

FAC 4122 Liquid Oxygen Storage

RUC: \$47.78 SF

Source: FY-06 RCF calculated below
Inflated to FY-08 using SPBI; projected to FY-09 using Green Book
In V12, Tri-Service and USACE PAX Newsletter values were updated while all
other values were inflated only.

SUC: \$0.87 SF

Source: Cost Works model in \$FY-08, inflated to \$FY-09 using Green Book Table 5-6
(O&M less DHP)
In V12, values were inflated only.

Model follows:

Chart: A chart showing relative annual sustainment requirements follows:

FAC 4122

Liquid Oxygen Storage

Inventory is only Air Force, measured in SF. Facility is CATCODE 442258 STOR LIE OXYGEN.
Description is for a generating/storage facility with protective fence enclosure, concrete foundation with LOX compatible sealer in joints, drive through capability, grounding points, blowdown condensation. 1000 SF facility assumed as typical

CCF

Source of the unit cost is quotation from RS Means Site Work Cost Data, 2004, RS Means Square Foot Costs 2004, Chart Inc quotation and BNi Public Works 2004 Costbook.

	EA	Type	Source
Foundation			
Excavation, 80 CY @ 11.90/CY	\$952		Bni , pg 23
Haul/Dump, 10 mile, @ 6.55/CY	\$524		Bni , pg 23
Dump charge @ \$70/T	\$5,600		RSM 2004, pg 41
Standard foundation @ 1.01/sf	\$1,010		RSM SF Cost 2004, pg 219
Slab on Grade @ 8.92/SF	\$8,920		Same
Services			
200 Amp Service, breaker, disconnect	\$3,320		RSM SF Cost, pg 139
Fence			
Industrial, 8', 6 ga, 132 LF			
@ \$41 per LF	\$5,412		RSM, pg 111
Gates			
\$1,800 ea	\$3,600		RSM, pg 112
Storage Tank			
HS-1500NC-250-01 with vaporizer, 250 psig, 1509 GA			
	15000		
Total	\$44,338.00		Chart Inc. Quotation
Per SF =	\$44.34		

Escalated from 2004 to 2007

	MILCON Deflator				
Year	2006	2002	2003	2004	
Deflator	103.62	96.88	98.42	100	Green Book

CCF, 2006 =	\$45.94
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FAC 4122 Liquid Oxygen Storage
CostWorks 2008 Quarter 2

Design Life= 36 Average S.F= 2,221		C.S.F=100 S.F; MSF=1000 S.F Sq=100 S.F; M.L.F=1000 L.F		This spreadsheet was exported from R.S. Means CostWorks		Terminal Cutoff is the removal of a single task occurrence if that task occurs within 10% of the end of the design life and if the frequency of the task exceeds 20% of the design life. This prevents scheduling major work near the end of the design life.					
Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurrences In Design Life	Adjusted Occurrences	Terminal Cutoff	
Replace aluminum siding - 1st floor	35	1 Carp	20.900	C.S.F.	9,492.15	11,393.84	2008 Qtr 2	1	0	\$	-
Refinish aluminum siding - 1st floor	20	1 Pord	20.900	C.S.F.	3,158.41	3,894.51	2008 Qtr 2	1	1	\$	3,894.51
Replace aluminum siding - 2nd floor	35	1 Carp	22.600	C.S.F.	12,745.27	15,356.25	2008 Qtr 2	1	0	\$	-
Refinish aluminum siding - 2nd floor	20	1 Pord	22.600	C.S.F.	5,312.58	6,517.16	2008 Qtr 2	1	1	\$	6,517.16
Replace glass - 1st floor (1% of glass)	1	1 Carp	0.100	S.F.	0.91	1.06	2008 Qtr 2	36	36	\$	38.23
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	2.000	Ea.	229.92	272.40	2008 Qtr 2	1	1	\$	272.40
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	2.000	Ea.	877.20	1,025.98	2008 Qtr 2	0	0	\$	-
Repair steel, painted, door	14	1 Carp	1.000	Ea.	582.44	686.36	2008 Qtr 2	2	2	\$	1,372.72
Refinish 3'-0" x 7'-0" steel, painted, door	4	1 Pord	1.000	Ea.	32.91	40.31	2008 Qtr 2	9	9	\$	362.79
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	1.000	Ea.	532.08	620.04	2008 Qtr 2	0	0	\$	-
Debris removal by hand & visual inspection metal steep roofing	1	2 Rofc	2.200	M.S.F.	39.05	47.08	2008 Qtr 2	36	36	\$	1,694.88
Minor finish repairs - (2% of roof area) metal steep roofing	5	2 Rofc	44.400	S.F.	120.32	142.97	2008 Qtr 2	7	7	\$	1,000.78
Flashing replacement - (2 S.F. per sq. repaired) metal steep roofing	1	2 Rofc	0.800	S.F.	11.55	13.86	2008 Qtr 2	36	36	\$	499.10
Minor replacement - (2.5% of roof area) metal steep roofing	20	2 Rofc	55.500	S.F.	496.17	589.41	2008 Qtr 2	1	1	\$	589.41
Total metal panel replacement metal steep roofing	30	2 Rofc	22.200	Sq.	14,703.73	17,482.72	2008 Qtr 2	1	1	\$	17,482.72
Repair steel painted interior door	14	1 Carp	1.000	Ea.	167.75	198.14	2008 Qtr 2	2	2	\$	396.28
Refinish 3'-0" x 7'-0" steel painted interior door	4	1 Pord	1.000	Ea.	49.40	60.82	2008 Qtr 2	9	9	\$	547.38
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	1.000	Ea.	937.54	1,089.96	2008 Qtr 2	0	0	\$	-
Repair solid core wood door interior	11	1 Carp	2.000	Ea.	335.50	396.28	2008 Qtr 2	3	2	\$	792.56
Refinish 3'-0" x 7'-0" solid core wood door interior	4	1 Pord	2.000	Ea.	84.44	103.96	2008 Qtr 2	9	9	\$	935.64
Replace 3'-0" x 7'-0" solid core wood door interior	40	1 Carp	2.000	Ea.	733.40	850.24	2008 Qtr 2	0	0	\$	-
Minor repairs to concrete floor unfinished	15	1 Cefi	22.200	S.F.	680.43	822.07	2008 Qtr 2	2	2	\$	1,644.13
Replace unfinished concrete floor unfinished	75	2 Cefi	22.200	C.S.F.	9,893.43	11,724.93	2008 Qtr 2	0	0	\$	-
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	34.000	Ea.	3,385.72	4,082.72	2008 Qtr 2	3	3	\$	12,248.16
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	34.000	Ea.	864.96	1,060.12	2008 Qtr 2	3	3	\$	3,180.36
Replace fixture fluorescent lighting fixture, 80 W	20	1 Elec	34.000	Ea.	6,054.72	7,313.74	2008 Qtr 2	1	1	\$	7,313.74
Maintenance and repair receptacles and plugs	20	1 Elec	5.000	Ea.	155.45	193.65	2008 Qtr 2	1	1	\$	193.65
Replace receptacle/plug receptacles and plugs	20	1 Elec	5.000	Ea.	263.80	322.10	2008 Qtr 2	1	1	\$	322.10
Maintenance and repair wiring devices, switches	10	1 Elec	4.000	Ea.	124.36	154.92	2008 Qtr 2	3	3	\$	464.76
Replace switch wiring devices, switches	15	1 Elec	4.000	Ea.	204.84	249.40	2008 Qtr 2	2	2	\$	498.80
Check and repair manual pull station	10	1 Elec	1.000	Ea.	69.21	84.87	2008 Qtr 2	3	3	\$	254.61
Replace manual pull station	15	1 Elec	1.000	Ea.	125.74	151.89	2008 Qtr 2	2	2	\$	303.78
Repair smoke detector	10	1 Elec	4.000	Ea.	152.76	188.00	2008 Qtr 2	3	3	\$	564.00
Check operation smoke detector	1	1 Elec	4.000	Ea.	45.60	57.20	2008 Qtr 2	36	36	\$	2,059.20
Replace smoke detector	15	1 Elec	4.000	Ea.	758.20	907.96	2008 Qtr 2	2	2	\$	1,815.92
					\$73,421.94	\$88,096.92					
										MR Subtotal	\$ 67,259.77
										MR Per Year	\$ 1,868.33
										PM Per Year	\$ 147.09
										Subtotal	\$ 2,015.42
										Total Per Unit	\$ 0.91

CostWorks 2008 Quarter 2 - FAC 4122 Liquid Oxygen Storage

Qty	Description	Bare Total	Total In-House	Total Incl. O&P	Zip Code		Release
					Prefix	Type	
1.000	Door, emergency egress, swinging, annualized	43.08	49.51	57.51	200	FMR	2008 Qtr 2
3.000	Fire doors, swinging, annualized	59.85	74.67	89.58	200	FMR	2008 Qtr 2
		\$102.93	\$124.18	\$147.09			

FAC 4122 Sustainment by Year - Terminal Cutoff Applied

