

## TANK FARM AND STORAGE TERMINAL COST ESTIMATE

All Costs in US \$ based on USGC / 4Q 2013

Description	Base Materials Cost	MTO Allowance	Cut & Waste Allowance	Design Allowance	Total Material Cost	Subcontract Costs	Fabricate & Installation Cost	Subtotal Cost	Contingency	Total Cost
<b>TANKS</b>										
Butane Tanks						\$ -		\$ -	\$ -	\$ -
Propane Tanks						\$ -		\$ -	\$ -	\$ -
Condensate Tanks						\$ -		\$ -	\$ -	\$ -
Crude Oil Tanks (750K BBL x 12)						\$ 148,236,000		\$ 148,236,000	\$ 22,235,400	\$ 170,472,000
Syncrude Tanks (500K BBL x 7)						\$ -		\$ -	\$ -	\$ -
Diluent Tanks (250K BBL x 7)						\$ -		\$ -	\$ -	\$ -
Fire Water Tanks (80K BBL x 2)						\$ 5,000,000		\$ 5,000,000	\$ 750,000	\$ 5,750,000
Gas Storage Tank (7K m3 x 1)						\$ -		\$ -	\$ -	\$ -
Diesel Fuel Tank (15K BBL x 1)						\$ 500,000		\$ 500,000	\$ 75,000	\$ 575,000
<b>Subtotal Tanks</b>	-	-	-	-	-	153,736,000	-	153,736,000	23,060,400	176,797,000
<b>EQUIPMENT</b>										
Scada & Telecomm	\$ 6,221,200	\$ 186,636	\$ 124,424	\$ 311,060	\$ 6,532,260		\$ 186,636	\$ 6,718,896	\$ 1,007,834	\$ 7,727,000
Vessels	\$ 1,399,770	\$ 41,993	\$ 27,995	\$ 69,989	\$ 1,469,759		\$ 139,977	\$ 1,609,736	\$ 241,460	\$ 1,852,000
Tank Mixers	\$ 3,300,000	\$ 99,000	\$ 66,000	\$ 165,000	\$ 3,465,000		\$ 231,000	\$ 3,696,000	\$ 554,400	\$ 4,251,000
Electrical Equipment	\$ 8,709,680	\$ 261,290	\$ 174,194	\$ 435,484	\$ 9,145,164		\$ 435,484	\$ 9,580,648	\$ 1,437,097	\$ 11,018,000
Pumps	\$ 3,594,576	\$ 107,837	\$ 71,892	\$ 179,729	\$ 3,774,305		\$ 143,783	\$ 3,918,088	\$ 587,713	\$ 4,506,000
Packages	\$ 1,399,770	\$ 41,993	\$ 27,995	\$ 69,989	\$ 1,469,759		\$ 48,992	\$ 1,518,750	\$ 227,813	\$ 1,747,000
Miscellaneous	\$ 1,244,240	\$ 37,327	\$ 24,885	\$ 62,212	\$ 1,306,452		\$ 62,212	\$ 1,368,664	\$ 205,300	\$ 1,574,000
Cathodic Protection	\$ 1,648,618	\$ 49,459	\$ 32,972	\$ 82,431	\$ 1,731,049		\$ 82,431	\$ 1,813,480	\$ 272,022	\$ 2,086,000
Loading Arms	\$ 9,309,953	\$ 279,299	\$ 186,199	\$ 465,498	\$ 9,775,450		\$ 2,327,488	\$ 12,102,938	\$ 1,815,441	\$ 13,919,000
SPARES - Operating / 1 Years	\$ 813,255	\$ 24,398	\$ 16,265	\$ 40,663	\$ 853,917			\$ 853,917	\$ 128,088	\$ 983,000
<b>Subtotal Equipment</b>	\$ 37,641,061	\$ 1,129,232	\$ 752,821	\$ 1,882,053	\$ 39,523,114	\$ -	\$ 3,658,003	\$ 43,181,118	\$ 6,477,168	\$ 49,663,000
<b>CIVIL WORKS</b>										
Site Development						\$ 7,528,212		\$ 7,528,212	\$ 1,129,232	\$ 8,658,000
Civil Works For Piping & Equipment						\$ 1,882,053		\$ 1,882,053	\$ 282,308	\$ 2,165,000
Underground Utilities						\$ 2,258,464		\$ 2,258,464	\$ 338,770	\$ 2,598,000
Pilings						\$ -		\$ -	\$ -	\$ -
Buildings						\$ 9,410,265		\$ 9,410,265	\$ 1,411,540	\$ 10,822,000
Jetty Construction						\$ 34,329,588		\$ 34,329,588	\$ 5,149,438	\$ 39,480,000
Road Work						\$ 1,882,053		\$ 1,882,053	\$ 282,308	\$ 2,165,000

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Subtotal Civil Works						\$ 57,290,635	\$ -	\$ 57,290,635	\$ 8,593,595	\$ 65,884,230
<b>PIPING WORKS</b>										
Pipe	\$ 3,762,304	\$ 112,869	\$ 75,246	\$ 188,115	\$ 4,138,534		\$ 6,207,801	\$ 10,346,335	\$ 1,551,950	\$ 11,898,285
Fittings	\$ 752,461	\$ 22,574	\$ 15,049	\$ 37,623	\$ 827,707		\$ 1,241,560	\$ 2,069,267	\$ 310,390	\$ 2,380,057
Flanges	\$ 225,738	\$ 6,772	\$ 4,515	\$ 11,287	\$ 248,312		\$ 372,468	\$ 620,780	\$ 93,117	\$ 714,000
Valves	\$ 2,069,267	\$ 62,078	\$ 41,385	\$ 103,463	\$ 2,276,194		\$ 3,414,290	\$ 5,690,484	\$ 853,573	\$ 6,544,057
Specials, Bolting & Gaskets	\$ 601,969	\$ 18,059	\$ 12,039	\$ 30,098	\$ 662,165		\$ 993,248	\$ 1,655,414	\$ 248,312	\$ 1,904,000
Hydro Testing & NDT		\$ -	\$ -	\$ -	\$ -		\$ 1,316,806	\$ 1,316,806	\$ 197,521	\$ 1,514,327
Painting & Insulations	\$ 376,230	\$ 11,287	\$ 7,525	\$ 18,812	\$ 413,853		\$ 620,780	\$ 1,034,633	\$ 155,195	\$ 1,190,000
Subtotal Piping	\$ 7,787,968	\$ 233,639	\$ 155,759	\$ 389,398	\$ 8,566,765	\$ -	\$ 14,166,954	\$ 22,733,719	\$ 3,410,058	\$ 26,143,777
<b>ELECTRICAL WORKS</b>										
Cables	\$ 1,829,033	\$ 54,871	\$ 36,581	\$ 91,452	\$ 2,011,936		\$ 640,161	\$ 2,652,098	\$ 397,815	\$ 3,050,000
Glands & Terminations	\$ 435,484	\$ 13,065	\$ 8,710	\$ 21,774	\$ 479,032		\$ 1,524,194	\$ 2,003,226	\$ 300,484	\$ 2,304,000
Luminaries	\$ 740,323	\$ 22,210	\$ 14,806	\$ 37,016	\$ 814,355		\$ 62,927	\$ 877,283	\$ 131,592	\$ 1,009,000
Power Outlets & Switches	\$ 283,065	\$ 8,492	\$ 5,661	\$ 14,153	\$ 311,371		\$ 42,460	\$ 353,831	\$ 53,075	\$ 407,000
Junction Boxes	\$ 130,645	\$ 3,919	\$ 2,613	\$ 6,532	\$ 143,710		\$ 20,903	\$ 164,613	\$ 24,692	\$ 190,000
Tray & Tracks	\$ 1,045,162	\$ 31,355	\$ 20,903	\$ 52,258	\$ 1,149,678		\$ 679,355	\$ 1,829,033	\$ 274,355	\$ 2,104,000
Earthing Accessories	\$ 65,323	\$ 1,960	\$ 1,306	\$ 3,266	\$ 71,855		\$ 22,863	\$ 94,718	\$ 14,208	\$ 109,000
Miscellaneous	\$ 87,097	\$ 2,613	\$ 1,742	\$ 4,355	\$ 95,806		\$ 80,129	\$ 175,936	\$ 26,390	\$ 203,000
Subtotal Electrical	\$ 4,616,130	\$ 138,484	\$ 92,323	\$ 230,807	\$ 5,077,743	\$ -	\$ 3,072,993	\$ 8,150,736	\$ 1,222,610	\$ 9,373,346
<b>INSTRUMENT &amp; CONTROLS WORK</b>										
Cables	\$ 311,060	\$ 9,332	\$ 6,221	\$ 15,553	\$ 342,166		\$ 93,318	\$ 435,484	\$ 65,323	\$ 501,000
Glands & Terminations	\$ 46,659	\$ 1,400	\$ 933	\$ 2,333	\$ 51,325		\$ 349,943	\$ 401,267	\$ 60,190	\$ 462,000
Junction Boxes	\$ 31,106	\$ 933	\$ 622	\$ 1,555	\$ 34,217		\$ 155,530	\$ 189,747	\$ 28,462	\$ 219,000
Tray & Tracks	\$ 279,954	\$ 8,399	\$ 5,599	\$ 13,998	\$ 307,949		\$ 153,975	\$ 461,924	\$ 69,289	\$ 532,000
Field Instruments	\$ 217,742	\$ 6,532	\$ 4,355	\$ 10,887	\$ 239,516		\$ 7,621	\$ 247,137	\$ 37,071	\$ 285,000
Instrument Hook - Up		\$ -	\$ -	\$ -	\$ -		\$ 777,650	\$ 777,650	\$ 116,648	\$ 894,298
Instrument Valves	\$ 933,180	\$ 27,995	\$ 18,664	\$ 46,659	\$ 1,026,498		\$ 23,330	\$ 1,049,828	\$ 157,474	\$ 1,207,302
Miscellaneous	\$ 77,765	\$ 2,333	\$ 1,555	\$ 3,888	\$ 85,542		\$ 23,330	\$ 108,871	\$ 16,331	\$ 125,000
Instrument Piping	\$ 31,106	\$ 933	\$ 622	\$ 1,555	\$ 34,217		\$ 124,424	\$ 158,641	\$ 23,796	\$ 183,000
Subtotal Instrument & Controls	\$ 1,928,572	\$ 57,857	\$ 38,571	\$ 96,429	\$ 2,121,429	\$ -	\$ 1,709,119	\$ 3,830,548	\$ 574,582	\$ 4,405,131

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<b>Subtotal Bulks</b>	\$ 14,332,671	\$ 429,980	\$ 286,653	\$ 716,634	\$ 15,765,938	\$ 57,290,635	\$ 18,949,066	\$ 92,005,639	\$ 13,800,846	\$ 105,822,000
<b>Subtotal Tanks, Equip + Bulks</b>	\$ 51,973,732	\$ 1,559,212	\$ 1,039,475	\$ 2,598,687	\$ 55,289,052	\$ 211,026,635	\$ 22,607,069	\$ 288,922,756	\$ 43,338,413	\$ 332,282,000
<b>INDIRECT FIELD COSTS</b>										
Commissioning Spares	\$ 779,606	\$ 23,388	\$ 15,592	\$ 38,980	\$ 857,567		\$ 857,567	\$ 857,567	\$ 128,635	\$ 987,000
Chemicals	\$ 259,869	\$ 7,796	\$ 5,197	\$ 12,993	\$ 285,856		\$ 285,856	\$ 285,856	\$ 42,878	\$ 329,000
Logistics, Expediting & Shipping	\$ 4,677,636	\$ 140,329	\$ 93,553	\$ 233,882	\$ 5,145,399		\$ 5,145,399	\$ 5,145,399	\$ 771,810	\$ 5,918,000
Marine Insurance	\$ 1,223,002	\$ -			\$ 1,223,002		\$ 1,223,002	\$ 1,223,002	\$ 183,450	\$ 1,407,000
Custom Clearance	\$ 77,961	\$ 2,339	\$ 1,559	\$ 3,898	\$ 85,757		\$ 85,757	\$ 85,757	\$ 12,863	\$ 99,000
Inland Freight	\$ 2,115,627	\$ 31,184	\$ 20,789	\$ 51,974	\$ 2,219,574		\$ 2,219,574	\$ 2,219,574	\$ 332,936	\$ 2,553,000
<b>Indirect Field Costs</b>	\$ 9,133,699	\$ 205,036	\$ 136,691	\$ 341,727	\$ 9,817,154	\$ -	\$ -	\$ 9,817,154	\$ 1,472,573	\$ 11,293,000
<b>EPCM COSTS</b>										
Engineering						\$ 16,882,131		\$ 16,882,131	\$ 2,532,320	\$ 19,415,000
Procurement						\$ 6,330,799		\$ 6,330,799	\$ 949,620	\$ 7,281,000
Project Management						\$ 8,441,065		\$ 8,441,065	\$ 1,266,160	\$ 9,708,000
Construction Management Costs						\$ 21,102,663		\$ 21,102,663	\$ 3,165,400	\$ 24,269,000
Overhead & Profit								\$ 52,724,485		\$ 52,725,000
<b>EPCM Costs</b>	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 52,756,659	\$ -	\$ 105,481,144	\$ 7,913,499	\$ 113,398,000
<b>Client Costs</b>										
Land & Land Acquisition Costs								\$ 5,977,000	\$ 896,550	\$ 6,874,000
Environmental & Community Relations								\$ 3,686,000	\$ 552,900	\$ 4,239,000
Tendering & FEED								\$ 10,164,000	\$ 1,524,600	\$ 11,689,000
Engineering, Procurement & Construction Oversight								\$ 56,420,000	\$ 8,463,000	\$ 64,883,000
Commissioning & Start-Up								\$ 1,080,000	\$ 162,000	\$ 1,242,000
Home Office Costs								\$ 3,813,000	\$ 571,950	\$ 4,385,000
<b>Client Costs</b>										\$ 93,312,000
<b>Total Capex Costs For Tank Farm &amp; Storage Terminal</b>	\$ 61,107,432	\$ 1,764,248	\$ 1,176,166	\$ 2,940,414	\$ 65,106,206	\$ 263,783,294	\$ 22,607,069	\$ 404,221,054	\$ 52,724,485	\$ 550,285,000