

**GLWA-CS-213 Environmental - Occupational Health and Safety Consulting  
Cost Analysis**

| Tasks  | Hourly Rate |             |             |             | # of Hours |     |       |            | Sub Total           |                     |                    |                     |
|--|-------------|-------------|-------------|-------------|------------|-----|-------|------------|---------------------|---------------------|--------------------|---------------------|
|  | ECT         | NTH         | Somat       | Tetra Tech  | ECT        | NTH | Somat | Tetra Tech | ECT                 | NTH                 | Somat              | Tetra Tech          |
| <b>Task 1 - Remediation of Leaking Underground Storage Tank Site</b>   |             |             |             |             |            |     |       |            |                     |                     |                    |                     |
| Project Manager/hr   | \$ 131.00   | \$ 185.00   | \$ 99.00    | \$ 149.81   | 4          | 6   | 2     | 4          | \$ 524.00           | \$ 1,110.00         | \$ 198.00          | \$ 599.24           |
| Activity Manager/hr  | \$ 105.00   | \$ 145.00   | \$ 82.00    | \$ 122.53   | 8          | 16  | 4     | 16         | \$ 840.00           | \$ 2,320.00         | \$ 328.00          | \$ 1,960.48         |
| Crew Leader/hr   | \$ 55.00    | \$ 90.00    | \$ 75.00    | \$ 79.45    | 10         | 10  | 8     |            | \$ 550.00           | \$ 900.00           | \$ 600.00          | \$ -                |
| Analytical Cost/sample   | \$ 125.00   | \$ 116.00   | \$ 455.00   | \$ 467.00   | 5          | 10  | 1     | 6          | \$ 625.00           | \$ 1,160.00         | \$ 455.00          | \$ 1,401.00         |
| Cleaning and disposal of Tanks (2500 gallon capacity)  | \$ 9,500.00 | \$ 2,500.00 | \$ 300.00   | \$ 2,420.00 | 1          | 1   | 4     | 1          | \$ 9,500.00         | \$ 2,500.00         | \$ 1,200.00        | \$ 2,420.00         |
| Hydraulic Excavator with Operator/hr   | \$ 125.00   | \$ 180.00   | \$ 185.00   | \$ 262.50   | 10         | 10  | 16    | 8          | \$ 1,250.00         | \$ 1,800.00         | \$ 2,960.00        | \$ 2,310.00         |
| Field Technician - Professional/hr   | \$ 79.00    | \$ 60.00    | \$ 64.00    | \$ 77.89    | 10         | 16  | 3     | 13         | \$ 790.00           | \$ 960.00           | \$ 192.00          | \$ 1,012.57         |
| Field Technician - Assistant/hr  | \$ 45.00    | \$ 70.00    | \$ 56.00    | \$ 67.39    | 10         | 10  | 8     | 9          | \$ 450.00           | \$ 700.00           | \$ 448.00          | \$ 606.51           |
| Removal and Disposal of Contaminated Soil to Type II Landfill/cubic yard   | \$ 40.00    | \$ 70.00    | \$ 40.00    | \$ 40.00    | 50         | 250 | 40    | 85         | \$ 2,000.00         | \$ 17,500.00        | \$ 1,600.00        | \$ 3,400.00         |
|  | <b>108</b>  | <b>329</b>  | <b>86</b>   | <b>142</b>  |            |     |       |            | <b>\$ 16,529.00</b> | <b>\$ 28,950.00</b> | <b>\$ 7,981.00</b> | <b>\$ 13,709.80</b> |
| <b>Task 2 - Develop Health and Safety Programs and Training of GLWA Personnel</b>  |             |             |             |             |            |     |       |            |                     |                     |                    |                     |
| All regulatory Health and Safety Topics Related to the Operations  | \$ 129.00   | \$ 145.00   | \$ 155.00   | \$ 2,190.00 | 16         | 32  | 4     | 34         | \$ 2,000.00         | \$ 4,640.00         | \$ 620.00          | \$ 74,460.00        |
| Total Course Development ( One Time Charge Per Course)   | \$ 1,650.00 | \$ 145.00   | \$ 1.00     | \$ 560.00   | 1          | 32  | 1     | 34         | \$ 1,650.00         | \$ 4,640.00         | \$ 2,500.00        | \$ 19,040.00        |
| Course Presentation (class size: 30; course manuals to be provided to each participant)  | \$ 500.00   | \$ 145.00   | \$ 1,550.00 | \$ 1,400.00 | 1          | 16  | 2     | 4          | \$ 500.00           | \$ 2,320.00         | \$ 3,100.00        | \$ 5,600.00         |
| Project Mgr/hr   |             | \$ 185.00   |             |             |            | 2   |       |            |                     | \$ 370.00           |                    |                     |
| Senior Project Consultant/hr   |             | \$ 185.00   |             |             |            | 2   |       |            |                     | \$ 370.00           |                    |                     |
| Word Processing  |             | \$ 50.00    |             |             |            | 6   |       |            |                     | \$ 300.00           |                    |                     |
|  | <b>17.5</b> | <b>90</b>   | <b>7</b>    | <b>72</b>   |            |     |       |            | <b>\$ 4,150.00</b>  | <b>\$ 12,640.00</b> | <b>\$ 6,220.00</b> | <b>\$ 99,100.00</b> |
| <b>Task 3 - Development and Update of Spill Prevention, Control and Countermeasure and Pollution Incident Prevention Plans</b> |             |             |             |             |            |     |       |            |                     |                     |                    |                     |
| Senior Project Consultant/hr   | \$ 165.00   | \$ 185.00   | \$ 180.00   | \$ 217.21   | 2          | 2   | 2     | 0          | \$ 330.00           | \$ 370.00           | \$ 360.00          | \$ -                |
| Project Manager/hr   | \$ 127.00   | \$ 185.00   | \$ 139.00   | \$ 149.81   | 2          | 4   | 2     | 6          | \$ 760.00           | \$ 740.00           | \$ 278.00          | \$ 898.86           |
| Senior Project Engineer/hr   | \$ 124.00   | \$ 145.00   | \$ 174.00   | \$ 115.28   | 2          | 14  | 4     | 4          | \$ 248.00           | \$ 2,030.00         | \$ 696.00          | \$ 461.12           |
| Senior Staff Engineer/hr   | \$ 120.00   | \$ 115.00   | \$ 82.00    | \$ 83.97    |            | 20  |       | 0          |                     | \$ 2,300.00         |                    | \$ -                |
| Staff Professional / hr  | \$ 127.00   | \$ 95.00    | \$ 73.00    | \$ 122.53   | 6          | 0   | 24    | 16         | \$ 570.00           | \$ -                | \$ 1,752.00        | \$ 1,960.48         |
| CADD   | \$ 96.00    | \$ 85.00    | \$ 75.00    | \$ 83.97    | 4          | 2   | 2     | 4          | \$ 380.00           | \$ 170.00           | \$ 150.00          | \$ 335.88           |
| Word Processing  | \$ 96.00    | \$ 50.00    | \$ 45.00    | \$ 67.39    | 8          | 4   | 2     | 2          | \$ 768.00           | \$ 200.00           | \$ 90.00           | \$ 134.78           |
|  | <b>24</b>   | <b>46</b>   | <b>36</b>   | <b>32</b>   |            |     |       |            | <b>\$ 3,056.00</b>  | <b>\$ 5,810.00</b>  | <b>\$ 3,326.00</b> | <b>\$ 3,791.12</b>  |
| <b>Task 4 - Update and Audit of Process Safety Management and Risk Management Plans</b>  |             |             |             |             |            |     |       |            |                     |                     |                    |                     |
| Activity Manager/hr  | \$ 165.00   | \$ 185.00   | \$ 119.00   | \$ 149.81   | 40         | 4   | 8     | 6          | \$ 6,600.00         | \$ 740.00           | \$ 952.00          | \$ 898.86           |
| Project Engineer/hr  | \$ 154.00   | \$ 145.00   | \$ 87.00    | \$ 95.28    | 54         | 60  | 16    | 90         | \$ 9,316.00         | \$ 8,700.00         | \$ 1,392.00        | \$ 8,575.20         |
| Crew Leader  | \$ 124.00   | \$ 95.00    | \$ 75.00    | \$ 122.53   | 54         | 16  | 4     | 0          | \$ 6,696.00         | \$ 1,520.00         | \$ 300.00          | \$ -                |
| Decontamination Equipment/hr   | \$ 85.00    | \$ -        | \$ 300.00   | \$ 250.00   |            | 0   | 4     | 0          | \$ -                | \$ -                | \$ 1,200.00        | \$ -                |
| Technician-Professional/hr   | \$ 105.00   | \$ 95.00    | \$ 64.00    | \$ 83.97    | 30         | 16  | 4     | 8          | \$ 3,150.00         | \$ 1,520.00         | \$ 256.00          | \$ 671.76           |
| Field Technician/hr  | \$ 96.00    | \$ 50.00    | \$ 56.00    |             | 12         | 8   |       |            | \$ 1,152.00         | \$ 400.00           |                    | \$ -                |
|  | <b>190</b>  | <b>104</b>  | <b>36</b>   | <b>104</b>  |            |     |       |            | <b>\$ 26,914.00</b> | <b>\$ 12,880.00</b> | <b>\$ 4,100.00</b> | <b>\$ 10,145.82</b> |

**GLWA-CS-213 Environmental - Occupational Health and Safety Consulting  
Cost Analysis**

| <b>Task 5 - Clean-up and Disposal of Oil and Pollution Spills on Surface Waters</b>  | Hourly Rate |             |             |             | # of Hours |     |       |            | Sub Total    |              |              |              |
|--|-------------|-------------|-------------|-------------|------------|-----|-------|------------|--------------|--------------|--------------|--------------|
|  | ECT         | NTH         | Somat       | Tetra Tech  | ECT        | NTH | Somat | Tetra Tech | ECT          | NTH          | Somat        | Tetra Tech   |
| Activity Manager/hr  | \$ 151.50   | \$ 185.00   | \$ 152.00   | \$ 149.81   |            | 2   |       | 4          |              | \$ 370.00    |              | \$ 599.24    |
| Project Engineer/hr  |             | \$ 145.00   | \$ 87.00    | \$ 95.28    |            | 6   |       | 0          |              | \$ 870.00    |              | \$ -         |
| Crew Leader  | \$ 110.50   | \$ 110.50   | \$ 111.00   | \$ 122.53   |            | 30  |       | 17         |              | \$ 3,315.00  |              | \$ 2,083.01  |
| Decontamination Equipment/hr   | \$ 245.00   | \$ 245.00   | \$ 245.00   | \$ 275.00   | 4          | 4   | 4     | 2          | \$ 980.00    | \$ 980.00    | \$ 980.00    | \$ 550.00    |
| Technician-Professional/hr   | \$ 119.50   | \$ 95.00    | \$ 120.00   | \$ 83.97    |            | 2   |       | 17         |              | \$ 190.00    |              | \$ 1,427.49  |
| Field Technician/hr  | \$ 78.50    | \$ 60.00    | \$ 79.00    | \$ 67.39    |            | 10  |       | 18         |              | \$ 600.00    |              | \$ 1,213.02  |
| Complete waste characteriazation/sample (includes analysis for PCB's, Flash and BTEX with 48-hr TAT)   |             |             |             |             |            |     |       |            |              |              |              |              |
|  | \$ 497.00   | \$ 769.00   | \$ 497.00   | \$ 1,286.00 | 1          | 1   | 1     | 1          | \$ 497.00    | \$ 769.00    | \$ 497.00    | \$ 1,286.00  |
| Supply and deployment of containment boom by boat /incident (Includes 20' twin engine workboat with 4-person crew and 500' of small (6"x6") containment boom) Not to Exceed a 10-hour day portal to portal |             |             |             |             |            |     |       |            |              |              |              |              |
|  | \$ 7,030.00 | \$ 2,581.50 | \$ 7,030.00 | \$ 2,510.00 | 1          | 1   | 1     | 1          | \$ 7,030.00  | \$ 2,518.50  | \$ 7,030.00  | \$ 2,510.00  |
| Supply and deployment of absorbent boom by boat /incident (Includes 20' twin engine workboat with a 4-person crew and 200' of Spc 510 sorbent boom) Not to Exceed a 10hour day portal to portal.           |             |             |             |             |            |     |       |            |              |              |              |              |
|  | \$ 6,840.00 | \$ 2,328.50 | \$ 6,840.00 | \$ 3,148.00 | 1          | 1   | 1     | 1          | \$ 6,840.00  | \$ 2,328.50  | \$ 6,840.00  | \$ 3,148.00  |
| Recover, containerize, transport and dispose of floating contaminants /gallon  | \$ 929.30   | \$ 19.13    | \$ 9,293.00 | \$ 2.88     | 6          | 250 | 1     | 1500       | \$ 5,575.80  | \$ 4,782.50  | \$ 9,293.00  | \$ 4,323.00  |
| Contractor Project Manager   |             | \$ 119.50   |             |             |            | 3   |       |            |              | \$ 454.50    |              |              |
| Contractor Technician  |             | \$ 151.50   |             |             |            | 30  |       |            |              | \$ 3,585.00  |              |              |
| Contractor Field Labor   |             | \$ 78.50    |             |             |            | 60  |       |            |              | \$ 4,710.00  |              |              |
|  |             |             |             |             | 13         | 400 | 8     | 1,561      | \$ 20,922.80 | \$ 25,473.00 | \$ 24,640.00 | \$ 17,139.76 |

**Total Cost Per Task**

| <b>Task Description</b>  | ECT                 | NTH                 | Somat               | Tetra Tech           |
|--|---------------------|---------------------|---------------------|----------------------|
| 1. Remediation of Leaking Underground Storage Tank Site  | \$ 16,529.00        | \$ 28,950.00        | \$ 7,981.00         | \$ 13,709.80         |
| 2. Develop Health and Safety Programs and Training of GLWA Personnel                                     | \$ 4,150.00         | \$ 12,640.00        | \$ 6,220.00         | \$ 99,100.00         |
| 3. Develop Spill Control and Countermeasures/Pollution Incident Prevention Plans and Development Updates | \$ 3,056.00         | \$ 5,810.00         | \$ 3,326.00         | \$ 3,791.12          |
| 4. Update and Audit of Process Safety Management and Risk Management Plan                                | \$ 26,914.00        | \$ 12,880.00        | \$ 4,100.00         | \$ 10,145.82         |
| 5. Clean-up and Disposal fo Oil and Pollution Spills on Surface Waters                                   | \$ 20,922.80        | \$ 25,473.00        | \$ 24,640.00        | \$ 17,139.76         |
|  | <b>\$ 71,571.80</b> | <b>\$ 85,753.00</b> | <b>\$ 46,267.00</b> | <b>\$ 143,886.50</b> |

D. Graves

5/7/2018

**GLWA-CS-213 Environmental Health and Safety Compliance Services**

**Cost Detail**

**Original Hours**

**Expanded Hours**

**Task**

**Description**

|   |   |
|---|---|
| 1 | Remediation of Leaking Underground Storage Tank Site  |
| 2 | Develop Health and Safety Programs and Training of GLWA Personnel                                     |
| 3 | Develop Spill Control and Countermeasures/Pollution Incident Prevention Plans and Development Updates |
| 4 | Update and Audit of Process Safety Management and Risk Management Plan                                |
| 5 | Clean-up and Disposal of Oil and Pollution Spills on Surface Waters                                   |
| 6 | Preparation of Training Sessions for Health and Safety Training Programs                              |
| 7 | Presentation of Training Sessions for Health and Safety Programs                                      |

| <b>Hours</b> | <b>Cost</b>         |
|--------------|---------------------|
| 329          | \$ 28,950.00        |
| 90           | \$ 12,640.00        |
| 46           | \$ 5,810.00         |
| 104          | \$ 12,880.00        |
| 400          | \$ 25,473.00        |
|              |                     |
| <b>969</b>   | <b>\$ 85,753.00</b> |

| <b>Hours</b> | <b>Cost</b>          |
|--------------|----------------------|
| 329          | \$ 28,950.00         |
| 2470         | \$ 158,278.00        |
| 1046         | \$ 56,700.00         |
| 800          | \$ 50,422.00         |
| 400          | \$ 25,473.00         |
| 1600         | \$ 141,740.00        |
| 1349         | \$ 19,717.00         |
| <b>7,994</b> | <b>\$ 481,280.00</b> |