CHI also employed all new cleaning equipment that required additional training.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Custodial Services (NASA Glenn Research Center, Cleveland, OH)
Spray Buffing	×
Machine Scrub/Polish	
Vacuum Carpet	
Shampoo Carpet	
Dust Mop Hard Surfaces	x
• Trash Removal	x
Damp Mop Hard Surfaces	x
Rest Room Services	x
Dining/Kitchen Cleaning	x
Carpet Installation	x
Industrial Cleaning	x
Class I - IV Cleanroom Cleaning	x
• Other Specialized Cleaning Service	s X
Customer Performance Rating	New Contract

#### CHI MANAGER'S BASE-WIDE CUSTODIAL SERVICES FUNCTIONS PERFORMED

# INSTITUTIONAL FACILITIES OPERATIONS, REPAIR, AND MAINTENANCE (IFORM) NASA GLENN RESEARCH CENTER, OH

CHI's provides, on a fixed-price with variation in quantity type contract with a workforce of over 100 personnel, a wide-range of facilities/equipment, preventive maintenance, predictive maintenance, repair, utilities operations, and major facilities/equipment installation services in support of NASA's on-going research projects/programs. Reference figure depicts the systems, equipment, and services CHI provides at GRC.

The IFORM contract requires CHI to support some of the most advance research facilities and equipment in the world, including:

**Energy Management Control, Life Safety, and Security Systems** – CHI operates and maintains the EMCS and ALS3 system which is a single fully integrated fire alarm server networked throughout most of the GRC complex's 152

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Institutional Fac. Ops, Repair, and Maintenance - GRC, Cleveland, Ohio NASA-GRC
Life Safety Systems	x
Electrical Distribution Systems	x
Communication Systems	x
Personnel and Mtl Handling System	n <b>x</b>
Surface Areas and Grounds	x
Buildings and Structures	x
Heating Plants O&M	x
• HVAC & Energy Mgmt Control Sys.	x
Utilities Distribution Systems	x
Related Environmental Services	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Performance Rating	Excellent to date

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

research and supporting facilities totaling just over 2 million square feet of covered space. EMCS, supported by proprietary software, monitors and controls, for greatest efficiency, environmental system components including detectors, sensors, activators, valves, flow regulators, pumps, and associated wiring and plumbing. Environmental conditions are thereby maintained and operated to closely match evolving energy requirements for both administrative and research facilities on a 24 hour 7 day per week basis.

Under the heading of Life Safety, there are a total of 691 detectors and systems or devices sampling air quality for smoke, combustible and toxic gases as well as for low oxygen conditions all of which we maintain. Fire suppression systems include among the total inventory such systems and devices: 62 automatic sprinkler and standpipe systems, 13 CO2 Extinguishing systems, various pumps and hydrants, and nearly 2,400 fire extinguishers.

Security systems include 25 Access Control and 49 Intrusion Detection systems detectors. All of the above systems and equipment are operated and maintained by CHI and updated as conditions require.

All section C8 systems and components are subject to preventive maintenance and repair by qualified Electronic Technicians.



**Electrical Distribution Systems** – CHI operates and maintains NASA Glenn Research Center's site wide/building electrical systems, high and low voltage. The Center receives commercial 138KV power through a single substation and distributes the power to over 150 buildings throughout the Center. The distribution system consists of 12 substations; over 1,320,000 lineal feet of electrical cable (over 590,000 feet of which is nitrogen filled); 110 oil filled transformers ranging from 50 KVA to 500 KVA; 80 dry transformers ranging from 225 KVA to 85 MVA; and over 1,550 panel boxes throughout the site.

CHI electricians perform thousands of preventive maintenance and PT&I actions annually on the distribution and building systems. In addition our high voltage and low voltage electrical maintenance crews complete thousands of Trouble Calls annually. Indefinite Delivery Indefinite Quantity (IDIQ) delivery orders have expanded CHI's electrical maintenance and repair responsibilities, by adding projects for installing over 70 electrical panels during the first three years of the contract. In addition, Davis-Bacon (DB) projects totaling over \$2 million have been awarded to CHI at the Center, comprising renovation of electrical systems in two major research facilities on the Center. Through this DB work, CHI removed and replaced 42 electrical panels, 2 motor control centers, three major bus bars and other electrical work.

**Communications Systems** – CHI technicians maintain a total of 45 communications and paging systems in 45 GRC buildings. Maintenance includes both preventive and corrective maintenance

**Personnel and Material Handling Systems** – Our Maintenance Mechanics have been providing maintenance services to a total of 521 cranes and hoists used in many of the research facilities in direct mission support. Each of the 1,560 slings used by the customer is scheduled for and tested once every 4 years. Maintenance, testing and certification of material handling systems are conducted by trained and certified mechanics. Under the IFORM contract, CHI is maintaining 11 personnel and freight elevators by subcontract.

**Grounds and Surfaced Areas** – At GRC, CHI is responsible for the continuing maintenance and repair of sidewalks and curbs as well as maintenance of improved and unimproved roads and grounds which includes 80 acres of improved grass area and 80 acres of unimproved areas. Grass areas are mowed and edged regularly during mowing seasons; weeds are eradicated soon after their discovery; ornamental areas are properly maintained; leaves are removed on a regular basis; debris is regularly removed from open ditches, culverts and storm water catch basins. 600 trees, 300 shrubs and many hedges are trimmed periodically. Recreational facilities are also maintained by CHI. During the winter, snow and ice removal becomes a primary task for CHI's roads and grounds workforce. Maintenance of snow and ice removal equipment is included in our responsibilities.



**Buildings and Structures** – CHI maintains and repairs all of NASA's Glenn Research Center building and structures of over 2M SF, which involve the complete spectrum of interior and exterior facility maintenance/certification tasks and skills: roofs (roofers and carpenters), doors (carpenters, locksmiths, mechanics), wall structures (carpenters, sheet metal, welding), floors (carpenters, masons, tile and carpet layers), windows (glazers and carpenters), ceilings (carpenters and painters), trim and hardware (carpenters and painters), gutters and downspouts (carpenters and sheetmetal workers), building/equipment monitoring systems (electricians, electronic technicians), emergency/exit lights (electricians), fire suppression systems (electronic technicians, plumbers), access control systems/CCTV (electronic technicians), lighting system (electricians), low voltage distribution system (electricians), fixed overhead crane/hoist, mobile crane/hoist and associated rigging (mechanical). Most of this work is performed in response a Work Request or Trouble Call (repair).

**Heating Plants and Hot Water Boilers** – GRC facilities include 36 steam, up to 600 HP, and hot water boilers which are operated and maintained by a CHI. CHI provides preventive maintenance services for such elements as pumps, air compressors, valves, traps, forced/induced draft fans, etc. The central heating plant serving the main campus area is manned 24 hours per day as required by the State of Ohio regulatory agency and the GRC IFORM contract.

CHI maintains and operates eight compressed air systems at 125 psig to supply various industrial and research requirements.

**Heating, Ventilating, Air Conditioning and Refrigeration** – CHI operates and maintains HVAC/R systems for all buildings at NASA's Glenn Research Center. Incorporated in the buildings system are 40 split system air conditioning/condensing units, 381 package air conditioning units, 310 air handling units, 1,462 fan coil units, 21 large air dryer units, 974 exhaust fans, 600 forced air heating units and 6 large gas fired heating units. Smaller items include over 400 cold/ hot drinking fountains, 7 mobile refrigerant reclaimers, and numerous window-type air conditioning units.

To fulfill our duties CHI dispatches HVAC/R technicians to perform thousands of preventive maintenance actions and complete thousands of Trouble Calls annually. We report and verify equipment condition, inventory information, location and relevant maintenance and repair information for each specific action using over 12,000 individual reports annually. In addition, Davis Bacon Construction projects awarded to CHI during the second and third year of the contract expanded our ventilation responsibilities to include renovation (by replacement) of an entire ventilation system in the Center Building 106 research facility. The project included replacing eight roof-installed ventilation stacks, wiring and duct systems on 3 floors of the building, and installing electronic control devices that control ventilation.



CHI operates and maintains NASA Glenn Research Center's 24 chillers of up to 6,500 tons and chilled water production system. The major components of the system are 6 cooling towers, 24 chillers, and 14 closed-loop systems. Incorporated in the system are nine centrifugal, 6 rotary type and nine reciprocating chillers, 41 major chilled water pumps, 21,500 lineal feet of cooling tower supply and return lines and 24,300 LF of chilled water supply and return lines.

Our qualified HVAC maintenance personnel perform over a thousand monthly, quarterly, semi-annual and annual preventive, programmed and PT&I maintenance actions on the system each contract year. In a major annual action, the Center shuts down its large computer support facilities one weekend yearly, during which time CHI services the entire chilled water and cooling tower for the facilities.

Our HVAC maintenance personnel provide emergency (24 hours around-the-clock) and routine Trouble Call maintenance as CHI Trouble Call desk receives requests. We monitor the operations of the system 24 hours daily with both emergency and routine alarm capability, enabling CHI to respond to emergencies at any time, day or night, and to ensure that routine problems are treated economically yet expeditiously.

We operate and provide water treatment for 6 large cooling towers, ranging in size from an 80,000-gallon basin volume and 4,000 recycle (flow) rate to a 1,800,000 gallons basin volume and 11,000 gpm recycle rate. We also operate and treat 6 smaller towers with basin volumes of up to 30,000 gallons. The total capacity of all towers and closed-loop systems we operate and maintain is over 4,500,000 gallons.

So important is this system to NASA mission, that CHI has dedicated a Chemical Treatment Specialist who conducts daily tests of water quality, water use and system condition. We have arranged for our treatment chemicals supplier to provide a full day per week interface with our Specialist and have tasked them to improve the quality of water, decrease water use and generally improve Glenn's chilled water production system. Through this process we have automated (often at no or minimal cost to the Government) chemical feed systems and blow-down and upgraded chemical controllers. Recently, at the recommendation of CHI's specialist and together with the Government, CHI converted our testing for effectiveness of biocides from a petri-dish test to an on-site computer operated method that provides test results in minutes rather than days. This enables CHI to more rapidly (and accurately) assess and act on test results. CHI, along with its supplier, completed a survey of bulk tanks and the bulk tank chemical delivery system at Glenn. The results of the survey provided information as to ways to improve safety for plant operators and delivery technicians, identified objectives to prevent releases of chemical into the immediate areas of the individual tanks and identified maintenance upgrades to the system.

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#### **Utility Distribution Systems**

*Steam and Condensate Systems* – CHI operates and maintains the entire steam production and condensate return system at NASA's Glenn Research Center. The total system consists of three sub-systems, each one supporting specific geographic areas at the Center. This three part system consists of 11 steam boilers ranging in size from 60 horsepower (HP) capable of producing 2,500,000 BTU per hour (BTU/Hr.) to 600 HP capable of producing 40,200,000 BTU/Hr. Total capability of the 11 steam producing boilers consists of 4,297 HP capable of 144 million BTU/Hour. Steam is distributed through 7.4 miles of steam distribution lines and over 6.8 miles of condensate recovery lines. Over 1,250 steam traps are incorporated in the system. All buildings are served by the steam system.

Our Stationary Engineers provide around-the-clock operational and maintenance of this total system using CHI developed and Government approved operating instructions, which include topics for: the preparation and support of the annual State certification of the boilers; conduct around-the-clock direct and EMCS supported system monitoring; daily water sampling; monitoring and adjusting chemical treatment; ensuring steam output is within contract defined parameters; recording and maintaining daily operating logs and records; and performing daily maintenance and adjustments to all components of the system.

CHI Stationary Engineers, supported by other qualified, certified technicians perform over 240 preventive maintenance actions annually on the system, including comprehensive inspections, repair, and adjustments during the scheduled "shut-down" periods for actions which cannot be taken during the operating period. CHI led the effort at GRC to automate chemical mixing where, for years previously, hand mixing had been the method used. We also led the effort to replace older steam boilers, that had to be constantly monitored, with newer boilers that could be operated without constant surveillance. This \$350,000 replacement project will pay NASA back in significantly less than 2 years, and save the Center approximately \$300,000 annually thereafter.

*Potable Water Systems* – CHI maintains NASA's Glenn Research Center's two potable water systems from the point the commercially provided potable water enters the Center. The distribution systems consists of 42,100 lineal feet of potable water lines incorporating 70 back flow preventers, running to over 120 buildings and terminating in over 1,500 potable water outlets.

CHI technicians perform an average of 1,000 Trouble Calls and preventive maintenance actions annually on the potable water system. CHI provides additional support to the system through IDIQ task orders issued by the Government. These orders range from relatively minor requirements to replace existing potable water outlets, to excavating and repairing significant parts of the system within the buildings and/or distribution lines.



*Compressed Air System* – CHI technicians provide both minor and major repair for NASA's Glenn Research Center compressed air system. Repairs consist of arresting and repairing leaks in the systems in all buildings, approximately 19,200 feet of service lines and valves; and replacing lines and valves. Minor repair is provided via the Trouble Call system and averages 10-15 Trouble Calls annually, primarily to repair leaks. Major repairs consist of replacement of lines subsequent to system shutdown and average one annually. CHI performs hundreds of preventive maintenance actions annually on Glenn Research Center compressed air system components.

*Fuel Systems* – CHI operates the fuel system supplying diesel fuel to NASA Glenn Research Center's central steam plant where it is used as an alternate to natural gas during gas system outages. Fuel system operations are performed and supervised by CHI stationary engineers operating the Center's steam production and distribution system. Approximately 8,000 gallons of fuel are delivered annually via vehicle from commercial sources and off loaded under CHI supervision into tanks for direct feed into the boiler system. CHI personnel continuously monitor fuel-flow and fuel use and make adjustments necessary to maintain efficient, effective levels of use. Operators sample and test fuel daily, 7 days per week.

Fuel tanks are inspected daily to detect leakage, potential leakage or other incipient problems. Repair is accomplished via Trouble Call (minor repair) or IDIQ task order (major repair). Each year CHI performs major programmed maintenance on one quarter of the fuel tanks, consisting of draining, thorough cleaning and parts replacement as required to ensure "like new" condition. CHI uses comprehensive safety practices and checklists during all fuel handling, testing, and use. Our safety practices have resulted in a perfect safety record in the discharge of our fuel responsibilities; without loss of fuel, without unplanned fuel system outage, or contamination of adjacent areas.

*Natural Gas System* – CHI provides preventive maintenance and minor repair services to NASA Glenn Research Center natural gas system. The system consists of 222,000 feet of natural gas distribution lines and 53 valves controlling flow of the gas. All CHI technicians who work on the system are trained in both the technical and safety aspects of the system, and work as teams to ensure safety. Minor repair is implemented via the Trouble Call mechanism of the contract and averages approximately 30 annually. Other major repair, such as line excavation and replacement, is implemented via IDIQ task orders issued by the Government and average 500 labor hours annually. CHI technicians perform 53 preventive maintenance actions annually on the system's valve points, including lubrication, testing, and checking the integrity of valve hardware and operations. Problems found during the PM action are converted to Trouble Calls or IDIQ task orders, as appropriate.



**Maintenance Related Environmental Services** – As IFORM contractor, CHI provides hazardous waste abatement and spill cleanup services on an as needed basis. The service includes the collection, packaging, and transportation of hazardous materials. Hazardous materials may include asbestos, lead, combustible liquids, paint, and other substances not excluded from the contract. All hazardous material operations and disposal are governed by pertinent Federal, state, and local regulations. Our hazardous waste personnel are trained and certified to process each class of hazardous material normally encountered at GRC.

This contract offered some unique challenges for CHI's managers from the very beginning. The previous contract was a cost plus contract, while the new contract was a fixed price. This took a lot of our effort to train and discuss with our employees and the Government personnel as to the difference in the two types of contracts; i.e., our contract as a performance based fixed price contract where CHI made the decision as to work methods, etc., employees were only required to perform the work specified, where the Government COTR role was one of quality assurance evaluator. A vast difference from the cost plus environment of the past.

The contract combined three difference contracts into one with three different unions. CHI successfully negotiated with the unions involved and had agreements in place at the time of takeover.

Another challenge we were faced with, was the lack of material inventory records whereby we had to completely inventory all existing materials and establish a centralized material management function. We added additional personnel to accomplish this non-planned event.

In the first months of the contract, CHI installed and implemented its proprietary computer system, Capella. Capella is a totally integrated system in which 23 business functions operate as a single solution. The capabilities range from customer support to engineering planning, scheduling, purchasing, etc. This effort took training, purchase of equipment, and installation of system configurations. However, the largest and most challenging task was the loading and revising of the maintenance data based on records that were less than accurate.

The Glenn Research Center consists of many critical systems serving major NASA research facilities, computer centers, wind tunnels. Downtime in any of these facilities cost thousands of dollars a minute in lost time, revenue from various universities, commercial, and Government customers. Our immediate service call response is critical and follow-on repair equally urgent to ensure continuing operation of the facility.

# ENGINEERING, MODIFICATION, REPAIR AND LOGISTICS SUPPORT FOR SPECIAL FORCES COMMAND TAMPA, FL/RAYTHEON E-SYSTEMS

CHI was retained by Raytheon E-Systems to perform a comprehensive evaluation of Raytheon E-Systems' performance on its contract with the Special Forces Command to provide engineering, manufacturing, product testing, modification, and repair to a wide range of special operations forces equipment and services. The contract involved 12 different locations, 1,100 people, and over \$200M expenditure per year. The client performed full facilities management and maintenance, engineering, manufacturing, production control, and logistics support services. The operational analysis was designed to evaluate every department on this contract and to assess current operations and provide recommendations for improvements.

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Upon CHI's findings and recommendations, we were retained to assist in the recommendation implementation. The study/analysis analyzed all aspects of the operation: organization, work management, engineering, quality, safety, manufacturing processes, ADP systems, financial/accounting, contract administration, subcontract, material management, etc. CHI was retained for their broad/ diverse technical services background.

The critical aspects for this contract was Raytheon's support of the Special Operations Forces community. This support included the ability for

	Contract/Program
CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Engineer, Modify, Repair, and Logistic Support, (SF) Equipment Special Forces (SF) Command
SOW Requirements	(Tampa, FL)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
Fire/Rescue and Security Services	x
Management & Administration Svcs	×
Medical Services	X
• Recreation and Food Services	X
Supply/Logistics Services	X
Transportation Services/Veh Maint	X
• Utilities O&M	X
Airfield Operations/Aircraft Maint	X
Property/Asset Mgmt. Services	X
Work Management System Services	sX
Financial/Accounting	X
Computer System/Info Mgmt	X
Program Analysis & Control	X
Planning, Scheduling & Work Integ.	×
Customer Performance Rating	Superior

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

quick reaction to diversified missions and support requirements anywhere in the world. To meet these challenges a disciplined approach for work management and the flexibility to react were key elements for the customers operations. CHI personnel played a key role in implementing these capabilities.

Mr. H. Foster was the team leader on this contract and was assisted by CHI's team as follows:

- W. Makynen Work Management, Work Control, Production Control, and Automated Systems
- H. Sneed Quality Control, Project Management
- J. Griffin Facilities Maintenance, Production Control, Manufacturing, Configuration Management
- J. Pitman Engineering
- **M. Hart** Facilities Utilization
- **R. Hansen** Logistics, Logistics Engineering, Property, Warehousing, and Security

# PROVIDE A WIDE-RANGE OF TECHNICAL SERVICES, KELLY AIR FORCE BASE, TX AND MCCLELLAN AIR FORCE BASE, CA

CHI competed on a contract to provide a wide-range of technical services in support of the U.S. Air Force downsizing/base closure of Kelly and McClellan AFBs. The extent of the contract was to take over a wide range of technical services, from facilities maintenance, electronic equipment M&R to operating machine shops, etc., as Government employees transferred to other locations, retired, etc., during the downsizing. The contract was totally an indefinite quantity contract where the contractor would respond to individual Government requirements. CHI was selected for this contract based on its past experience in managing and controlling large workforces and our in-depth knowledge of Government regulations and reporting requirements, plus our plan for acquiring the necessary personnel on short notice.

To date, the Air Force has only awarded two IQ taskings, thus we look forward to having the opportunity to respond to additional IQ work tasking. When awarded, the Air Force specified a NTC price of \$425 M over a 5-year period. To date this has not materialized.

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### PROVIDE OPERATIONAL ANALYSIS FOR EG&G FLORIDA FOR THE BASE OPERATIONS SERVICES, NASA, KENNEDY SPACE CENTER, FL

CHI as a subcontractor for EG&G, performed an operational analysis and provided recommendation for the improvement of the base operation services performed by EG&G at NASA's Kennedy Space Center. Reference figure shows the functional requirements of EG&G's NASA/KSC contract. EG&G's contract responsibilities included complete facilities maintenance and utilities operations; engineering and design; systems configuration management; equipment maintenance and operations; logistics support, including supply, maintenance, transportation, logistics engineering; mail service and distribution; custodial service; security services; automated systems support; printing; and publications support and distribution. CHI personnel performed this analysis by observing the current operations, interviewing personnel, analyzing organizational structures and inefficiencies, reviewing established EG&G and Government procedures, reviewing management data for the accomplishment of work, analyzing the automated capabilities of the work management system, and analyzing the methods and procedures used in the support of the NASA KSC mission and shuttle launch support. At the conclusion of the operational analysis, CHI personnel prepared documentation of their findings and presented to

CALL HENRY INC ?	Contract/Program
CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Base Operational Services, NASA (Kennedy Space Center, FL) Subcontractor to EC&C
SOW Requirements	
• Engineering/Technical Services	X
• Buildings & Equip. Maint. & Repair	×
• Electronic/Comm/ Operations/Maint	X
Environmental/Laboratory Services	×
• Fire/Rescue and Security Services	x
Management & Administration Svcs	x
Medical Services	x
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	x
Property/Asset Mgmt. Services	x
Work Management System Services	
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Superior

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

EG&G. Included were recommendations for improvements, more effective/efficient methods of operation, organization structure, automated systems use, personnel staffing and skill mix, and work management systems. Upon review of these findings, CHI was tasked to assist EG&G in the implementation of the proposed changes. This critical contract supported NASA and Aerospace contractor operations in their day-to-day space launch missions plus other related site aerospace activities. CHI key management personnel involved in this operations included:

- H. Foster Team Leader
- W. Makynen Work Management, Work Control, and Automated Systems
- H. Sneed Quality Control, Project Management, Security
- J. Parker Facilities Maintenance, Configuration Management
- **R. Homberger** Engineering, Utilities Operations
- R. Hansen Logistics, Logistics Engineering, Publications, Mail Services, Administrative Services

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# LOGISTIC/PERSONNEL SUPPORT SERVICES, U.S. AIR FORCE RIYADH, SAUDI ARABIA

This contract, with over 250 people, supports the U.S. Air Force Logistic Group in Riyadh, Saudi Arabia in providing a wide range of in-country logistic/personnel support services. Services include in-country procurement, facilities maintenance, utilities operations, transportation/bus services, motor vehicle/heavy equipment maintenance, base supply services, minor engineering services, communication equipment O&M, housing management and maintenance, travel services, guard services, food services, recreation program/services, and government relations program, roads and grounds, custodial, and APO/courier services.

The challenges of this contract are the management of the multi-national workforce, dealing with their individual culture differences, and equally dealing with family member problems associated with living in a foreign country. CHI's J. Parker is the Project Manager and H. Foster and H. Sneed were responsible for developing the proposal and phasing in the contract. Both continue to be advisers to the project from a technical, as well as business management standpoint. CHI was a subcontractor to Saudi Services and Operating Co.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Logistic/Personnel Support Services, Air Force Logistic Group (Riyadh, Saudi Arabia)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	x
• Environmental/Laboratory Services	
• Fire/Rescue and Security Services	x
Management & Administration Svcs	
Medical Services	
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	x
Work Management System Services	s x
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Superior

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

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# BASE OPERATIONS SUPPORT SERVICES, NAVY PACIFIC MISSILE RANGE FACILITY, BARKING SANDS, KAUAI, HI

CHI provided Baker Support Services phase-in support and installation of CHI's computer system Capella in support of their contract with the Navy at Pacific Missile Range Base Operating Services, Barking Sands, Kauai, Hawaii. CHI installed a complex integrated application suite of business processes to support this 350 person workforce responsible for the operation and maintenance of the Navy's Pacific Missile Range Facilities. Contractual requirements, as shown in reference figure, with the Navy included operations, preventive, corrective maintenance, calibration of equipment, HVAC, facility plumbing, potable treatment and water distribution, sewage collection and treatment, emergency power generation, high and low voltage electrical distribution, facilities/structures, airfield maintenance, military family housing, fire station operation, security, pass and ID, new construction and alterations, engineering, energy conservation, planning and estimating, scheduling, purchasing, multiple supply operations, contracts, finance, and human resources. CHI provided a wide range of phase-in support including preparing technical/management operating plans, preventive maintenance procedures, establishment of maintenance records for facilities and systems, and assessing personnel requirements. CHI designed,

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Base Operational Support Services (Navy Pacific Missile Range, Barking Sands, Kauai, Hawaii)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	x
• Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	x
• Transportation Services/Veh Maint	
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
• Work Management System Services	
Financial/Accounting	
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

purchased, and installed a computer network, provided computer/system analysts and programmers to support system upgrades, plus provided personnel training in the use and operation of the automated O&M system software applications.

The unique challenges for this contract were that CHI had to install a new computer system to replace a number of old systems that had been developed over the course of time with little documentation. As with any new system, the users were very reluctant to migrate from the old legacy systems to a more efficient method of operation because of the possible personnel impact. CHI installed the Capella system and trained the users. Henry Foster, CHI's President, dispatched a team of our senior personnel (Dave Woodward, Rick Hansen, Hu Sneed) to work with the Baker personnel to show them the value of the improved system, and to speed the implementation. CHI was able to successfully implement the system and the results of the effort is that now the contractor is receiving evaluation scores consistently above 95%. CHI personnel (Bill Makynen, Larry Bunten, Rodion Gaerlan, Aleli Quiat, Ioni Buyser, Bon Jucinto. Herman Moneda) continued to support the system installation with custom reports and site specific modifications for over 2 years.

# \_\_\_\_\_\_CALL \_\_\_\_ENRY, \_\_\_\_

# MAINTENANCE AND SUPPORT SERVICES, AIR FORCE, ONIZUKA AS, CA

CHI was a subcontractor to Raytheon Services to provide the phase-in support for this 250-person Civil Engineering Services contract requiring the services as shown in reference figure. CHI installed its integrated application suite, Capella, to support the workforce responsible for the operation and maintenance of Onizuka Air Station. Operations, preventive maintenance, corrective maintenance, calibration of equipment, HVAC, facility plumbing, potable water distribution, sewage collection, low voltage electrical distribution, facilities/structures, military family housing, engineering, planning and estimating, purchasing, supply, tool crib, contracts, finance, and human resources were all functions performed by the workforce and supported by Capella. CHI provided support and assistance in the personnel interviewing, development of management plans, preventive maintenance plans, establishment of maintenance records, human resource records, financial and general ledger data, job cost collection methods, property and material systems, work control and scheduling, and

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Maintenance and Support Services, Air Force Base (Onizuka, CA)
Engineering/Technical Services	×
Buildings & Equip Maint & Repair	
Electronic/Comm/ Operations/Maint	
Environmental/Laboratory Services	^
Eiro/Posque and Socurity Son/joss	
- Management & Administration Succes	
	~
Recreation and Food Services	
• Supply/Logistics Services	<b>x</b>
Iransportation Services/Ven Maint	
• Utilities O&M	<b>x</b>
• Airfield Operations/Aircraft Maint	
<ul> <li>Property/Asset Mgmt. Services</li> </ul>	×
Work Management System Services	s X
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

the establishment of operating procedures. CHI provided system operation and software application training plus provided system analysts and programmers to design site specific application software.

Unique challenges for this contract were experienced due to the delay in contract award. Because of this delay CHI had to install the new computer system to support the entire operation within a 1 month phase-in period. Five CHI personnel (William Makynen, Rodion Gaerlan, Aleli Quiat, Ioni Buyser, and Tony Faelga) were involved. Not only was the system installed and fullup-and-running on day-one of the contract CHI then had to train the new users. Training was accomplished and on-going efforts were performed to develop site specific reports and displays. An additional CHI person (Larry Bunten) was brought to the site following completion of the phase-in to support on-going operations, train on-site technical person in the use of the AS/400 platform Capella runs on, as well as in the use of Capella. Larry is still on site providing and implementing system upgrades and incorporating site specific modifications and enhancements.



THE CONTRACTS DESCRIBED ON THE FOLLOWING PAGES WERE MANAGED BY VARIOUS MEMBERS OF THE CALL HENRY, INC. CURRENT MANAGEMENT TEAM PRIOR TO THE CREATION OF CHI. THESE CONTRACT DESCRIPTIONS HAVE BEEN INCLUDED BECAUSE THEY PROVIDE AN IMPORTANT CONTRIBUTION TO CHI'S CURRENT PROJECT/ PROGRAM MANAGEMENT CAPABILITIES. TECHNICAL EXPERIENCE AND EXPERTISE THAT IS AND WILL CONTRIBUTE TO CHI'S CURRENT AND FUTURE GOVERNMENT TECHNICAL SUPPORT SERVICE CONTRACT PERFORMANCE.



# MAINTENANCE CONSTRUCTION AND SUPPORT SERVICES NASA AMES RESEARCH CENTER, CA

This contract, with a workforce of over 220 personnel, involved the operation and maintenance of HVAC, steam distribution, plumbing, low and high voltage, sewage collection, fire alarm, and facility monitoring systems; facilities and structures; roads and grounds; pest control; janitorial services; as well as new construction and alteration. Reference figure shows the work functions performed on this contract.

At Ames CHI principals were responsible for the maintenance of several critical systems serving major computer facilities supporting customers throughout the country. Downtime in these facilities cost thousands of dollars a minute in lost revenue from various universities and other research facilities. Immediate service call response was critical and follow-on repairs equally urgent to ensure continuing operation of the facility. Working directly for the Project Manager, CHI's Bill Makynen implemented a formal PM program and instituted sound work management practices aided by PC-based automation developed by CHI's Larry

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Maintenance, Construction, and Support Services (NASA Ames Research Center, CA)
Engineering/Technical Services	×
Buildings & Equip. Maint. & Repair	x
Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
Management & Administration Svcs	x
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	x
Work Management System Services	
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

Bunten. We were able to increase work through-put 600% to help ensure the integrity and up-time for these facilities. Preventive maintenance was primarily limited to non-intrusive tasks such as lubrication and passive PT&I techniques such as infrared thermography. This was to ensure the performance of PM did not adversely effect any operational system. Then, during annual shutdowns, we carefully planned and consolidated our maintenance and repair efforts to take maximum advantage of the shutdown period. Critical path schedules were prepared by CHI personnel, implemented and monitored to ensure all critical facility support systems were up and running on schedule and no impact to the research efforts were encountered.



# GROUND SUPPORT OPERATIONAL SERVICES NASA, KENNEDY SPACE CENTER, FL

This contract, with a workforce of over 1,200 people, performed the operation and maintenance (reference figure shows the contracts functions performed) of KSC space transportation related systems: structures, water, facilities, environmental control and pressurization, transporters, pneumatics, and special power. Responsibility for each of these systems included modification, installation, operation, and maintenance. Other support services included: facility and utility operations and maintenance. The functions include: propellants, cranes, doors, life support, industrial operations, and facility and utility operations and maintenance, plant engineering, quality assurance, and test support management. The challenge of this contract was equipment and system operational reliability, as any failure in critical systems would cause a delay in launch or even the life and safety of the launch personnel. Training, skills, and quality was the focus. CHI's W. Makynen was a manager of Annex Utilities Operations, while CHI's R. Homberger was the Mechanical Systems Engineer responsible for mechanical system operation and maintenance,

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Ground Support Operational Services, NASA (Kennedy Space
SOW Requirements	Center, FL)
• Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	X
Electronic/Comm/ Operations/Maint	X
Environmental/Laboratory Services	X
Fire/Rescue and Security Services	× – – – – – – – – – – – – – – – – – – –
Management & Administration Svcs	x
Medical Services	x
Recreation and Food Services	
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	x
Property/Asset Mgmt. Services	x
• Work Management System Services	
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

CHI's M. Hart was the Electrical Systems Engineer responsible for all the electrical systems at KSC up to the launch interface point. CHI's J. Parker was the manager responsible for facilities engineering and equipment O&M. CHI's J. Griffin was the Construction Subcontract Manager responsible for site-wide construction projects. CHI's H. Foster managed the proposal that won the contract and provided corporate overview during the execution of the contract.

# INSTALLATION SUPPORT SERVICES NASA, KENNEDY SPACE CENTER, FL

This contract, with a peak workforce of over 2,175 people, provided site-wide installation support to NASA organizations, tenant organizations, Saturn, and then Shuttle launch contractors (see reference figure). The services included:

- Test Support Management and Scheduling – the management, scheduling, planning, and overall coordination and operational control of all support operations provided by the contractor and the timely coordination and scheduling of all site and test/launch support provided by other contractors.
- Plant Engineering and Maintenance responsible for the following services to assure that the KSC area buildings, grounds, facilities, and equipment are maintained and effectively satisfy all requirements: maintenance engineering, maintenance, roads and grounds, heavy equipment operations, mechanical, and electrical utilities.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Installation Support Services, NASA (Kennedy Space Center, FL)
Engineering/Technical Services	X
• Buildings & Equip. Maint. & Repair	
• Electronic/Comm/ Operations/Maint	
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
• Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
• Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
Work Management System Services	
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

#### Supply and Transportation Operations – responsible for operating all aspects of the KSC supply system. These responsibilities include: material management, warehousing, material service center operations, transportation and traffic management operations, and planning and principal participant in the development and implementation of the Automated Shuttle Inventory Management Systems (SIMS).

- Documentation Support Services produce publications, provide data and reports management, graphics arts, providing exhibits, forms management, technical writing, development of comprehensive written, pictorial, and audio-visual materials, direct support to the NASA Public Affairs Office.
- Fire Prevention/Protection provide experienced fire prevention management and a trained, experience organization of combat firemen, inspectors, instructors, engineers, and administration.
- Security Services provide security services at KSC encompassing management of an experienced workforce that includes security guards, traffic patrolmen, investigators, locksmiths, communications, supply, training, badging, and records maintenance.



- Quality Assurance establish and maintain an inspection system which encompasses and satisfies the requirements of NHB 5300.4(1C) and NHB 5300.4 (LD-1) in all areas within the contractors O&M purview. Provide quality assurance and inspections of technical work performed on facilities, equipment, and systems under the O&M cognizance based on system criticality, concurrent schedules and manpower availability. These activities include quality assurance inspections during acceptance testing, modifications, repairs, validations, and certifications as specified in applicable drawings, test procedures, and preventive maintenance instructions.
- Training provide training of NASA and contractor personnel at KSC and Cape Canaveral Air Force Station in common areas of operational safety. Training was provided in the following disciplines: SCAPE and breathing apparatus donning and operation; propellants, solvents, and miscellaneous liquid safety; explosive ordinance safety; high pressure gas safety; and hazardous work areas egress and use of special safety equipment.

The challenge of this contract was one of size, diversity, as well as the criticality of many of the responsibilities that directly supported the launches at KSC. For example, the complexity of test support management and scheduling activities involved dozens of operations and thousands of test support events for each launch. Accurate documentation was also critical as it was a center piece of the evidence that supported launch decisions. Of course, quality was utmost in everything that was accomplished...every critical operation required verification and the paper system and records associated with the Quality Program. CHI's M. Hart was the Ground System Electrical Manager responsible for all ground/site-wide electrical systems. CHI's R. Homberger was the Mechanical O&M System Manager with the responsibility for the operation and maintenance of all mechanical systems, including the O&M of various large air conditioning plant operations. CHI's W. Makynen, as the Work Control Manager, was responsible for maintaining planning and scheduling. CHI's J. Griffin, as the Project Manager's assistant, performed a wide range of administrative and specific project responsibilities.

# MANUFACTURING EQUIPMENT MAINTENANCE NASA MICHOUD ASSEMBLY FACILITY, NEW ORLEANS, LA

This contract, with a workforce of over 125 people, was in support of Martin Marrietta's shuttle external tank design, test, and manufacturing program. The service provided (see reference figure) maintenance of production equipment, laboratories, and special test facilities used in the manufacturing and testing of the external tank prior to shipment to Kennedy Space Center where the tank is mounted to the shuttle for launch. The management and technical challenges of this contract were associated with maintaining a highly skilled workforce required for the maintenance of the specialized external tank manufacturing equipment and facilities. Also of great emphasis was equipment and facilities reliability, failure in critical systems and equipment would impact manufacturing schedules and could even impact a delay in a shuttle launch. Maintenance effort went to great lengths to ensure critical system reliability by enhanced operation and maintenance procedures, as well as internal quality control of the work performed. CHI's H. Foster was the corporate Project Manager for this project.

CALL HENRY INC 'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Manufacturing Equipment Maintenance, NASA (Michoud Assembly Facility, New Orleans, LA)
- Engineering/Technical Services	
Engineering/rechnical Services	
- Eulidings & Equip. Maint. & Repair	
	<b>^</b>
Environmental/Laboratory Services	
• File/Rescue and Security Services	
Management & Administration SVCs	<b>x</b>
	<b>x</b>
Transportation Services/Veh Maint	
• Utilities O&M	X
• Airfield Operations/Aircraft Maint	
• Property/Asset Mgmt. Services	X
Work Management System Services	s X
Financial/Accounting	X
Computer System/Info Mgmt	
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Superior

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

\_\_\_\_\_CALL HENRY, Inc.®\_

# BASE MAINTENANCE AND MANAGEMENT SERVICES NASA MSFC, HUNTSVILLE, AL

This contract, with a workforce over 550 people, provided a wide range of support to NASA, as shown on reference figure, in their research and development efforts associated with the shuttle program and other related space activities. Support included the maintenance of all buildings; installed utility systems; operated steam, water, and other utility systems, including UCS; provided custodial services for over 3M sq. ft. of space; and providing ground/pavement maintenance of the entire MSFC assigned land area. Provided construction services up to \$1M project size. The technical and management challenge associated with this contract was the maintenance of the critical mission support system and equipment when an untimely failure could impact a shuttle mission or some other important NASA research project. Also of equal importance, was the adherence to work schedules as they related to critical NASA missions. These challenges were overcome by focusing on the reliability centered maintenance concept and strict schedule controls. CHI's H. Foster was the Corporate Director that the BMMS Project Manager reported to and, as such, provided oversight and management control over the project.

CALL HENRY, INC.'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	AMS Base Maintenance and Management Services, NASA (MSFC
SOW Requirements	Huntsville, AL)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	×
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
• Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint.	
Property/Asset Mgmt. Services	
• Work Management System Services	s x
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

\_\_\_\_\_CALL HENRY, Inc.®\_

# INSTALLATION SUPPORT SERVICES NASA MICHOUD ASSEMBLY FACILITY, NEW ORLEANS, LA

This contract, with a workforce of 325 people, provided installation-wide support, as shown in reference figure, to NASA and NASA on-site contractors and tenants. Among the site activities were the manufacturing and testing of shuttle tanks, and support to the USDA Regional Office Center, NOAA, and other miscellaneous government agencies. The service provided included the operation and maintenance of all primary utility systems. Included was the operation and maintenance of one of the worlds largest central air conditioning systems powered by low pressure steam turbines, maintained all building exterior components, including roofing. Provided transportation and motor pool services site-wide, vehicle maintenance, medical services, center reproduction plant operation, installation-wide security/guard service, maintained ocean going barges, port operations, ground/pavement maintenance, operated the installation telephone system, provided site-wide plant engineering services, construction services, and document/drawing/technical library operations,

CALL HENRY, INC.'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Installation and Support Services, NASA (Michoud Assembly Facility,
SOW Requirements	New Orleans, LA)
<ul> <li>Engineering/Technical Services</li> </ul>	×
Buildings & Equip. Maint. & Repair	
Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
Management & Administration Svcs	x
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
Work Management System Services	
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Superior

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

custodial services, pest control, refuse, and mail services, as well as operated the site-wide supply warehouse, photographic laboratory, dining facilities, property control, and fire protection.

The challenges and focus was the operation and maintenance of a very old central boiler and AC plant operation serving over 3M sq. ft. of space. Any interruption would impact the external tank production. The support personnel were represented by the AFL/CIO Building Trades union consisting of 21 different unions representing each craft skill on the contract. CHI's J. Parker was the Plant Engineering Manger on this contract and H. Foster was the Project Manager.
## SATURN S-1C DESIGN, MANUFACTURING, AND TEST NASA MICHOUD ASSEMBLY FACILITY, NEW ORLEANS, LA

The contract, with a workforce of over 7,000 people, was for the research and development, design, manufacture, and testing of the first stage of the Saturn booster; i.e., S-1C stage that was used to put a man on the moon. The contractor was required to design, build, and maintain the facilities plus provide all necessary support service in support of the contract. In today's dollars over \$50M was spent for the general purpose equipment and over \$75M for facilities new construction and modification, specialized equipment/tools cost over \$100M. Reference figure shows the functional requirements of the contract. Contractor provided maintenance of all production, laboratory, test equipment/facilities, facilities master planning, engineering, and construction management. Services provided included reproduction and graphic services, documentation control, custodial, pest control, security, and property management.

Everything about the contract was challenging because most of it had never been done before. The unique facilities required; i.e., 250' high bay vertical assembly building, to a high pressure test facility capability of producing 10,000 PSI, to an entire air conditioning manufacturing facility, to the largest Class III and IV cleanroom in the world, to design and build ultra cleaning facilities, to clean

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Saturn Design, Manufacturing and Test, NASA (Michoud Assem- bly Facility, MSFC, NSTL, KSC)
SOW Requirements	
• Engineering/Technical Services	X
• Buildings & Equip. Maint. & Repair	X
Electronic/Comm/ Operations/Maint	X
Environmental/Laboratory Services	×
• Fire/Rescue and Security Services	
Management & Administration Svcs	x
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
• Work Management System Services	 s
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Excellent/Superior

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

tank components, to the entire tank itself, to installing the largest boring mill in the world, to building 33' deep vertical welding towers, 140' high, to learning how to handle and transport the Saturn stage that weight over 100 ton and over 140' long costing hundreds of millions of dollars. Operating and maintaining specialized high pressure gas systems; i.e.,  $CO_2 H_2$  and others.

The rapid buildup of over 7,000 people in less than 2 years with mass recruiting throughout the U.S. offered its own unique challenges. Training a workforce that had never been involved in an aerospace program offered a unique challenge as well. CHI's H. Foster was involved in the program for over 10 years as the Master Facility Production Planning to the Production Project Manager responsible for facilities installation and activation and then became the Facilities and Service Director responsible for the operation and maintenance of all unique facilities equipment and systems plus provided a wide range of support services such as graphics, reproduction, document control, transportation, supply, etc., with a maintenance and service workforce of over 500 people. CHI's J. Parker was also on this program for over 8 years as the Equipment Engineering Manager responsible for the identification of the general purpose equipment required, developing equipment specifications, and overseeing the installation and checkout of same. CHI's M. Hart was the Ground Electrical System Launch Support Manager in supporting launches at KSC of the Saturn S-1C booster.

## STATIC FIRING STAND MAINTENANCE SERVICES NASA STENNIS SPACE CENTER, BAY ST. LOUIS, MS

This contract, with a workforce of 90 people, was for developing the maintenance plan for the S-1C static test stand and associated equipment and systems and then the execution of the plan for all installed facilities and ground support equipment (see reference figure) In addition to facilities maintenance, the operation of the 180T derrick crane for lifting the S-1C booster from the barge onto the stand and then return the booster to the barge after static firing was included as part of the contract. Other services included warehouse operation, transportation services, and related engineering activities.

The uniqueness or challenges was associated with the maintenance of the specialized ground systems such as the deluge system capable of flowing as much water for 2 minutes as the Niagara Falls flows, to all of the high pressure piping, valve, regulator, control, etc., involved in providing utility support to the booster while on the stand and during static firing. CHI's H. Foster was the Project

CALL HENRY INC 'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Static Firing Stand Maintenance Services, NASA (Stennis Space Center, Bay St. Louis, MS)
	<u> </u>
Engineering/Technical Services	$\frac{x}{y}$
• Buildings & Equip. Maint. & Repair	<b>x</b>
Electronic/Comm/ Operations/Maint	X
• Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
Management & Administration Svcs	×
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	x
Work Management System Services	s X
Financial/Accounting	x
Computer System/Info Mgmt	
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	<u>x</u>
Customer Performance Rating	Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

Manager, as well as the Facility Director during the execution of this contract. CHI's J. Parker provided maintenance engineering support in developing the S-1C stand maintenance program.

## STATIC FIRING STAND ACTIVATION SUPPORT NASA STENNIS SPACE CENTER, BAY ST. LOUIS, MS

This contract, with a contract workforce including subcontractors of over 100 people, was for installing and checking out the static firing ground support equipment plus performing facilities operational checkout to ensure systems/equipment operated properly prior to the first static firing. Reference figure shows the contract requirements The service included design engineering for equipment installation, managing in-house work crews to install hardware, manage subcontractors in support of equipment installation, and provide technicians to operationally checkout the installed equipment and systems.

The challenge associated with this contract was performing the work while hundreds of construction contracting personnel were completing the static test stand construction work. Labor union disputes among the various unions were common which took continuous attention. CHI's H. Foster was the Project Manager on this contract. Mr. J. Parker was the Engineering Manager on this contract as well.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Static Firing Stand Activation Support, NASA (Stennis Space Center, Bay St. Louis, MS)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	
Electronic/Comm/ Operations/Maint	t
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
Management & Administration Svcs	,
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
• Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
• Work Management System Service	s
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

75



# BASE OPERATIONS, MAINTENANCE, AND SUPPORT SERVICES, U.S. ARMY, FORT IRWIN CA

Several of CHI's key managers were also key managers on this large base contract. Fort Irwin is a large military installation and also the National Training Center for U.S. Army combat units to engage in realistic force on force combat exercises similar to the conditions found in the middle east. On this contract CHI managers were key division managers providing full facilities maintenance for all facilities and family housing units at Fort Irwin. Providing all logistical support for units assigned and training at Fort Irwin, and providing critical automated system support for the contractor and Army use. Reference figure shows the functional requirements of the contract. Particular functional responsibilities for CHI managers included facilities maintenance and repair; construction management; utility operations; special purpose equipment maintenance, engineering services; roads and grounds maintenance and repair; family housing maintenance; work control; installation supply support; transportation support; operation of military automated supply systems; supply support for

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Base Operation, Maintenance, and Support Services, Army
SOW Requirements	(Fort Irwin, CA)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
Management & Administration Svcs	x
Medical Services	
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	x
Property/Asset Mgmt. Services	x
• Work Management System Services	s X
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

Army Mechanized Units training at Fort Irwin; warehouse operations, POL support, subsistence support, and ammunition support. This very important contract with the Army was crucial to ensuring the readiness of Army units by providing responsive support for the installation and units training at Fort Irwin and providing the facility and equipment required by Army personnel to effectively monitor and measure the effectiveness of the training exercises. The family housing and recreational facilities maintenance support had a direct impact on the quality of life and moral of the Army personnel and their dependents. J. Pitman from CHI served as the installations Facility Engineering Division Manager, R. Hansen served as the Installation Logistics Division Manager, and L. Bunten was the automated systems support person.

## BASE OPERATIONS MAINTENANCE AND SUPPORT SERVICES, U.S. NAVY, TRIDENT SUBMARINE BASE, BANGOR, WA

On this contract CHI Managers were responsible for the management for complete base operations and support as shown in reference figure. Included were the maintenance of all facilities on the base; operation of all utilities systems; environmental management and hazardous waste processing; engineering support; construction management; roads and grounds maintenance; logistics support including base supply, procurement, transportation operations and maintenance, and subsistence support; security services; refuse collection and custodial support; and administrative services.

The Bangor Submarine Base was the first contract awarded to United Airlines Services Corporation's Operations and Maintenance Division, of which CHI's President Mr. H. Foster was the Director, and CHI's managers were senior managers within the division as discussed above in the introduction. This large (over 800 personnel) base contract afforded many challenges due to the sensitive nature of the base mission and the critical

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Base Operation, Maintenance, and Support Services, Navy (Trident Sub- marine Base, Bangor, WA)
Engineering/Technical Services	X
Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
Management & Administration Svcs	x
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	x
• Transportation Services/Veh Maint.	x
• Utilities O&M	x
• Airfield Operations/Aircraft Maint.	
Property/Asset Mgmt. Services	x
• Work Management System Services	
Financial/Accounting	x
Computer System/Info Mgmt.	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

aspect with ensuring uninterrupted support for these mission. CHI managers directly led the phase-in efforts, hiring of all personnel, transferring of historical and system work data, and ensuring that the workforce and operations were 100% on day one of the contract start. These challenges were met on-time and on schedule. After the phase-in period two of our senior managers remained on the contract as project senior managers. Mr. H. Sneed was the Quality Control manager, and Mr. J. Parker was the manager for the Civil Engineering Division. Other CHI managers provided corporate oversight and project assistance from the Corporate Offices. Mr. H. Foster was the director to who the project manager reported, Mr. W Makynen was the Work Management and Automated Systems Manager, Mr. Hansen was the corporate Logistics Manager, and Mr. D. Woodward assisted in the project management issues.

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## BASE OPERATION, MAINTENANCE AND SUPPORT SERVICES, U.S. NAVY, TRIDENT SUBMARINE BASE, KINGS BAY, GA

This 800-plus person contract provided full base support (see reference figure) for the Navy including, complete facilities maintenance; utilities operations; engineering support; construction management; automated systems operations; logistics including installation supply, procurement, transportation operations and maintenance; security services; environmental support and hazardous material processing; fire protection and inspections; and administrative services.

This contract was the third contract awarded to Mr. Foster and his managers as the Operations and Maintenance Division for United Airlines Services Corporation (UASC). Mr. D. Woodward, one of CHI's current managers, was immediately dispatched to Kings Bay to serve as the Project Manager and to head up the phase-in activities. Mr. Woodward reported to Mr. Foster at corporate where Mr. Foster had overall responsibility for the operations and performance of the contract. Mr. H. Sneed was assigned to the project to head up the Quality Control office responsible for the quality

CALL HENRY INC 'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Base Operation, Maintenance, and Support Services, Navy (Trident Submarine Base, Kings Bay, GA)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	
Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	
• Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	x
Work Management System Services	X
Financial/Accounting	x
Computer System/Info Mgmt	X
Program Analysis & Control	×
• Planning, Scheduling & Work Integ.	X
Customer Performance Rating	Good/Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

control system and ensuring that performance met or exceeded the contract requirements. Mr. R. Hansen, as the corporate Logistics Manager, assisted the project and provided corporate oversight in the logistics functions for supply, property, procurement, transportation operations, and transportation maintenance. This contract presented many challenges for CHI managers. Being the third successive contract awarded in a period of 6 months the phase-in activities presented challenges for the assignment of CHI corporate managers to assist in managing and completion of phase-in activities. Ensuring that the phase-in efforts and contract start was accomplished on-time with quality service was also complicated by the fact that the contract requirements had increased by 50% from the time the contract was solicited and contract award. CHI managers accomplished these activities in a superb manner ensuring that the contract was started with sufficient trained resources and the methods and procedures were in place for successful accomplishment of the work requirements.



# FACILITIES MAINTENANCE AND SUPPORT SERVICES, U.S. NAVY RESEARCH CENTER, CHINA LAKE, CA

On this 400-plus person contract CHI's managers were responsible for providing support for the installation (see reference figure) in full facilities maintenance; housing maintenance; roads and grounds maintenance; engineering support; installation supply; POL operations; transportation operations and maintenance; procurement; custodial operations; refuse collection; and environmental support and hazardous waste processing and deposal. This contract provided installation level support for the entire research center with CHI managers involved in the operations of the contract and providing corporate oversight and assistance to the project. Mr. Dave Woodward, one of CHI's senior managers, was assigned as the Project Manager and, subsequently replaced by CHI's Mr. M. Hart when Mr. Woodward was assigned to the Navy Trident Submarine contract at Kings Bay, GA. Mr. Woodward and Mr. Hart reported to Mr. Foster at Corporate who had the direct responsibility and authority over all operations and maintenance contracts for UASC. Mr. Hansen provided corporate oversight and assistance to the project for all areas in logistics, and Mr. H. Sneed directed the establishment of the project quality control system, and the subsequent oversight for the system.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Facilities Maintenance, and Support Services (Navy Research Center, China Lake, CA)
SOW Requirements	
• Engineering/Technical Services	
• Buildings & Equip. Maint. & Repair	×
• Electronic/Comm/ Operations/Maint	
Environmental/Laboratory Services	
Fire/Rescue and Security Services	×
<ul> <li>Management and Administration</li> </ul>	x
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
• Work Management System Services	s X
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

This contract was the second operations and maintenance contract awarded to the newly formed O&M Division within UASC. CHI's President, Mr. Foster and his team of managers, were responsible for the phase-in and start-up of this contract, as well as the subsequent operation of the contract. One of the significant challenges of this contract was that it was awarded and phase-in began during the period that phase-in was also being accomplished on the Bangor Trident Submarine contract. Through the excellent planning and use of resources both phase-in activities were accomplished simultaneously under the direction of CHI's Mr. Foster and his team of CHI manager's. Another challenge was the fact that the incumbent contractor had terminated service on portions of the contract and Mr. Foster was requested to implement services early. All of these activities were accomplished ensuring no disruption of services for the Navy Activities supported.

# BASE MAINTENANCE SERVICES, AIR FORCE SERVICES, THROUGHOUT THE COUNTRY OF TURKEY

This contract, with a workforce of 3,163, was performed at seven major U.S. military installations and over 15 separate satellite locations in support of our U.S. military force in the country of Turkey. Reference figure shows the services performed on this contract. The services at each location involved complete base O&M and support services including: civil engineering, food service, motor vehicle operations and maintenance, housing services, laundry and dry cleaning, office machine repair, traffic management, hospital housekeeping, base supply operations, administrative services, property account management, U.S. payroll services, commissary operations, recreation services, telephone exchange O&M, and O&M of communication equipment.

The unique challenges this contract offered were many, the diversity of services, diversity of location, management of a foreign workforce, labor/management, payroll and banking in so many diverse locations, cost accounting, and property management to U.S. standards was a continuous challenge. Recruiting U.S. nationals to fill key positions required a worldwide recruiting effort.

CALL HENRY, INC.'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Base Maintenance Services, Air Force Services (Throughout the Country of Turkey)
SOW Requirements	·····,
• Engineering/Technical Services	×
Buildings & Equip. Maint. & Repair	×
· Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
Management & Administration Svcs	x
• Medical Services	
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	x
Property/Asset Mgmt. Services	x
Work Management System Services	s X
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

CHI's D. Woodward was the Project Manager, H. Sneed was the Quality Assurance Manager country-wide, C. Robotham was the QC Manager at two of the major locations. H. Foster provided technical and corporate support to the project, as well as performance audits.

## **BASE MAINTENANCE SERVICES USAF - THROUGHOUT THE COUNTRY OF SPAIN**

This contract, with a peak workforce of 962 people, performed a wide range of base maintenance and support services (see reference figure) for the U.S. Air Force at two major air bases and four tropospheric scatter communication sites in the country of Spain. The services provided included: civil engineering; i.e., building/structure maintenance; utilities operations and maintenance, including central plants, water, sewage, power generation, and all distribution systems. Services also included a full range of engineering, construction management, planning programming, energy conservation, real property management, motor vehicle O&M, including motor pool operations, delivery services, traffic management, and equipment maintenance. Complete base supply system, food services, and security services all were included on this contract.

The challenge offered by this contract was the management of a workforce with unique labor laws and unions. CHI's D. Woodward was the Project Manager and H. Foster had corporate overview responsibilities.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Base Maintenance Services, Air Force Services (Throughout the
SOW Requirements	Country of Spain)
Engineering/Technical Services	×
Buildings & Equip. Maint. & Repair	x
Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
Management & Administration Svcs	x
Medical Services	
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations	x
Property/Asset Mgmt. Services	x
Work Management System Services	
Financial/Accounting	x
Computer System Svcs/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Good/Excellent



## AWACS AIRPLANE OPERATION U.S. AIR FORCE/SAUDI AIR FORCE, SAUDI ARABIA

This contract involved hundreds of personnel in modifying 707 aircraft, installing AWACS equipment, checkout of equipment, airplane delivery, Saudi national personnel training program, and in-country operational support. Reference figure shows the functional requirements of this contract in which CHI managers were involved. Part of the contract responsibilities were to provide personnel support services for the in-country workforce, as well as the maintenance and operation of assigned facilities. Services included program planning, procurement of housing and equipment, maintenance of houses, and all industrial shops and hanger areas, transportation/bus services, medical, recreation, mail, security, banking, laundry, travel, reproduction and graphics, local procurement, and government affairs services were provided.

The challenges of this contract from the service end, were the employment of over 10 different nationalities, managing the housing area and delivering personnel services to over 1,500 family members, as well as the culture differences of all of the nationalities involved. CHI's H. Sneed was the Project Manger in charge of all the personnel services and maintenance activities of the contact. CHI's H. Foster played a significant role early in the program in developing the in-country personnel AWACS execution plan based on his and Mr. Sneed's previous Saudi O&M experience.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program In Country Support to AWACS Airplane Operation, Air Force (Riyadh, Saudi Arabia)
Engineering/Technical Services	X
• Buildings & Equip. Maint. & Repair	X
· Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
Management & Administration Svcs	× ×
Medical Services	x
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	x
Property/Asset Mgmt. Services	x
Work Management System Services	s x
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent



# STRATEGIC PETROLEUM RESERVE O&M AND SUPPORT SERVICES, NEW ORLEANS, LA

This 1,100-person contract provided complete Management Operations and Maintenance (MOM) support for the Department of Energy's Petroleum Reserve site's. Headquartered in New Orleans, LA the contract consisted of six operating sites responsible for the receipt and storage of crude oil or movement of crude oil for the Department of Energy. Contract requirements are shown in reference figure. At each of these sites the contract required maintenance of facilities, maintenance of equipment, engineering support, operation of utility systems, roads and grounds maintenance, material and property support, procurement and subcontracting, vehicle maintenance and operations, operation of control centers, environmental support, hazardous waste and hazardous material support, and crude oil operations support.

Mr. R. Hansen from CHI's staff was responsible for the site management and operations of one of the largest DOE sites on this very important contract. On this site 150m bbl of crude oil was stored in salt dome caverns. Mr. Hansen was responsible for the entire site operations including site management for the maintenance department; operations department; security; quality control; environmen-

CALL HENRY, INC.'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Strategic Petroleum Reserve O&M and Support Services, DOE
SOW Requirements	(New Orleans, LA)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
• Electronic/Comm/ Operations/Maint	x
• Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
• Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
Work Management System Services	s x
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Good/Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

tal support; site support including administration, procurement, supply and property, and engineering. The critical aspects relating to this contract included the DOE charter associated with the crude oil storage and the design criteria relating to the capability to withdraw the crude oil from the caverns at a rate of 1.2m bbl per day and the capability to sustain that rate of withdrawal. This required that the equipment associated with the draw down had to be maintained in excellent this same condition. Through a viable preventive maintenance program and quick reaction for corrective maintenance, the site was able to continuously demonstrate their capability to meet these draw down requirements. Also, the potential environmental impact associated with the storage of crude oil and the brine solution used for the movement of the oil provided many challenges for the site and, in particular, the maintenance and operations. Maintenance of the pipelines, valves, instrumentation and associated pumps. Through sound maintenance programs ensured minimal upset conditions were experienced. The majority of unplanned conditions were the result of some internal cavern activity, such as a salt fall. All were responded to, contained, and mitigated immediately.

## **RESEARCH AND FACILITIES O&M, DOE, BRUCETON, PA**

This contract, with a workforce of 75 people, was for performing basic research and development on how to design and build safe and more efficient coal mining equipment plus safer mine retainer structures. The services (see reference figure) included engineering, computer modeling, measurement technologies, and research reports using video and other related media. Included in the contract was the maintenance and operation of the assigned research facilities and equipment as well as providing various administrative support; i.e., graphics and reproduction services.

The unique challenges were applying aerospace computer modeling and structure stress measurement technologies to the coal mine environment. CHI's M. Hart was the Project Manager of this contract. CHI's H. Foster provided business development support plus corporate overview of contract performance.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Research and Facilities O&M, DOE (Bruceton, PA)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	
• Electronic/Comm/ Operations/Maint	×
• Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	
Management & Administration Svcs	× ×
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	x
• Work Management System Services	s X
Financial/Accounting	
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Superior



# FACILITIES OPERATION AND SUPPORT SERVICES BUREAU OF MINES BRUCETON, PA

The contract involved a central boiler plant with above, as well as underground, steam distribution lines, electrical distribution system, facility maintenance, water distribution system, sewage collection system, vehicle maintenance, as well as a complete machine shop that supported not only our maintenance and repair efforts but also the government as well as other contractors at the site. Reference figure shows the functional requirements for this program.

This was a very challenging and unique contract as it was the first A-76 conversion. Our task at hand was to smoothly transition from a government operated facility to a contractor operation while maintaining workforce morale and productivity. Additional complexity was the requirement to support two customers. Detailed cost collection systems were set in place to ensure both the DOE and the Bureau of Mines were billed properly. CHI's President, Henry Foster, served as phase-in manager. CHI's Bill Makynen was a member of the phase-in team. Henry and Bill hired the necessary

CALL HENRY INC 'S	Contract/Program
MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Facilities Operation, Maintenance, and Support Services, Bureau of Mines (Bruceton PA)
SOW Requirements	(Bruceton, TA)
• Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	X
Electronic/Comm/ Operations/Maint	×
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	x
• Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	x
• Work Management System Services	
Financial/Accounting	x
Computer System/Info Mgmt	x
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent

### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

personnel, set up the financial collection and control procedures, implemented the comprehensive integrated management systems for work control and supply operations as defined in the proposal including a comprehensive preventive maintenance program. The management systems called CPC (Central Planning and Control) became the standard for Boeing throughout the world and the basis upon which Henry, Bill, and Rick Hansen designed and built the multi-million dollar Boeing Operations Support System (BOSS) with which Boeing Services International used to standardize their world-wide operations.



# TEST CENTER OPERATION, MAINTENANCE AND SUPPORT SERVICES DOT, PUEBLO, CO

This contract, with a workforce of 350 plus, was a GOCO operation where the contractor operated the total test center, performing basic research and development on how to better design rail transport systems. In support of the GOCO operation a whole host of services were performed (see reference figure) such as: facilities and equipment maintenance; site-wide utilities operation and maintenance including UCS and centralized plants; i.e., boiler, water, sewage, etc.; total ground and pavement and road maintenance were included. Custodial services were provided for all building areas, medical clinic, as well as operating a dining facility. Included also were administrative services; i.e., graphic, reproduction, technical libraries, photo laboratory, etc. All a part of the responsibility of the contract.

The challenges this contract offered were many, including computer modeling technology, high speed photography, and thousands of test measurements and analysis required for each test conducted. CHI's C. Maddox was the Project Manager on this contract. CHI's H. Foster assisted in the planning of this contract and the phase-in efforts.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Test Center Operations, Maintenance, and Support Services,
SOW Requirements	DoT (Pueblo, CO)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	x
Electronic/Comm/ Operations/Maint	x
Environmental/Laboratory Services	x
• Fire/Rescue and Security Services	x
Management & Administration Svcs	
Medical Services	x
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
Work Management System Services	
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	
• Planning, Scheduling & Work Integ.	
Customer Performance Rating	Excellent/Superior

## BASE MAINTENANCE, OPERATION, AND SUPPORT SERVICES SAUDI ROYAL AIR FORCE, DHAHRAN, SAUDI ARABIA

This contract, with 3,000-plus personnel, provided installation-wide support to the Saudi Air Force Base plus operation and maintenance of the Dhahran International Airport (see reference figure). Services included the maintenance of every building and housing unit located on the air base and airport. Maintained and operated primary/secondary utility plants and distribution systems. Plant operations included deionized water plants, sewage plants, power plant, gas plants. Maintained all of the road, grounds, and drainage systems. Provided site-wide transportation and bus services, motor vehicle/heavy equipment maintenance, civil engineering services, construction services/subcontract management, and warehouse operations, a Saudi upward skill level training program, food services, telephone/fax/two-way communication system O&M, laboratory for testing water, sewage, oils, and hazards were provided. Custodial services were provided to all office facilities. Pest control, refuse, property control, and fire protection were also provided. In support of the airport, services included: NAV-aid maintenance, airport fire services, facilities/hanger and runway maintenance, operation of food service facilities, and providing custodial services.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS	Contract/Program Base Maintenance, Operation, and Support Services, Saudi Royal Air Force (Dhahran, Saudi Arabia)
SOW Requirements	
• Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	×
• Electronic/Comm/ Operations/Maint	×
• Environmental/Laboratory Services	×
• Fire/Rescue and Security Services	X
Management & Administration Svcs	×
• Medical Services	x
Recreation and Food Services	x
Supply/Logistics Services	x
Transportation Services/Veh Maint	x
• Utilities O&M	x
Airfield Operations/Aircraft Maint	x
Property/Asset Mgmt. Services	x
Work Management System Services	
Financial/Accounting	
Computer System/Info Mgmt	
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	x
Customer Performance Rating	Excellent

#### CHI MANAGER'S TECHNICAL SERVICE FUNCTIONS PERFORMED

As part of this contract, it required the contractor to maintain living accommodations and other personnel services for the 3,000 plus workforce...as such, a worker's camp was provided along with personnel services (food, medical, recreation, banking, transportation, security, and travel), plus the maintenance of housing and personnel services for Westerner's living accommodations, including a recreation program.

The challenge was extraordinary from the very beginning...design and construction of a 20 acre building in less than 4 months, equip a 3,000 personnel living facilities during the 3 months phase-in, hire and relocate a workforce of 3,000 from around the world in less than 3 months, including all of the visa/entry requirements of both countries. Procure over 1,000 vehicles and



\$11,000,000 of material in 3 months, manage a cash flow of over \$100M in 4 months, great amounts had to be handled in cash. All of these challenges were during phase-in...not counting developing the operational and maintenance procedures required to operate the facilities during the same time period. From the operation standpoint, it also offered equal challenges; i.e., learning how to deal with the Saudi Government personnel, managing a workforce of 21 nationalities, dealing with systems, parts, and components from all over the world and trying to figure out how to spare for all these different systems/components from different countries. Managing people with a diversity of culture and their needs was a constant focus. Many of the operation and maintenance activities were in support of critical airport and air base missions and required high quality and timely services. CHI's H. Foster was the managing Director over the project, while H. Sneed managed the logistics part of the contract, J. Parker ran the Engineering and Construction Division and CHI's J. Rice was the Business Manager responsible for accounting, financial and banking services.

## MANUFACTURING SITE ACTIVATION SERVICES AIR FORCE MINUTEMAN ASSEMBLY FACILITY, OGDEN, UT

The contract (see reference figure) was part of a larger contract for the design, manufacture, test, and providing launch support for the Minuteman missile. The activation services included the facilities planning, programming, installation design of ground systems, and checkout of all facilities utility systems and their interface with the ground systems. Included both the management of an inhouse workforce and construction subcontractors used in installing piping, cables, controls, etc. CHI's H. Foster was the Project Engineer responsible for defining the requirements, controlling the funds and schedule to meet mission program schedule and cost objectives.

CALL HENRY, INC.'S MANAGERS' EXPERIENCE MANAGING TECHNICAL CONTRACTS/PROGRAMS SOW Requirements	Contract/Program Manufacturing Site Activation Services, Air Force (Minute Man Assembly Facility, Ogden, Utah)
Engineering/Technical Services	×
• Buildings & Equip. Maint. & Repair	
Electronic/Comm/ Operations/Maint	
Environmental/Laboratory Services	
• Fire/Rescue and Security Services	
Management & Administration Svcs	
Medical Services	
Recreation and Food Services	
Supply/Logistics Services	
Transportation Services/Veh Maint	
• Utilities O&M	
Airfield Operations/Aircraft Maint	
Property/Asset Mgmt. Services	
Work Management System Services	s X
Financial/Accounting	x
Computer System/Info Mgmt	
Program Analysis & Control	x
• Planning, Scheduling & Work Integ.	X
Customer Performance Rating	Good/Excellent



## **IN SUMMARY**

### MANAGEMENT AND ADMINISTRATION OF MULTI-TECHNICAL SERVICE CONTRACTS HAS BEEN CHI'S MANAGERS ROLE FOR 37 PLUS YEARS

The contracts we have just discussed range in size from 50 employees and an annual value of \$3M to over 3,500 employees and an annual value of over \$200M. The contracts have been located in such diverse locations and environments as the high deserts in the western United States, numerous locations in Saudi Arabia, and throughout the countries of Turkey, Spain, Philippines, and numerous other locations throughout the world. Fourteen of the contracts shown in the figures are cost-type contracts requiring financial management and accountability of public funds according to U.S. Government requirements.

We managed quality control and safety programs in compliance with U.S Government/foreign procurement regulations on all of our contracts, according to contract requirements of each. The typical quality and safety programs involved comprehensive inspection systems; responsive corrective action methods, complete records and files of actions taken, and customer comments and support activities. Environmental and hazardous waste management programs were established and operated as part of contract requirements on 14 of the contracts and were conducted as routine self-support functions on each of the other contracts.

We have been involved in phasing-in the contracts shown previously in figure 1. CHI key corporate managers, working as a team, as an example, phased in the contract to provide operations and maintenance to the RSAF Air Base/Dhahran International Airport in Saudi Arabia. For this contract, we mobilized a workforce of over 2,500 personnel with 18 nationalities in less than 60 days, including a wide range of technical support activities including supply and equipment services, transportation, logistics, maintenance engineering, communications, administrative services, airport operations and fire and protective services. It is important to note that because the incumbent contractor transferred the entire incumbent workforce to other projects, no incumbent personnel were available. Each of the more than 2,500 employees were recruited, hired, and mobilized from the United States, Saudi Arabia, the Philippines, and other locations throughout the world. During this time our managers constructed an entire camp for the 2,500 employees, including all support infrastructure such as logistic/supplies, recreational facilities, medical facilities, and dining halls; procured over \$15,000,000 of supplies, materials, and equipment in support of contract start-up; and, in response to the Contracting Officer's request, took over major portions of the contract more than 30 days early. On this contract, we successfully operated a supply system that had its major sources thousands of miles distant in Europe, the United States, and Japan, and provided a consistent flow of supplies to over 30 supply accounts and 2,500 working employees.



Some of our managers also developed and implemented the plans for mobilizing and supporting over 500 U.S. citizens who were employed by the Boeing Company to support the U.S. Government's sale of Airborne Warning and Control System (AWACS) aircraft to Saudi Arabia. This mobilization called for establishing over 300 homes in Saudi Arabia and furnishing them prior to the arrival of the employees; establishing transportation, recreation, medical and other personnel logistic support systems for the community; and operating two large community compounds approximately 10 miles apart.

The highly successful management of these contracts soon led to CHI's managers assisting major companies in capturing other large base operating support contracts, as well as to the capture, management, and operations of numerous technical, logistical, environmental, security, safety, utilities, and support services contracts. In 1992 a Saudi Arabian company, Saudi Services and Operating Company (SSOC), working with CHI as a subcontractor, successfully sought its first contract in support of the United States Government – the Personnel Support Services contract in Support of the U.S. Logistics Group (LSG) in Saudi Arabia. SSOC continues today to operate that contract and to receive exceptionally high rating for its performance.

We have managed both fixed price and cost contracts for the National Aeronautical and Space Administration (NASA); the U.S. Navy, Air Force, Army; the U.S. Department of Energy; the Bureau of Mines; the Saudi Arabian Government Ministry of Defence and Aviation; RSAF; Presidency of Civil Aviation (equivalent of the United States FAA).

It is important to understand that our key corporate managers are among the most experienced and skilled in managing multi-national/multi-services workforces. On the contract in support of the Saudi Arabia Air Force and the International Airport at Dhahran, Saudi Arabia as we discussed above. On the contract in support of the U.S. Air Force/Army in Turkey our managers were invaluable managing a workforce of over 3,000 employees of Turkish and U.S. nationality. On the contract to provide AWACS aircraft maintenance and support services in Saudi Arabia we managed a workforce of over 500, including those of U.S., Filipino, and Yemeni nationalities. In support of the U.S. Logistics Support Group in Saudi Arabia they are managing a workforce of 120 made up of U.S., Saudi Arabian, Filipino, and other nationalities.

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## CHI PROVIDES PROFESSIONAL MANAGEMENT SERVICES TO PRIME CONTRACTORS ON MAJOR GOVERNMENT SUPPORT SERVICES CONTRACTS

CHI has provided a management/technical consultant on three large base support services contracts, (1) the Navy's Pacific Missile Range Facility Base Operating Support Services at Barking Sands, Kauai, Hawaii; (2) the Air Force's Onizuka Air Station at Sunnyvale, CA; and (3) the Logistics Support Contract at the Special Operations Forces Installation, Bluegrass Station, KY, providing management and technical service to establish an integrated logistics management system and to train employees in its use. In the establishment of this system we provide our state-of-the-art computer operation and management system, that we developed expressly for base/support services projects.

Unquestionably, CHI is well prepared to operate and manage a wide range of services. Our indepth, diverse, and long-term experience is proof positive of our capabilities to do so. Consider the following advantages the experience of CHI' managers offers to customers:

- Our experience enables us to provide a customer with corporate managers whose operation, management, and technical services experience of over 360 cumulative years of experience managing and performing a wide range of technical services. Our managers know technical support services contracting and how to provide the highest levels of service.
- In-depth experience managing every technical support service requirement. Our managers are specialists in their field.
- Comprehensive experience managing operations, logistics, and technical support services in all areas. CHI understands the effects of diverse locations on its employees and customers and knows how to control these conditions.
- Extensive experience phasing in and managing large numbers of employees obtained from locations remote from the work site. CHI has the resources and sources, and understands exactly how to obtain, mobilize, and put-in-place large numbers of personnel, equipment, and materials to meet stringent phase-in schedules and requirements.
- Experience with numerous different government organizations, including NASA, various DoD organizations, the Department of Energy, and numerous other Government agencies. CHI understands U.S. Government contract requirements and customers and how to perform at the optimum for our customers.

The backbone for the experience and capability of CHI rests with the experience and the long time relationship of CHI's managers. They have unparalleled experience for performance of operations, maintenance, and technical services on contracts that represent a cross sector for government and commercial operations, their long association and performance as a team in providing excellent services ensures our customers that top level performance will be provided.