

FAC 4413 Hazardous Materials Storage, Depot

RUC: \$149.90 SF

Source: USACE PAX Newsletter 3.2.2 dated 20 Mar 09
Catcode 44135
Deflated to FY-09 using Appendix C of newsletter
In V12, Tri-Service and USACE PAX Newsletter values were updated while all other values were inflated only.

SUC: \$2.91 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 appears below:

FAC 4413 Hazardous Materials Storage, Depot
CostWorks 2008 Quarter 2

Design Life= 45
Average S.F= 5,353

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
Point & refinish block wall - 1st floor	25	1 Bric	35.100	C.S.F.	13,039.30	16,009.11	2008 Qtr 2	1	1	\$ 16,009.11
Point & refinish block wall - 2nd floor	25	1 Bric	32.500	C.S.F.	14,227.85	17,453.48	2008 Qtr 2	1	1	\$ 17,453.48
Replace glass - 1st floor (1% of glass)	1	1 Carp	0.200	S.F.	1.81	2.12	2008 Qtr 2	45	45	\$ 95.58
Repair 2'-0" x 3'-0" aluminum window - 1st floor	20	1 Carp	4.000	Ea.	459.84	544.80	2008 Qtr 2	2	2	\$ 1,089.60
Replace 2'-0" x 3'-0" aluminum window - 1st floor	50	1 Carp	4.000	Ea.	1,754.40	2,051.96	2008 Qtr 2	0	0	\$ -
Repair 12' x 12' steel roll-up door	10	1 Carp	3.000	Ea.	2,497.83	2,893.62	2008 Qtr 2	4	4	\$ 11,574.48
Refinish 12' x 12' steel roll-up door	12	1 Pord	3.000	Ea.	506.49	616.62	2008 Qtr 2	3	3	\$ 1,849.86
Replace 12' x 12' steel roll-up door	35	2 Carp	3.000	Ea.	9,975.81	11,548.65	2008 Qtr 2	1	1	\$ 11,548.65
Repair steel, painted, door	14	1 Carp	1.000	Ea.	582.44	686.36	2008 Qtr 2	3	2	\$ 1,372.72
Refinish 3'-0" x 7'-0" steel, painted, door	12	1 Pord	1.000	Ea.	32.91	40.31	2008 Qtr 2	3	3	\$ 120.93
Replace 3'-0" x 7'-0" steel, painted, door	45	1 Carp	1.000	Ea.	532.08	620.04	2008 Qtr 2	1	0	\$ -
Debris removal and visual inspection built-up roofing	0.5	2 Rofc	5.300	M.S.F.	155.50	187.36	2008 Qtr 2	90	90	\$ 16,861.95
Non-destructive moisture inspection built-up roofing	5	2 Rofc	5.300	M.S.F.	481.13	581.94	2008 Qtr 2	9	9	\$ 5,237.46
Minor membrane repairs - (2% of roof area) built-up roofing	1	G5	1.000	Sq.	344.52	407.04	2008 Qtr 2	45	45	\$ 18,316.80
Flashing repairs - (2 S.F. per sq. repaired) built-up roofing	5	2 Rofc	2.100	S.F.	7.06	8.40	2008 Qtr 2	9	9	\$ 75.60
Minor membrane replacement - (25% of roof area) built-up roofing	15	G5	13.300	Sq.	7,905.92	9,430.76	2008 Qtr 2	3	2	\$ 18,861.53
Place new membrane over existing built-up roofing	20	G5	53.500	Sq.	18,423.80	21,776.64	2008 Qtr 2	2	2	\$ 43,553.28
Total roof replacement built-up roofing	28	G1	53.500	Sq.	30,536.73	36,163.33	2008 Qtr 2	1	1	\$ 36,163.33
Repair steel painted interior door	14	1 Carp	3.000	Ea.	503.25	594.42	2008 Qtr 2	3	2	\$ 1,188.84
Refinish 3'-0" x 7'-0" steel painted interior door	12	1 Pord	3.000	Ea.	148.20	182.46	2008 Qtr 2	3	3	\$ 547.38
Replace 3'-0" x 7'-0" steel painted interior door	60	1 Carp	3.000	Ea.	2,812.62	3,269.88	2008 Qtr 2	0	0	\$ -
Repair solid core wood door interior	11	1 Carp	5.000	Ea.	838.75	990.70	2008 Qtr 2	4	3	\$ 2,972.10
Refinish 3'-0" x 7'-0" solid core wood door interior	12	1 Pord	5.000	Ea.	211.10	259.90	2008 Qtr 2	3	3	\$ 779.70
Replace 3'-0" x 7'-0" solid core wood door interior	40	1 Carp	5.000	Ea.	1,833.50	2,125.60	2008 Qtr 2	1	1	\$ 2,125.60
Repair 8" concrete block wall - (2% of walls) painted	25	1 Bric	1.600	C.S.F.	1,617.94	1,942.43	2008 Qtr 2	1	1	\$ 1,942.43
Refinish concrete block wall painted	12	1 Pord	81.000	C.S.F.	7,870.77	9,568.53	2008 Qtr 2	3	3	\$ 28,705.59
Replace 8" concrete block wall painted	75	2 Bric	81.100	C.S.F.	87,410.39	105,121.01	2008 Qtr 2	0	0	\$ -
Repair 5/8" drywall - (2% of walls)	20	1 Carp	33.100	S.F.	52.63	63.22	2008 Qtr 2	2	2	\$ 126.44
Replace 5/8" drywall	75	2 Carp	1,656.000	S.F.	3,692.88	4,454.64	2008 Qtr 2	0	0	\$ -
Replace carpet	12	2 Tilf	47.500	S.Y.	2,143.68	2,476.65	2008 Qtr 2	3	3	\$ 7,429.95
Refinish concrete floor finished	25	2 Cefi	47.200	C.S.F.	16,493.57	19,856.57	2008 Qtr 2	1	1	\$ 19,856.57
Replace vinyl floor	18	1 Tilf	22.300	S.Y.	1,064.83	1,300.09	2008 Qtr 2	2	2	\$ 2,600.18
Acoustic tile repairs - (2% of ceilings)	9	1 Carp	0.080	C.S.F.	35.73	42.53	2008 Qtr 2	5	5	\$ 212.67
Replace acoustic tile ceiling, fire-rated	20	1 Carp	4.200	C.S.F.	1,693.23	2,011.80	2008 Qtr 2	2	2	\$ 4,023.60
Repair sheetrock ceiling - (2% of ceilings)	20	1 Carp	0.040	C.S.F.	13.97	17.05	2008 Qtr 2	2	2	\$ 34.10
Refinish sheetrock ceiling	20	1 Pord	2.000	C.S.F.	251.34	310.58	2008 Qtr 2	2	2	\$ 621.16
Replace sheetrock ceiling	40	2 Carp	2.000	C.S.F.	716.66	875.02	2008 Qtr 2	1	1	\$ 875.02
Check / minor repairs drinking fountain	1	1 Plum	2.000	Ea.	75.16	94.68	2008 Qtr 2	45	45	\$ 4,260.60
Repair internal leaks drinking fountain	4	1 Plum	2.000	Ea.	70.28	86.86	2008 Qtr 2	11	11	\$ 955.46

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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
Correct water pressure drinking fountain	2	1 Plum	2.000	Ea.	64.42	81.00	2008 Qtr 2	22	22	\$ 1,782.00
Replace refrigerant drinking fountain	2	1 Plum	2.000	Ea.	31.68	37.72	2008 Qtr 2	22	22	\$ 829.84
Repair drain leak drinking fountain	4	1 Plum	2.000	Ea.	45.26	54.06	2008 Qtr 2	11	11	\$ 594.66
Replace fountain drinking fountain	10	2 Plum	2.000	Ea.	2,011.68	2,387.14	2008 Qtr 2	4	4	\$ 9,548.56
Inspect and clean shower head emergency shower station	3	1 Plum	1.000	Ea.	37.80	47.44	2008 Qtr 2	15	15	\$ 711.60
Replace shower emergency shower station	25	2 Plum	1.000	Ea.	726.39	873.58	2008 Qtr 2	1	1	\$ 873.58
Inspect and clean spray heads, emergency eye wash	3	1 Plum	1.000	Ea.	37.80	47.44	2008 Qtr 2	15	15	\$ 711.60
Replace eye wash station, emergency eye wash	25	2 Plum	1.000	Ea.	573.92	695.88	2008 Qtr 2	1	1	\$ 695.88
Replace washer in spud connection lavatory, vitreous china	7	1 Plum	8.000	Ea.	192.08	226.64	2008 Qtr 2	6	6	\$ 1,359.84
Replace washer in faucet lavatory, vitreous china	2	1 Plum	8.000	Ea.	78.80	98.32	2008 Qtr 2	22	22	\$ 2,163.04
Replace faucets lavatory, vitreous china	10	1 Plum	8.000	Ea.	987.92	1,192.48	2008 Qtr 2	4	4	\$ 4,769.92
Clean out strainer and P trap lavatory, vitreous china	2	1 Plum	8.000	Ea.	216.32	268.56	2008 Qtr 2	22	22	\$ 5,908.32
Replace lavatory, vitreous china	35	2 Plum	8.000	Ea.	4,241.52	5,085.60	2008 Qtr 2	1	1	\$ 5,085.60
Replace faucet washer sink, iron enamel	2	1 Plum	1.000	Ea.	9.79	12.19	2008 Qtr 2	22	22	\$ 268.18
Clean trap sink, iron enamel	3	1 Plum	1.000	Ea.	6.60	8.25	2008 Qtr 2	15	15	\$ 123.75
Replace faucets sink, iron enamel	10	1 Plum	1.000	Ea.	123.49	149.06	2008 Qtr 2	4	4	\$ 596.24
Unstop sink sink, iron enamel	2	1 Plum	1.000	Ea.	32.21	40.50	2008 Qtr 2	22	22	\$ 891.00
Replace sink, P.E.C.I. sink, iron enamel	35	2 Plum	1.000	Ea.	552.72	657.69	2008 Qtr 2	1	1	\$ 657.69
Replace flush valve diaphragm tankless water closet	10	1 Plum	5.000	Ea.	353.70	415.30	2008 Qtr 2	4	4	\$ 1,661.20
Rebuild flush valve tankless water closet	20	1 Plum	5.000	Ea.	659.90	800.05	2008 Qtr 2	2	2	\$ 1,600.10
Unplug clogged line tankless water closet	5	1 Plum	5.000	Ea.	841.30	1,050.90	2008 Qtr 2	9	9	\$ 9,458.10
Replace tankless water closet	35	2 Plum	5.000	Ea.	2,740.00	3,241.80	2008 Qtr 2	1	1	\$ 3,241.80
Replace tankless flush valve	25	1 Plum	5.000	Ea.	1,047.50	1,226.85	2008 Qtr 2	1	1	\$ 1,226.85
Replace wax ring gasket tankless water closet	5	1 Plum	5.000	Ea.	547.85	686.00	2008 Qtr 2	9	9	\$ 6,174.00
Replace flush valve diaphragm urinal	7	1 Plum	2.000	Ea.	141.48	166.12	2008 Qtr 2	6	6	\$ 996.72
Rebuild flush valve urinal	20	1 Plum	2.000	Ea.	263.96	320.02	2008 Qtr 2	2	2	\$ 640.04
Unplug line urinal	5	1 Plum	2.000	Ea.	224.28	279.82	2008 Qtr 2	9	9	\$ 2,518.38
Replace wall-hung urinal	35	2 Plum	2.000	Ea.	1,683.26	2,013.14	2008 Qtr 2	1	1	\$ 2,013.14
Repair circulator pump, 1/12 - 3/4 H.P.	5	1 Stpi	1.000	Ea.	70.99	84.25	2008 Qtr 2	9	9	\$ 758.25
Replace circulator pump, 1/12 - 3/4 H.P.	15	Q1	1.000	Ea.	2,484.44	2,870.47	2008 Qtr 2	3	2	\$ 5,740.94
Repair damaged pipe insulation, fiberglass 3/4"	5	Q14	4.000	Ea.	62.88	76.72	2008 Qtr 2	9	9	\$ 690.48
Repair damaged pipe insulation, fiberglass 2"	5	Q14	2.000	Ea.	36.92	45.06	2008 Qtr 2	9	9	\$ 405.54
Replace pipe insulation, fiberglass 3/4"	5	Q14	0.030	M.L.F.	188.67	229.84	2008 Qtr 2	9	9	\$ 2,068.55
Replace pipe insulation, fiberglass 2"	5	Q14	0.010	M.L.F.	74.26	90.69	2008 Qtr 2	9	9	\$ 816.22
Replace pipe and fittings, copper 3/4"	20	2 Plum	32.000	L.F.	567.04	687.36	2008 Qtr 2	2	2	\$ 1,374.72
Replace pipe and fittings, copper 2"	25	2 Plum	16.000	L.F.	652.96	785.76	2008 Qtr 2	1	1	\$ 785.76
Drain and flush water heater, electric, 120 gallon	7	1 Plum	1.000	Ea.	226.43	283.04	2008 Qtr 2	6	6	\$ 1,698.24
Check operation water heater, electric, 120 gallon	3	1 Plum	1.000	Ea.	1.98	2.48	2008 Qtr 2	15	15	\$ 37.20
Replace water heater, electric, 120 gallon	15	2 Plum	1.000	Ea.	9,192.45	10,543.79	2008 Qtr 2	3	2	\$ 21,087.58

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		Average S.F= 5,353	Sq=100 S.F; M.L.F=1000 L.F	from R.S. Means CostWorks		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 Occurences	Terminal Cutoff
Unclog floor drain, PVC	20	1 Plum	1.000	Ea.	37.09	45.87	2008 Qtr 2	2	2	\$ 91.74
Repair joint pipe and fittings, PVC	10	1 Plum	2.000	Ea.	231.88	288.28	2008 Qtr 2	4	4	\$ 1,153.12
Replace pipe, 4" pipe and fittings, PVC	30	2 Plum	300.000	L.F.	17,760.00	21,957.00	2008 Qtr 2	1	1	\$ 21,957.00
General maintenance & repair drain: roof, scupper, area	1	1 Plum	2.000	Ea.	56.70	71.34	2008 Qtr 2	45	45	\$ 3,210.30
Replace drain: roof, scupper, area	40	1 Plum	2.000	Ea.	796.68	936.28	2008 Qtr 2	1	1	\$ 936.28
Replace roof mounted exhaust fan, 8500 CFM exhaust fan	20	Q20	1.000	Ea.	2,619.48	3,050.64	2008 Qtr 2	2	2	\$ 6,101.28
Repair single zone rt. unit, 5 ton	10	2 Stpi	1.000	Ea.	1,929.71	2,314.56	2008 Qtr 2	4	4	\$ 9,258.24
Replace single zone rt. unit, 5 ton	15	Q5	1.000	Ea.	7,276.88	8,588.60	2008 Qtr 2	3	2	\$ 17,177.20
Maintenance and repair standard suspended heater	2	1 Elec	2.000	Ea.	185.18	217.34	2008 Qtr 2	22	22	\$ 4,781.48
Maintenance and inspection standard suspended heater	0.5	1 Elec	2.000	Ea.	124.92	156.16	2008 Qtr 2	90	90	\$ 14,054.40
Replace heater standard suspended heater	15	1 Elec	2.000	Ea.	1,450.80	1,699.34	2008 Qtr 2	3	2	\$ 3,398.68
Minor repairs to fire alarm control panel	5	1 Elec	1.000	Ea.	107.84	130.97	2008 Qtr 2	9	9	\$ 1,178.73
Maintenance and inspection fire alarm control panel	0.5	1 Elec	1.000	Ea.	30.54	38.17	2008 Qtr 2	90	90	\$ 3,435.30
Replace fire alarm control panel	15	1 Elec	1.000	Ea.	2,615.62	3,107.84	2008 Qtr 2	3	2	\$ 6,215.68
Inspect sprinkler system	1	1 Plum	1.000	Ea.	26.55	32.89	2008 Qtr 2	45	45	\$ 1,480.05
Replace sprinkler head	20	1 Plum	56.000	Ea.	3,566.08	4,393.76	2008 Qtr 2	2	2	\$ 8,787.52
Replace fire alarm bell, 6"	20	1 Elec	3.000	Ea.	426.84	514.53	2008 Qtr 2	2	2	\$ 1,029.06
Maintenance and repair safety switch, 3 pole safety switch, heavy duty	8	1 Elec	1.000	Ea.	28.50	35.63	2008 Qtr 2	5	5	\$ 178.15
Maintenance and inspection safety switch, 3 pole, heavy duty	1	1 Elec	1.000	Ea.	28.50	35.63	2008 Qtr 2	45	45	\$ 1,603.35
Replace safety switch, heavy duty	25	2 Elec	1.000	Ea.	580.48	680.71	2008 Qtr 2	1	1	\$ 680.71
Repair switchgear 1200 A mainframe	5	1 Elec	1.000	Ea.	1,694.09	1,975.10	2008 Qtr 2	9	9	\$ 17,775.90
Maintenance and inspection switchgear, mainframe	1	1 Elec	1.000	Ea.	45.81	57.01	2008 Qtr 2	45	45	\$ 2,565.45
Replace switchgear 1200 A mainframe	20	3 Elec	1.000	Ea.	4,052.28	4,808.24	2008 Qtr 2	2	2	\$ 9,616.48
Maintenance and repair motor starter, up to 600 V	5	1 Elec	2.000	Ea.	341.50	415.00	2008 Qtr 2	9	9	\$ 3,735.00
Maintenance and inspection motor starter, up to 600 V	0.5	1 Elec	2.000	Ea.	76.34	95.70	2008 Qtr 2	90	90	\$ 8,613.00
Replace starter motor starter, up to 600 V	18	1 Elec	2.000	Ea.	1,056.36	1,260.82	2008 Qtr 2	2	2	\$ 2,521.64
Replace fluor. ballast for fluorescent lighting fixture, 80 W	10	1 Elec	80.000	Ea.	7,966.40	9,606.40	2008 Qtr 2	4	4	\$ 38,425.60
Replace lamps (2 lamps) fluorescent lighting fixture, 80 W	10	1 Elec	80.000	Ea.	2,035.20	2,494.40	2008 Qtr 2	4	4	\$ 9,977.60
Replace fixture fluorescent lighting fixture, 80 W	20	1 Elec	80.000	Ea.	14,246.40	17,208.80	2008 Qtr 2	2	2	\$ 34,417.60
Maintenance and repair receptacles and plugs	20	1 Elec	65.000	Ea.	2,020.85	2,517.45	2008 Qtr 2	2	2	\$ 5,034.90
Replace receptacle/plug receptacles and plugs	20	1 Elec	65.000	Ea.	3,429.40	4,187.30	2008 Qtr 2	2	2	\$ 8,374.60
Maintenance and repair wiring devices, switches	10	1 Elec	16.000	Ea.	497.44	619.68	2008 Qtr 2	4	4	\$ 2,478.72
Replace switch wiring devices, switches	15	1 Elec	16.000	Ea.	819.36	997.60	2008 Qtr 2	3	2	\$ 1,995.20
Check and repair manual pull station	10	1 Elec	3.000	Ea.	207.63	254.61	2008 Qtr 2	4	4	\$ 1,018.44
Replace manual pull station	15	1 Elec	3.000	Ea.	377.22	455.67	2008 Qtr 2	3	2	\$ 911.34
Repair smoke detector	10	1 Elec	11.000	Ea.	420.09	517.00	2008 Qtr 2	4	4	\$ 2,068.00
Check operation smoke detector	1	1 Elec	11.000	Ea.	125.40	157.30	2008 Qtr 2	45	45	\$ 7,078.50
Replace smoke detector	15	1 Elec	11.000	Ea.	2,085.05	2,496.89	2008 Qtr 2	3	2	\$ 4,993.78
					\$344,425.63	\$412,950.68				

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Description	Frequency	Crew	Qty	Unit	Total In-House	Total Incl. O&P	Release	Occurences In Design Life	Adjusted Occurences	Terminal Cutoff
									MR Subtotal	\$ 650,316.87
									MR Per Year	\$ 14,451.49
									PM Per Year	\$ 1,595.26
									Subtotal	\$ 16,046.75
									Total Per Unit	\$ 3.00

CostWorks 2009 Quarter 1 - FAC 4413 Hazardous Materials Storage,

Qty	Assembly Number	Description	Total In-House	Total Incl. O&P	Zip Code	Prefix	Type	Release
2.000	D3045 160 1950	VAV Boxes, annualized	122.62	152.00	200		FMR	2008 Qtr 2
1.000	E1095 122 1950	Crane, electric bridge, up to 5 ton, annualized	152.92	186.81	200		FMR	2008 Qtr 2
1.000	B2035 225 1950	Door, emergency egress, swinging, annualized	49.51	57.51	200		FMR	2008 Qtr 2
3.000	B2035 400 1950	Door, overhead, manual, up to 24' high x 25' wide,	404.22	487.65	200		FMR	2008 Qtr 2
8.000	C1025 110 1950	Fire doors, swinging, annualized	199.12	238.88	200		FMR	2008 Qtr 2
2.000	D2015 800 1950	Drink fountain, annualized	99.00	118.72	200		FMR	2008 Qtr 2
8.000	D2015 100 4950	Lavatories, annualized	197.44	240.64	200		FMR	2008 Qtr 2
5.000	D2015 100 2950	Toilet (vacuum breaker type), annualized	64.65	80.75	200		FMR	2008 Qtr 2
2.000	D2015 100 1950	Urinals, annualized	25.86	32.30	200		FMR	2008 Qtr 2
			\$1,315.34	\$1,595.26				

FAC 4413 Sustainment by Year - Terminal Cutoff Applied

