

**FAC 1242    Marine Operating Fuel Storage**

RUC:            \$13.55 GA

Source:        Special study for DLA/DESC in 2008/2009  
Based upon PACES estimate and calculated per unit as follows.

SUC:            \$2.07 GA

Source:        Special study for DLA/DESC in 2008/2009; equated to SUC for FAC 1241 and  
calculated per unit as follows.

## **RUC FAC 1242 Marine Operating Fuel Storage**

### **Parametric Cost Engineering System (PACES) Project/Assembly Detail Cost Report**

**Project** DESC Marine Operating Fuel Storage

**Location:** ARLINGTON, VIRGINIA

**Description:**

**Comments:**

**Estimate Date:** 12/08/2008

**Estimate By:** R&Kfjk

**Agency:** Army

**Report Date:** 04/28/2009  
12:54 PM

**Construction Start Date:** 04/01/2009

**Construction Midpoint:** 05/01/2009

**Construction End Date:** 07/01/2009

**Escalation Rate:** 6.85% Based on Project Construction Midpoint

**Database Version:** Jan 2006 Cost Book

**PACES Version:** 7.0.11

## Project/Assembly Detail

Cost Report  
Type Supporting**Facility:** Marine Storage, Army only, 2500 ga**Model:** Storage Tank

<u>Assembly</u>	<u>Description</u>	<u>Qty</u>	<u>UOM</u>	<u>Mtrl</u>	<u>Labor</u>	<u>Equip</u>	<u>Unit Cost</u>	<u>Total</u>
19092003	Earthwork, Abv Grd Fire Protected Vaulted Tank	29	CY	\$0.00 \$0	\$27.64 \$802	\$11.39 \$330	\$39.03	\$1,132
19092103	Concrete, Abv Grd Fire Protected Vaulted Tank	14	CY	\$167.10 \$2,339	\$82.04 \$1,149	\$0.00 \$0	\$249.14	\$3,488
19092203	Pipes And Fittings, Abv Grd Fire Protected Vaulted Tank	84	LF	\$3.94 \$331	\$11.18 \$939	\$0.00 \$0	\$15.11	\$1,270
19092303	Electrical, Abv Grd Fire Protected Vaulted Tank	34	LF	\$57.53 \$1,951	\$40.11 \$1,360	\$9.83 \$333	\$107.48	\$3,645
19092403	Controls, Vaulted Abv Grd Fire Protected Vaulted Tank	1	EA	\$1,767.72 \$1,768	\$530.41 \$530	\$0.00 \$0	\$2,298.13	\$2,298
19092534	Tank, 11400 L (3000 gal), Vaulted Abv Grd Fire Pro	1	EA	\$15,989.04 \$15,989	\$2,699.06 \$2,699	\$533.85 \$534	\$19,221.94	\$19,222
<b>Model</b> Storage Tank				<b>\$22,378</b>	<b>\$7,479</b>	<b>\$1,198</b>		<b>\$31,055</b>
<b>Facility:</b> Marine Storage, Army only, 2500 ga				<b>\$22,378</b>	<b>\$7,479</b>	<b>\$1,198</b>		<b>\$31,055</b>

**Project/Assembly Detail**04/28/2009  
12:54 PM**Cost Report**

<b>Facilities Total (Direct Cost):</b>	<b>\$22,378</b>	<b>\$7,479</b>	<b>\$1,198</b>	<b>\$31,055</b>
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<b>Project Direct Cost:</b>				<b>\$31,055</b>
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Markups	42.5	%		\$13,191
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<b>Project Marked Up Cost:</b>				<b>\$44,246</b>
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Contingency	5.0	%		\$2,212
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SIOH	5.7	%		\$2,648
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<b>Project Cost:</b>				<b>\$49,106</b>
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Design/Indirect Cost:	0.0	%		\$0
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<b>Total Project Cost:</b>				<b>\$49,106</b>
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<b>Construction Start</b>	04/01/2009
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<b>Construction Midpoint:</b>	05/01/2009
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<b>Construction End Date:</b>	07/01/2009
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<b>Escalation Rate:</b>	6.85% Based on Construction Midpoint
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<b>Database Version:</b>	Jan 2006 Cost Book
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<b>PACES Version:</b>	7.0.11
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DESC RCF Revisions						
FAC	FACTITLE	UM	V.11 RCF \$09	PACES Direct Cost	PACES Unit	Unit Cost
1211	Aircraft Fueling Facility	GM	337.84	\$ 5,211,155	2400	\$ 2,171.31
1212	Aircraft Defueling Facility	GM	337.84	\$ 5,211,155	2400	\$ 2,171.31
1221	Marine Fueling Facility	GM	29.07			\$ 267.42
1231	Vehicle Fueling Facility	OL	13,748.50	\$ 249,800	2	\$ 124,900.00
1241	Aircraft Operating Fuel Storage	GA	1.96	\$ 1,992,868	420000	\$ 4.74
1242	Marine Operating Fuel Storage	GA	5.56	\$ 44,246	3000	\$ 14.75
1243	Vehicle Operating Fuel Storage	GA	5.76	\$ 86,668	25000	\$ 3.47
1244	Other Operating Fuel Storage	GA	9.39	\$ 43,968	17439	\$ 2.52
1251	POL Pipeline	LF	148.05	\$ 438,018	1000	\$ 438.02
1261	Liquid Fuel Loading/Unloading Facility	OL	13,748.50	\$ 456,159	4	\$ 114,039.75
1262	POL Pump Station	SF	681.19	\$ 2,022,665	1008	\$ 2,006.61
4111	Bulk Liquid Fuel Storage	BL	53.05			\$ 65.23

# FAC 1241 Operating Fuel Tank

Design Life and Representative Size	31	Years	26467		GA
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Component	Fre-quency	Estimated Cost per Occurrence	occurrences in design life	occurrences rounded	Design Life Cost
<b>Tank</b>					
API 653 External Inspection	5	\$ 20,000	6.2	6.0	\$ 120,000
Spot Painting/Minor Repairs	10	\$ 50,000	3.1	3.0	\$ 150,000
API 653 Internal Inspection	10	\$ 60,000	3.1	3.0	\$ 180,000
Repairs found during API 653 External Inspection	10	\$ 25,000	3.1	3.0	\$ 75,000
External Coating	15	\$ 115,000	2.1	2.0	\$ 230,000
Clean Tank	5	\$ 25,000	6.2	6.0	\$ 150,000
PM Cathodic Protection System (Impressed voltage)	1	\$ 2,000	31	31.0	\$ 62,000
<b>Piping</b>				0.0	\$ -
API 570 Inspection	3	\$ 15,000	10	10.0	\$ 150,000
				0.0	\$ -
<b>Controls</b>				0.0	\$ -
Annual Calibration	1	\$ 20,000	31	31.0	\$ 620,000
			S/T		\$ 1,737,000
			Per Year		\$ 56,032
Operator Maintenance	1	632	1	1	\$ 632
					\$ 56,664
<b>\$FY-08</b>			Per Unit		<b>\$ 2.14</b>
<b>\$FY-09</b>					<b>\$ 2.18</b>



99%  
1%

## SUC FAC 1242