## 2009 AML Reclamation Grading Costs - 3 Lowest Project Bids

|  | DESCRIPTION | QUANTTIES | UNIT PRICE | TOTAL | UNIT PRICE | TOTAL | UNIT PRICE | TOTAL |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Reclamation Project | Task | Cubic Yards | $\begin{gathered} \text { Cost per } \\ \mathrm{CY} \end{gathered}$ | Low Project Bid | $\begin{gathered} \text { Cost per } \\ \mathrm{CY} \end{gathered}$ | 2nd Project Bid | $\begin{gathered} \text { Cost per } \\ \mathrm{CY} \end{gathered}$ | 3rd Project Bid |  |  |
| OSM 11(0838)101.1 | Grading | 88,300 | \$0.90 | \$79,470.00 | \$1.40 | \$123,620.00 | \$1.25 | \$110,375.00 |  |  |
| OSM 24(0504)101.1 | Grading | 506,239 | \$0.89 | \$450,552.71 | \$0.80 | \$404,991.20 | \$0.90 | \$455,615.10 |  |  |
| OSM 37(4481)101.1 | Grading | 26,000 | \$0.90 | \$23,400.00 | \$1.60 | \$41,600.00 | \$1.50 | \$39,000.00 |  |  |
| OSM 17(6801)101.1 | Grading |  |  |  |  |  |  |  |  |  |
|  | a) Area "A" | 349,000 | \$0.85 | \$296,650.00 | \$0.80 | \$279,200.00 | $\$ 0.83$ | \$289,670.00 |  |  |
|  | b) Area "B" | 1,182,000 | \$0.85 | \$1,004,700.00 | \$0.80 | \$945,600.00 | \$0.89 | \$1,051,980.00 |  |  |
| OSM 10(4330)101.1 | Grading | 91,500 | \$1.49 | \$136,335.00 | \$0.90 | \$82,350.00 | \$1.00 | \$91,500.00 |  |  |
| OSM 16(0986)101.1 | Grading | 185,000 | \$0.76 | \$140,600.00 | \$0.85 | \$157,250.00 | $\$ 0.90$ | \$166,500.00 |  |  |
| OSM 16(6204)201.1 | Grading | 1,290,000 | \$0.51 | \$657,900.00 | \$0.74 | \$954,600.00 | $\$ 0.80$ | \$1,032,000.00 |  |  |
| OSM 43(0116)101.1 | Grading |  |  |  |  |  |  |  |  |  |
|  | a) Area "A" | 15,000 | \$1.00 | \$15,000.00 | \$3.00 | \$45,000.00 | \$1.18 | \$17,700.00 |  |  |
|  | b) Area "B" | 65,000 | \$1.00 | \$65,000.00 | \$2.00 | \$130,000.00 | \$1.53 | \$99,450.00 |  |  |
|  | c) Area "C" | 285,000 | \$1.00 | \$285,000.00 | \$1.00 | \$285,000.00 | \$1.24 | \$353,400.00 |  |  |
| OSM 35(3738)102.1 | Grading |  |  |  |  |  |  |  |  |  |
|  | A) Borrow Area | 526,965 | \$1.04 | \$548,043.60 | \$1.15 | \$606,009.75 | $\$ 0.73$ | \$384,684.45 |  |  |
|  | B) Grading Area | 387,635 | \$0.85 | \$329,489.75 | \$1.15 | \$445,780.25 | \$1.28 | \$496,172.80 |  |  |
| 9 |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |
|  |  | 4,997,639 | 0.81 | \$4,032,141.06 | \$0.90 | \$4,501,001.20 | \$0.92 | \$4,588,047.35 | \$0.88 | \$4,373,729.87 |




2005-2007 Frequency and Yards


Total Grading Costs for 2007-2009

| Unit Cost | $\begin{aligned} & 2007 \text { Total } \\ & \text { Yards } \end{aligned}$ | $\begin{aligned} & 2007 \\ & \text { Freq } \\ & \hline \end{aligned}$ | 2008 Total yards | 2008 <br> Freq | 2009 Total Yards | $\begin{aligned} & 2009 \\ & \text { Freq } \end{aligned}$ | Combined Total Yards | Combined Freq |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$0.51 |  |  |  |  | 1,290,000 | 1 | 1,290,000 | 1 | \$657,900 |  |  |
| \$0.73 |  |  |  |  | 526,965 | 1 | 526,965 | 1 | \$384,684 |  |  |
| \$0.74 |  |  |  |  | 1,290,000 | 1 | 1,290,000 | 1 | \$954,600 |  |  |
| \$0.76 |  |  |  |  | 185,000 | 1 | 185,000 | 1 | \$140,600 |  |  |
| \$0.77 |  |  | 924,000 | 1 |  |  | 924,000 | 1 | \$711,480 |  |  |
| \$0.80 |  |  |  |  | 2,037,239 | 3 | 2,037,239 | 3 | \$1,629,791 |  |  |
| \$0.81 | 538,800 | 1 |  |  |  |  | 538,800 | 1 | \$436,428 |  |  |
| \$0.83 |  |  |  |  | 349,000 | 1 | 349,000 | 1 | \$289,670 |  |  |
| \$0.84 |  |  | 8,350 | 1 |  |  | 8,350 | 1 | \$7,014 |  |  |
| \$0.85 | 1,427,670 | 1 |  |  | 2,103,635 | 4 | 3,531,305 | 5 | \$2,998,078 |  |  |
| \$0.86 | 53,227 | 1 |  |  |  |  | 53,227 | 1 | \$45,775 |  |  |
| \$0.88 | 4,300 | 2 |  |  |  |  | 4,300 | 2 | \$3,784 |  |  |
| \$0.89 |  |  |  |  | 1,688,239 | 2 | 1,688,239 | 2 | \$1,502,533 |  |  |
| \$0.90 | 335,411 | 4 | 8,350 | 1 | 897,039 | 5 | 1,240,800 | 10 | \$1,115,479 |  |  |
| \$0.92 | 409,289 | 8 | 48,750 | 1 |  |  | 458,039 | 9 | \$421,396 |  |  |
| \$0.93 | 149,000 | 2 | 87,750 | 2 |  |  | 236,750 | 4 | \$220,651 |  |  |
| \$0.94 | 165,790 | 1 |  |  |  |  | 165,790 | 1 | \$155,843 |  |  |
| \$0.95 | 149,300 | 1 |  |  |  |  | 149,300 | 1 | \$141,835 |  |  |
| \$0.97 | 269,809 | 6 |  |  |  |  | 269,809 | 6 | \$261,715 |  |  |
| \$0.98 | 704,590 | 2 |  |  |  |  | 704,590 | 2 | \$690,498 |  |  |
| \$0.99 | 315,090 | 2 |  |  |  |  | 315,090 | 2 | \$311,939 |  |  |
| \$1.00 | 843,251 | 4 | 1,843,741 | 10 | 741,500 | 5 | 3,428,492 | 19 | \$3,428,492 | 19,395,085 | \$0.85 |
| \$1.02 | 1,427,670 | 1 | 45,670 | 1 |  |  | 1,473,340 | 2 | \$1,502,807 |  |  |
| \$1.03 |  |  | 982,201 | 3 |  |  | 982,201 | 3 | \$1,011,667 |  |  |
| \$1.04 | 22,000 | 1 | 34,980 | 2 | 526,965 | 1 | 583,945 | 4 | \$607,303 |  |  |
| \$1.05 | 66,000 | 1 | 1,928,492 | 10 |  |  | 1,994,492 | 11 | \$2,094,217 |  |  |
| \$1.06 |  |  | 400,517 | 1 |  |  | 400,517 | 1 | \$424,548 |  |  |
| \$1.10 | 40,989 | 2 | 2,014,112 | 14 |  |  | 2,055,101 | 16 | \$2,260,611 |  |  |
| \$1.11 | 1,617,850 | 1 | 81,000 | 1 |  |  | 1,698,850 | 2 | \$1,885,724 |  |  |
| \$1.13 |  |  | 575,080 | 3 |  |  | 575,080 | 3 | \$649,840 |  |  |
| \$1.14 |  |  | 1,016,500 | 2 |  |  | 1,016,500 | 2 | \$1,158,810 |  |  |
| \$1.15 | 1,738,893 | 3 | 718,800 | 3 | 914,600 | 2 | 3,372,293 | 8 | \$3,878,137 |  |  |
| \$1.16 | 86,253 | 1 |  |  |  |  | 86,253 | 1 | \$100,053 |  |  |
| \$1.17 | 1,427,670 | 1 |  |  |  |  | 1,427,670 | 1 | \$1,670,374 |  |  |
| \$1.18 |  |  |  |  |  |  | 15,000 | 1 | \$17,700 |  |  |
| \$1.20 | 61,165 | 1 | 1,193,300 | 6 |  |  | 1,254,465 | 7 | \$1,505,358 |  |  |
| \$1.22 |  |  | 367,000 | 1 |  |  | 367,000 | 1 | \$447,740 |  |  |
| \$1.24 | 143,427 | 2 |  |  |  |  | 143,427 | 2 | \$177,849 |  |  |
| \$1.25 | 2,000,601 | 8 | 400,517 | 1 | 88,300 | 1 | 2,489,418 | 10 | \$3,111,773 | 19,935,552 | \$1.13 |



Revegetation Trend


Summary of Calculated Bond Rates by Task

|  | Unit | $\begin{gathered} 2007 \text { wgt } \\ \text { ave } \end{gathered}$ | 2007 ant | $\begin{gathered} 2008 \mathrm{wggt} \\ \text { ave } \end{gathered}$ | 2008 ant | 2009 wgt ave | 2009 ant | $\begin{array}{\|c\|} \hline 05.07 \\ \text { Weighted } \end{array}$ | $\begin{array}{\|c\|} \hline \text { 06.08 } \\ \text { Weighted } \end{array}$ | $\begin{array}{\|c\|} \hline 07.09 \\ \text { Weighted } \end{array}$ | 4year | 5 ¢year | 2006 | $\begin{array}{r} \text { Revised } \\ 2006 \end{array}$ | 2007 | 2008 | 2009 | 2010 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Grading1 | Yd | \$1.10 | 6,093,860 | \$1.15 | 4,987,709 | $\$ 0.88$ | 4,997,639 | \$1.31 | \$1.35 | \$1.05 | \$1.27 | \$1.24 | \$0.60 | \$0.65 | \$0.75 | \$0.90 | \$0.95 | $\$ 0.85$ |
| Grading2 | Yd |  |  |  |  |  |  |  |  |  |  |  | \$0.90 | \$0.95 | \$1.10 | \$1.20 | \$1.20 | \$1.10 |
| Select Grading | Acre |  |  | \$1,045.53 | 160.5 |  |  | \$1,667.13 | \$1,155.03 | \$1,045.53 | \$1,155.03 | \$1,210.53 | \$1,100.00 | \$1,300.00 | \$1,600.00 | \$1,600.00 | \$1,250,00 | \$1,150.00 |
| Reveg | Acre | \$1,543.36 | 225.8 | \$1,655.36 | 227.3 | \$1,640.77 | 297.4 | \$1,533.75 | \$1,616.37 | \$1,615.88 | \$1,620.13 | \$1,554.29 | \$1,300.00 | \$1,350,00 | \$1,480,00 | \$1,530,00 | \$1,600,00 | \$1,615,00 |
| Trees | each | $\$ 1.97$ | 29,965, | \$2.02 | 47,325.0 | $\$ 1.81$ | 33,507.0 | $\$ 1.91$ | \$1.93 | $\$ 1.94$ | $\$ 1.92$ | $\$ 1.92$ |  |  |  |  |  |  |
| Ditch Ex | Yd | $\$ 5.47$ | 32,325,0 | \$3.83 | 34,666.0 | \$4.23 | 12,171.0 | $\$ 5.77$ | \$5.22 | \$4.56 | $\$ 5.12$ | $\$ 5.25$ | \$4.50 | \$4.60 | \$5.00 | $\$ 5.50$ | \$5.25 | \$4.55 |
| Jute | sayd | 96.17 | 975.0 | \$3.30 | 1,950.0 |  |  | $\$ 4.97$ | \$4.44 | \$4.26 | $\$ 4.44$ | $\$ 4.71$ | \$2.20 | $\$ 2.45$ | $\$ 3.00$ | $\$ 3.25$ | \$3.25 | $\$ 3.30$ |
| HV Erosion | sqyd |  |  | \$3.39 | 6,125.0 | \$2.42 | 2,700.0 | $\$ 3.61$ | \$3.71 | \$3.09 | \$3.54 | \$3.44 | \$2.00 | \$2.20 | $\$ 2.80$ | $\$ 2.80$ | \$3.50 | $\$ 3.00$ |
| R3 | sayd |  |  | \$26.73 | 300.0 |  |  | \$27.87 | \$26.91 | $\$ 26.73$ | $\$ 26.91$ | \$26.91 | \$18.00 | \$18.00 | \$18.00 | $\$ 18.00$ | \$25.00 | \$26.00 |
| R4 | sayd |  |  | \$22.98 | 2,970.0 | $\$ 18.19$ | 5,230, | \$22.65 | \$19.87 | $\$ 19.93$ | $\$ 19.13$ | \$21.77 | \$23.75 | \$23.75 | $\$ 23.75$ | \$24.00 | \$22.00 | \$20.00 |
| R5 | squd | $\$ 16.08$ | 1,130.0 | \$17.59 | 7,460.0 | \$23.07 | 3,090.0 | \$26.72 | \$21.03 | \$18.80 | \$21.39 | \$23.13 | \$17.00 | \$18.00 | \$19.00 | \$19.50 | \$21.00 | \$19.00 |
| Geotex | sqyd | $\$ 5.07$ | 530.0 | \$1.71 | 12,151.0 |  |  | \$3.32 | \$2.00 | $\$ 1.85$ | $\$ 2.00$ | $\$ 2.03$ | $\$ 2.00$ | $\$ 2.00$ | \$2.00 | \$2.00 | \$2.00 | $\$ 1.70$ |
| PVC lining | sayd | \$14.68 | 7,220.0 |  |  |  |  | \$12.45 | \$12.16 | \$14.68 | \$12.16 | \$12.45 | \$9.50 | \$9.50 | \$10.00 | \$11.00 | \$11.00 | \$12.00 |
| Lime | Ton | \$41.71 | 1,167.0 | \$43.66 | 806.1 | \$38.33 | 2,192,0 | \$40.18 | \$40.84 | \$40.31 | \$40.02 | \$39.60 |  |  |  |  |  |  |
| Subdrain | foot | \$15.66 | $3,771.0$ | \$20.84 | 1,750.0 | $\$ 15.03$ | 815.0 | \$18.25 | \$18.69 | \$17.01 | \$18.42 | \$18.40 | \$10.00 | \$10.90 | \$12.00 | \$13.00 | \$18.50 | \$17.00 |
| Mulch | Acre | \$564.79 | 300.60 | \$634.42 | 155.3 | \$589.38 | 419.4 | \$525.66 | \$579.07 | \$588.93 | \$582.14 | $\$ 548.43$ |  |  |  |  |  |  |
| Seed Bed Prep | Acre | \$221.45 | 300.60 | \$226.58 | 180.8 | \$206.05 | 419.4 | \$215.29 | \$227.53 | \$215.31 | \$221.27 | \$214.31 |  |  |  |  |  |  |
| Seed | Acre | \$207.27 | 437.6 | \$206.95 | 398.3 | \$158.10 | 607.8 | \$200.79 | \$233.57 | \$186.48 | \$216.89 | $\$ 194.48$ |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | 2008 | 2008 | 2009 | 2009 | 2010 | 2010 |  |  |  |  |  |  |  |  |  |  |  |
|  | Reveg Tot | \$1,530.00 | \$1,530.00 | \$1,600.00 | \$1,600.00 | \$1,615.00 | \$1,615.00 |  |  |  |  |  |  |  |  |  |  |  |
|  | Mulch | \$525.00 | \$525.00 | \$580.00 | \$580.00 | \$590.00 | \$590.00 |  |  |  |  |  |  |  |  |  |  |  |
|  | Seed Bed | \$215.00 | \$215.00 | \$225.00 | \$225.00 | \$215.00 | \$215.00 |  |  |  |  |  |  |  |  |  |  |  |
|  | Seed | \$200.00 |  | \$230.00 |  | \$190.00 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  | \$590.00 | \$790.00 | \$565.00 | \$795.00 | \$620.00 | \$810.00 |  |  |  |  |  |  |  |  |  |  |  |
|  |  | Cropland | w/Seed | Cropland | W/Seed | Cropland | w/Seed |  |  |  |  |  |  |  |  |  |  |  |


| Unit Operation | Unit Measure | Unit Costs (\$) |
| :---: | :---: | :---: |
| Mobilization/demobilization | Job | $4 \%$ of direct costs or $\$ 40,000$, whichever is less |
| Grading (<500-foot push) | cubic yard | 0.85 (0.95) |
| Grading ( $\geq 500$-foot push/haul) | cubic yard | 1.10 (1.20) |
| Selective Grading | Acre | 1,150.00 (1,250.00) |
| Revegetation | Acre | 1,615.00 (1,600.00) |
| Tree Planting | Tree | 0.15 |
| Ditch Excavation | cubic yard | 4.55 (5.25) |
| Jute Matting | square yard | 3.30 (3.25) |
| High Velocity Erosion Control | square yard | 3.00 (3.50) |
| R3 Rock Lining | square yard | 26.00 (25.00) |
| R4 Rock Lining | square yard | 20.00 (22.00) |
| R5 Rock Lining | square yard | 19.00 (21.00) |
| Geotextile/Filter Fabric | square yard | 1.70 (2.00) |
| PVC Lining ${ }^{1}$ | square yard | 12.00 (11.00) |
| Subsurface Drain | lineal foot | 17.00 (18.50) |
| Erosion and Sedimentation Control (Temporary Installation) | Job | Lump sum (5\% of direct costs for site) |
| Pond Removal Active Phase ${ }^{2}$ | Pond | 3,800.00 |
| Erosion and Sedimentation Control (Temporary Installation) | Job | Lump sum (5\% of direct costs for site) |
| Stage 3 Maintenance Bond NonCropland Areas (Land uses where crop yields are not required) | Acre | 100.00 |
| Stage 3 Maintenance Bond Cropland (not row crops) Pastureland or Land occasional cut for hay (excludes seed cost) | Acre | 600 (550.00) |
| Stage 3 Maintenance Bond Cropland Area-Row Crops (includes seed cost) | Acre | 800 (800.00) |
| Stage 3 Mobilization | Job | 2,500.00 |
| Pond Removal-Stage 3 | Cubic yards (Embankment volume) Plus Topsoiling \& Revegetation Cost | Use $<500$ grading for pond embankment volume plus Topsoiling \& Revegetation cost for the area disturbed |
| Ditch Removal-Stage 3 | Lineal Foot | 0.65 |
| Equipment Tire Removal and Disposal | Tire | 300.00 |


| Structure Demolition | Costs will be calculated using costs listed in the construction industry's latest annual cost publications, such as Means Building Construction Cost Data. |  |
| :---: | :---: | :---: |
| Mine Sealing ${ }^{3}$ <br> Non-hydraulic shaft seal - inert fill | shaft (10 ft. or less diameter) | 1,400.00 |
|  | shaft (11 to 15 ft . diameter) | 3,000.00 |
|  | shaft (16 to 20 ft . diameter) | 4,500.00 |
|  | shaft (21 to 25 ft . diameter) | 8,000.00 |
| Mine Sealing ${ }^{3}$ <br> Hydraulic shaft seal w/ bulkhead | shaft (10 ft. or less diameter) | 7,600.00 |
|  | shaft (11 to 15 ft . diameter) | 9,200.00 |
|  | shaft (16 to 20 ft . diameter) | 10,700.00 |
|  | shaft (21 to 25 ft . diameter) | 14,200.00 |
| Mine Sealing ${ }^{3}$ <br> Non-hydraulic drift / slope seal | drift / slope | 3,900.00 |
| Mine Sealing ${ }^{3}$ Hydraulic drift / slope seal w/ bulkhead | drift / slope | 6,200.00 |

