

REQUEST AUTHORIZATION FOR MAYOR AND FINANCE OFFICER TO SIGN PROFESSIONAL SERVICES AGREEMENT OR AMENDMENT

Date: May 7, 2013

Project Name & Number: Rapid City Landfill Cells 15 & 16 Landfill Liner and Leachate Collection **CIP #:** 50888

Project Description: To provide professional engineering services.

Consultant: Burns and McDonnell Engineering Co.

| | | |
|---|---|----------------------------------|
| Original Contract Amount: \$229,467.00 | Original Contract Date: January 17, 2012 | Original Completion Date: |
|---|---|----------------------------------|

Addendum No: 2

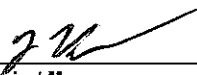
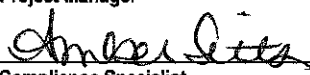
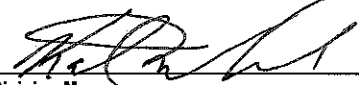
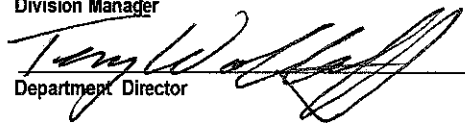
Amendment Description: Additional design engineering for composite liner systems, design of new base grades, permit amendment.

| | | | |
|---------------------------------|--------------|---------------------------------|--|
| Current Contract Amount: | \$374,431.42 | Current Completion Date: | |
| Change Requested: | \$54,103.00 | | |
| New Contract Amount: | \$428,534.42 | New Completion Date: | |

Funding Source This Request:

| | | | | |
|-------------|-------|------|------|--|
| \$54,103.00 | 7102 | 4223 | 0612 | |
| \$54,103.00 | Total | | | |

Agreement Review & Approvals

| | |
|---|---|
| <p> _____ Project Manager Date: 5-7-13</p> <p> _____ Compliance Specialist Date: 5/8/13</p> <p>_____ City Attorney Date:</p> | <p> _____ Division Manager Date: 5-7-2013</p> <p> _____ Department Director Date:</p> |
|---|---|

ROUTING INSTRUCTIONS

Route two originals of the Agreement for review and signatures.
 Finance Office - Retain one original
 Project Manager - Retain second original for delivery to Consultant
 cc: Public Works
 Engineering
 Project Manager

FINANCE OFFICE USE ONLY

(Note to Finance: Please write date of Agreement in appropriate space in the Agreement document)

| | | | |
|---------------|--------|----------|----------|
| | Date | Initials | Approved |
| Appropriation | 5/9/13 | AW | (Y) N |
| Cash Flow | | | Y N |

AMENDMENT NO. 2
To
AGREEMENT For PROFESSIONAL ENGINEERING SERVICES
Between
BURNS & McDONNELL ENGINEERING COMPANY, INC.
Centennial, Colorado
and
CITY OF RAPID CITY, SOUTH DAKOTA

This Contract amendment is made by and between Burns & McDonnell Engineering Company, Inc., a Missouri Corporation and City of Rapid City, South Dakota, this 29th day of April, 2013, for the Rapid City Landfill Cells 15 & 16 Landfill Liner and Leachate Collection System Design Project (LF11-1974)

Whereas, it is the mutual desire of the parties hereto to amend the AGREEMENT for PROFESSIONAL ENGINEERING SERVICES entered into on the 7th day of January 2012, hereinafter called the Existing Agreement, amended on the 2nd of October, 2012, hereinafter called Amendment No. 1, and amended on the 29th day of April, 2013, hereinafter called Amendment No. 2.

Therefore, it is hereby agreed that the Existing Agreement be amended as follows:

SCOPE OF SERVICES

DEDUCT the following from Scope of Services Section 1.2:

- Amendment 1, Section 1.2.3, Task 2.0 – Cell 15 and 16 Base Grade Modifications
 - This action removes Task 2.0 of Amendment 1 in its entirety and its fee option. The actual circumstance whereby this task takes effect varies from that described in the previous task. In addition, the scope of what is required and the timing of the task varies from actuality. The task is to occur during Final Design (Section 2.0) – requiring more revisions than initially anticipated in the Preliminary Design Phase.

ADD the following to Scope of Services Section 2:

- 2.12 – Perform tasks related to base grade and liner modifications described below:
 - Task 1.0 – Base Grade Recommendations Memorandum
The field investigation reveals that groundwater is recorded much higher than the assumed 10-15 ft bgs per Section 1.5. This revelation requires a major design change in landfill base grades to be formally presented for consideration. Provide memorandum for City of Rapid City consideration and for preliminary SD DENR approval of this concept:
 - Gather information pertaining to landfill design
 - Analyze information with respect to design base grades
 - Present information and recommendations concerning design base grades

- Task 2.0 – Update Design, Plans, Sections, and Details per Modifications
Rework of design and project drawings due to design modifications includes:
 - Revise grading to bring base grades up to 5 ft above groundwater and tie into surrounding areas.
 - Reevaluate and rebalance material volumes for Embankment Fill, Operations Layer, and Subgrade. Recalculate required borrow and stockpile volumes and footprints.
 - Recalculate stormwater runoff and revisit stormwater management.
 - Revise cell access road.
 - Evaluate geosynthetics products
 - Revise drawings: general notes.
 - Revise drawings: grading plan sheets, notes, and callouts.
 - Revise drawings: cross sections, notes, and callouts.
 - Revise drawings: details, notes, and callouts.
- Task 3.0 – Geotechnical Evaluations
Evaluate geotechnical requirements and slope stability of the alternative liner system. Particular attention given to the north slope in the intermediate grading condition. Summarize analysis and calculations and include summary as an Appendix to the Design Report. Evaluate processing the shale material into suitable embankment fill and provide guidance for updating Earthwork specifications accordingly.
- Task 4.0 – Revise HELP Model and Pump Calculations
Evaluate alternate liner system material properties for leachate collection modeling system, including recalculating drainage layer transmissivity and hydraulic conductivity. Recalculate required leachate pump size and operating point based upon total flow into sump and sump head loss. Summarize analysis and calculations and include summary as an Appendix to the Design Report.
- Task 5.0 – Revise Specifications per Modifications
Modify specifications to detail alternative liner design and building up of base grades. Address all references to previous liner system. Affected Specification Sections include:
 - ADD Geocomposite
 - ADD Geosynthetic Clay Liner
 - ADD Geomembrane Liner
 - ADD Leak Location Survey
 - REMOVE Compacted Soil Liner
 - MODIFY Site Preparation and Earthwork
 - MODIFY Cell Discharge Structure
 - MODIFY Subgrade Preparation
- Task 6.0 – Revise the Design Report per Modifications.
The aforementioned modifications require revisions to Sections 1, 3, 4, and 5 of the Design Report. Appendix K shall be replaced with updated HELP Model Results. Appendix M shall be replaced with updated grading and volume calculations. Appendix N shall be replaced with

updated stormwater calculations. Appendix P shall be added summarizing geotechnical analysis.

ASSUMPTIONS

1. No major comments are anticipated as a result of SD DENR review.
2. The City of Rapid City shall pay all required fees to SD DENR.

SCHEDULE

Revise Amendment 1 Schedule as follows:

Permit Documents shall be available to submit to SD DENR the week of April the 8th, 2013.

Bid documents shall be available for Bidding within three weeks of satisfactorily addressing comments from SD DENR, assuming no major revisions are required.

FEE

Revise as follows:

“5.2. The maximum amount of the fee for the services as detailed in Section 1.2 shall not exceed Four Hundred and Ten Thousand Two Hundred and Seventy Eight dollars and Forty Two cents (\$410,278.42) unless the scope of the project is changed as outlined in Section 4. If expenses exceed the maximum amount, the Engineer shall complete the design as agreed upon here without any additional compensation. Sub task dollar amounts may be reallocated to other tasks as long as the total fee is not exceeded.

- a. Exhibit D of Amendment 1 presents the detailed Professional Engineering Services Fee Estimate for Scope Items listed in Amendment 1. Tasks 1.0 and 3.0 – 9.0 total One Hundred Twenty Eight Thousand One Hundred Seven dollars and Forty-Two cents (\$128,107.42). Task 2.0 of Amendment 1 has been removed by Amendment 2 and its fee totaling Eighteen Thousand Two Hundred and Fifty Six dollars has been deducted by Amendment 2.
- b. The Professional Engineering Services Fee Estimate in Exhibit D includes a project costs deduct of One Thousand Three Hundred Ninety Nine dollars (\$1,399.00).
- c. Exhibit E of Amendment 2 presents the detailed Professional Engineering Services Fee Estimate for Scope Items listed in Amendment 2. Task 2.12 totals Fifty Four Thousand One Hundred and Three dollars and No cents (\$54,103.00).”

This amendment will be deemed a part of, and be subject to, all terms and conditions of the Existing Agreement. Except as modified above, the Existing Agreement will remain in full force and effect.

BURNS & MCDONNELL ENGINEERING CO.

ACCEPTED:

By _____

Title Vice President

Date _____

ATTEST:

By _____

Title Principal

Date _____

CITY OF RAPID CITY

ACCEPTED:

By _____

Title _____

Date _____

ATTEST:

By _____

Title _____

Date _____

END OF AMENDMENT NO. 2

EXHIBIT E
AMENDMENT NO. 2 COST ESTIMATE

**Cost Estimate - Amendment 2
on a per Task Basis**

**Rapid City, South Dakota
Amendment 2 - Base Grade and Liner Modifications
Rapid City Landfill**

(fill in green boxes)

| Task No. | Task Description | Category | Hourly Rate | Hours | Cost | EXPENSES | | | | | | |
|-----------------------|---|----------------|-------------|------------|--------------------|----------|----------|------|---------------|---------------|--------------------|---------------|
| | | | | | | Item | Quantity | Unit | Cost per Unit | Bare Cost | Percent Markup | Total Cost |
| 1.0 | Provide Base Grade Recommendation Memorandum | Associate (17) | \$200.00 | | | | | | | | | |
| | | Associate (14) | \$181.00 | | | | | | | | | |
| | | Senior (13) | \$171.00 | | | | | | | | | |
| | | Senior (12) | \$159.00 | | | | | | | | | |
| | | Staff (11) | \$148.00 | | | | | | | | | |
| | | Staff (10) | \$132.00 | 28 | \$3,696.00 | | | | | | | |
| | | Assistant (9) | \$120.00 | | | | | | | | | |
| | | Assistant (8) | \$108.00 | | | | | | | | | |
| | | Assistant (7) | \$77.00 | | | | | | | | | |
| | | Technician (6) | \$65.00 | | | | | | | | | |
| General Office | \$59.00 | | | | | | | | | | | |
| Task Subtotals | | | | 28 | \$3,696.00 | | | | | | | |
| Task Total | | | | | | | | | | | \$3,696.00 | |
| 2.0 | Update Design, Plans, Sections, Details per Modifications | Associate (17) | \$200.00 | | | | | | | | | |
| | | Associate (14) | \$181.00 | 22 | \$3,982.00 | | | | | | | |
| | | Senior (13) | \$171.00 | | | | | | | | | |
| | | Senior (12) | \$159.00 | 3 | \$477.00 | | | | | | | |
| | | Staff (11) | \$148.00 | 131 | \$19,388.00 | | | | | | | |
| | | Staff (10) | \$132.00 | 6 | \$792.00 | | | | | | | |
| | | Assistant (9) | \$120.00 | | | | | | | | | |
| | | Assistant (8) | \$108.00 | | | | | | | | | |
| | | Assistant (7) | \$77.00 | | | | | | | | | |
| | | Technician (6) | \$65.00 | | | | | | | | | |
| General Office | \$59.00 | | | | | | | | | | | |
| Task Subtotals | | | | 162 | \$24,639.00 | | | | | | | |
| Task Total | | | | | | | | | | | \$24,639.00 | |
| 3.0 | Geotechnical Evaluations | Associate (17) | \$200.00 | 4 | \$800.00 | | | | | | | |
| | | Associate (14) | \$181.00 | 2 | \$362.00 | | | | | | | |
| | | Senior (13) | \$171.00 | | | | | | | | | |
| | | Senior (12) | \$159.00 | | | | | | | | | |
| | | Staff (11) | \$148.00 | 40 | \$5,920.00 | | | | | | | |
| | | Staff (10) | \$132.00 | | | | | | | | | |
| | | Assistant (9) | \$120.00 | | | | | | | | | |
| | | Assistant (8) | \$108.00 | | | | | | | | | |
| | | Assistant (7) | \$77.00 | | | | | | | | | |
| | | Technician (6) | \$65.00 | | | | | | | | | |
| General Office | \$59.00 | | | | | | | | | | | |
| Task Subtotals | | | | 46 | \$7,082.00 | | | | | \$0.00 | | \$0.00 |
| Task Total | | | | | | | | | | | \$7,082.00 | |

**Cost Estimate - Amendment 2
on a per Task Basis**

**Rapid City, South Dakota
Amendment 2 - Base Grade and Liner Modifications
Rapid City Landfill**

(fill in green boxes)

| Task No. | Task Description | Category | Hourly Rate | Hours | Cost | EXPENSES | | | | | | |
|-----------------------|--|----------------|-------------|-----------|-------------------|----------|----------|------|---------------|-----------|--------------------|------------|
| | | | | | | Item | Quantity | Unit | Cost per Unit | Bare Cost | Percent Markup | Total Cost |
| 4.0 | Revise HELP Model and Pump Calculations | Associate (17) | \$200.00 | | | | | | | | | |
| | | Associate (14) | \$181.00 | | | | | | | | | |
| | | Senior (13) | \$171.00 | | | | | | | | | |
| | | Senior (12) | \$159.00 | 6 | \$954.00 | | | | | | | |
| | | Staff (11) | \$148.00 | | | | | | | | | |
| | | Staff (10) | \$132.00 | | | | | | | | | |
| | | Assistant (9) | \$120.00 | | | | | | | | | |
| | | Assistant (8) | \$108.00 | 35 | \$3,780.00 | | | | | | | |
| | | Assistant (7) | \$77.00 | | | | | | | | | |
| | | Technician (6) | \$65.00 | | | | | | | | | |
| General Office | \$59.00 | | | | | | | | | | | |
| Task Subtotals | | | | 41 | \$4,734.00 | | | | | | | |
| Task Total | | | | | | | | | | | \$4,734.00 | |
| 5.0 | Revise Specifications per Modifications | Associate (17) | \$200.00 | | | | | | | | | |
| | | Associate (14) | \$181.00 | | | | | | | | | |
| | | Senior (13) | \$171.00 | | | | | | | | | |
| | | Senior (12) | \$159.00 | | | | | | | | | |
| | | Staff (11) | \$148.00 | | | | | | | | | |
| | | Staff (10) | \$132.00 | 32 | \$4,224.00 | | | | | | | |
| | | Assistant (9) | \$120.00 | | | | | | | | | |
| | | Assistant (8) | \$108.00 | 40 | \$4,320.00 | | | | | | | |
| | | Assistant (7) | \$77.00 | | | | | | | | | |
| | | Technician (6) | \$65.00 | | | | | | | | | |
| General Office | \$59.00 | | | | | | | | | | | |
| Task Subtotals | | | | 72 | \$8,544.00 | | | | | | | |
| Task Total | | | | | | | | | | | \$8,544.00 | |
| 6.0 | Revise the Design Report per Modifications | Associate (17) | \$200.00 | | | | | | | | | |
| | | Associate (14) | \$181.00 | | | | | | | | | |
| | | Senior (13) | \$171.00 | | | | | | | | | |
| | | Senior (12) | \$159.00 | | | | | | | | | |
| | | Staff (11) | \$148.00 | 8 | \$1,184.00 | | | | | | | |
| | | Staff (10) | \$132.00 | 32 | \$4,224.00 | | | | | | | |
| | | Assistant (9) | \$120.00 | | | | | | | | | |
| | | Assistant (8) | \$108.00 | | | | | | | | | |
| | | Assistant (7) | \$77.00 | | | | | | | | | |
| | | Technician (6) | \$65.00 | | | | | | | | | |
| General Office | \$59.00 | | | | | | | | | | | |
| Task Subtotals | | | | 40 | \$5,408.00 | | | | | | | |
| Task Total | | | | | | | | | | | \$5,408.00 | |
| Project Total | | | | | | | | | | | \$54,103.00 | |