

CS-12-70

**CHANGE ORDER APPROVAL FORM**

PROJECT: West Nassau – Final Closure

CHANGE ORDER NUMBER: 02

DATE: 10/26/12

CONTRACT NUMBER: CM1166-103

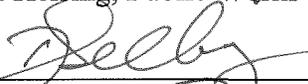
TO CONTRACTOR: Golder Associates

Reason for Change Order: Additional cost related to claims analysis for Tropical Storm Beryl and Tropical Storm Debby. Tropical Storm Beryl \$22,244.25; Tropical Storm Debby \$17,599.75; Total \$39,844.00. For details, see attached proposal from Golder Associates, dated 10/16/12.

Original Contract Sum.....	\$	<u>663,790.00</u>
Net Change by Previous Change Order/Supplemental Agreement.	\$	<u>126,420.00</u>
Contract Sum Prior to This Change Order.....	\$	<u>790,210.00</u>
Amount of This Change Order (Add/Deduct).....	\$	<u>39,844.00</u>
New Contract Sum Including this Change Order.....	\$	<u>830,054.00</u>

APPROVED BY:   
Scott Herring, Public Works Director

DATE: 10/22/12

APPROVED BY:   
Ted Selby, County Manager

DATE: 11/19/12

APPROVED BY:   
David Hallman, County Attorney

DATE: 11-19-12

APPROVED BY:   
Daniel B. Leeper, Chair

DATE: 11-19-12

ATTEST:   
John A. Crawford, Clerk of Courts

DATE: 11-20-12

ACCOUNT NO.: 70000000-239955

MES  
11-20-12

**Project Budget**  
**West Nassau Landfill Closure**  
**Construction Bid Award**

Landfill Current Closure Budget (Approved May 9, 2011)

Funds Available in Closure Account	\$9,976,433
Closure Bid	4,924,873
Contingency (15%)	738,731
Construction Management	<u>663,790</u>
Total Estimated Construction Cost	\$6,327,394

Landfill Closure Budget (Proposed November 19, 2012)

Closure Bid	4,924,873
Construction Management	790,210
Tropical Storms Claims Analysis	
Golder	39,844
Delta Consulting Group	19,718
Contingency	<u>552,749</u>
Total Estimated Construction Cost	\$6,327,394



October 26, 2012

993-3928.103

FN: 020

Mr. J. Scott Herring, PE  
West Nassau Landfill  
46026 Landfill Road  
Callahan, FL 32011

**RE: REQUEST FOR ADDITIONAL FUNDS  
CONSTRUCTION MANAGEMENT, OVERSIGHT AND DESIGN SUPPORT  
FINAL CLOSURE CONSTRUCTION  
WEST NASSAU LANDFILL  
NASSAU COUNTY, FLORIDA**

Dear Mr. Herring:

Golder Associates Inc. (Golder) has prepared this request for additional funds for the construction management, oversight, design support, and project management during the remaining construction schedule period. Golder, in its cost proposal dated April 8, 2011, provided an estimated cost for providing construction services as outlined therein for a total of 14.5 months; the end of the 14.5-month estimated construction schedule was the middle of September 2012. The contractor has estimated that it will achieve substantial completion by November 30, 2012, and we anticipate that the contractor may be on site, performing punch list and demobilization items for an additional two to four weeks past substantial completion. Therefore, the attached additional cost estimate (Table 1), totaling \$126,420 is for 14 weeks of continued construction CQA oversight, construction management, design support and project management plus an additional 2 weeks for project closeout. Based on the schedule for agenda requests, we anticipate this will be presented to the Nassau County Board of County Commissioners (Board) at its November 19, 2012 meeting.

The attached cost estimate provides estimated hours and expenses for an approximate 14 to 16-week period beginning September 17, 2012. No additional funds are requested under Task 5000, Construction Record Documentation Report, as this task should not be affected by the increase in the construction schedule. An additional 14 weeks is approximately a 24 percent increase in the schedule duration. However, as shown on the attached, the requested cost increase is only approximately 19 percent of the original budget for the four tasks being increased (Tasks 1000 through 4000), and it is comprised primarily of labor. The primary reason for this difference is the aggressive cost control measures taken by Golder early on in the project in efforts to save costs.

In October 2011, we implemented cost control measures to avoid the risk of exceeding the authorized budget. We reduced the daily CQA rate 17.6% and are not charging for hours exceeding 10 hours per day. We also eliminated the 10% markup on expenses and the office service fee (5% of Labor). These measures prevented a cost overrun during the first 14.5 months (as originally scheduled) of the project. If not for the two tropical storms (Tropical Storm Beryl and Tropical Storm Debby) which affected the duration of construction, the project would have likely been completed under the original approved budget.

In addition to the time extension of the project noted above, the following unforeseen items have occurred during closure construction, which were unique to this landfill closure. Note that some areas of the closure required connecting to older portions of the facility which preceded Golder's work experience with Nassau County. Additionally, these older areas had no as-built information available for reference.

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**Golder Associates Inc.**

9428 Baymeadows Road, Suite 400  
Jacksonville, FL 32256 USA

Tel: (904) 363-3430 Fax: (904) 363-3445 [www.golder.com](http://www.golder.com)



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- Comanco's original schedule (58 weeks) only included 5 work days per week, which was the basis for our originally proposed and authorized budget. There have been 35 Saturdays worked to date and 4 holidays. These additional work days are the equivalent of an eight week extension to the construction schedule.
- Comanco originally forecasted a mid-July completion which may have been attainable if not for the two tropical storms (Beryl and Debby).
- Weekly construction progress meetings were required for the first four months of the project due to unknown features, changes in construction methods by Comanco, and as-built survey issues.
- The south slope anchor trench had an unexpected curve/bow in it (anchor trenches are typically straight). This feature required additional field inspection, design evaluation, and coordination to allow for adjustments in the grading plan to meet the design intent of the closure permit.
- Because of settlement, the southwest corner required additional design services to allow for a smooth transition to the existing closed portion of the landfill.
- Several acres of smooth geomembrane liner were discovered on the north slope, which was not expected. This issue required substantial additional design effort to evaluate the purpose of the liner and stability issues.
- An unknown pipe was discovered along the eastern limit of waste which required time for evaluation and discussions with Nassau County and Comanco personnel.
- The toe of the north slope did not have a typical toe drain system (perforated pipe encased in wrapped aggregate) that would allow for drainage of the final cover system. This required an additional toe drain system to be designed in this area.
- Operational issues with the landfill gas collection and control system associated with the closure construction caused additional field inspection and coordination with Comanco.
- Comanco initially reported that a soil imbalance of approximately 10,000 cubic yards existed based upon the construction quantities provided in the bid package. Golder performed additional engineering review of these quantities using several different methods to verify the quantities were correct. The issue eventually was identified as an internal data evaluation issue with Comanco.
- The south slope underdrain system required additional design effort due to grading changes associated with southwestern tie-in and south slope anchor trench curve.
- Additional project and construction management services were required due to the departure from closure construction proceeding in a "postage-stamp" methodology to stripping the entire landfill (waste grades). This caused issues with leachate, erosion, and exposed waste that required Golder to facilitate additional Special Project meetings and recommend solutions.
- The east ditch crossing had to be relocated due to the failed condition of the culvert pipes under the crossing and to allow for better access for site maintenance personnel. Additional design effort was required in support of this.
- Tropical storms caused the stormwater perimeter ditch to be regraded in several areas, which required several evaluations of capacity and flow.
- Six special project meetings were required due to the contractor's lack of understanding of the project requirements (grading with GPS machine control, topsoil, stockpiling, leachate management, as-built survey issues, erosion and sediment control, etc.).
- Negotiating approximately twenty allowance requests for additional construction features. Golder's efforts on these have resulted in significant cost savings to Nassau County (on the order of \$100,000).

- Failure of the south slope GFFR (from the two tropical storms) required additional field evaluation and design services in order to provide a constructible repair.
- Additional laboratory costs were incurred for failing field seams of geosynthetics, interface friction tests, and additional geosynthetic sampling at factories (failing geotextile rolls). The failing test costs will be a deductive change order to Comanco resulting in a net zero financial impact to Nassau County. Once all geosynthetic testing is complete, this change order will be finalized.

The total change order amount requested for our services through completion of the closure construction is **\$126,420.00**. For reference, these costs are detailed in the attached Table 1. We have reduced costs by decreasing rates, not charging for field hours over 10 per day, not charging for our Office Service Fee (5% of labor), and not charging markup on expenses during the project that have saved the County approximately \$120,000 project to date.

Golder appreciates your consideration with this request and the opportunity to provide continued solid waste engineering services to the County. Should you have any questions or need additional information, please do not hesitate to contact one of the undersigned.

Sincerely,

**GOLDER ASSOCIATES INC.**

  
Glenn R. Carwell III, CHMM  
Senior Engineer and Associate

  
Kevin Brown, PE  
Senior Consultant and Principal

cc: Becky Hiers, PE – Nassau Co. Engineering Services

Attachment – Table 1

FN: C:\Users\dgrigg\Documents\Work Items\WNL\2012 CQA Budget increase\Budget authorization request additional work.docx

**ATTACHMENT  
TABLE 1**

**TABLE 1  
COST DETAIL**

**CQA/CM/Design Support for Final Closure Construction  
West Nassau Landfill  
Callahan, Nassau County, Florida**

LABOR		LABOR CATEGORY AND RATE										TOTAL HOURS	SUBTOTAL LABOR
		Principal/ Sr. Consult \$190	Senior Consultant \$173	Senior Engineer \$145	Senior Proj. Eng. \$130	Project Engineer \$110	Staff Engineer II \$95	Engineer I \$80	Drafting \$90	Senior Technician \$85	Senior Admin \$65		
TASK	DESCRIPTION												
1000	CQA Services	0	30	0	0	0	0	0	0	0	0	30	\$5,190
2000	Construction Management	0	0	0	180	0	0	0	0	0	0	180	\$23,400
3000	Design Support	0	50	0	0	128	0	0	0	0	0	178	\$22,730
4000	Project Management	0	0	180	0	0	0	0	0	0	0	180	\$26,100
5000	Construction Record Documentation Rpt	0	0	0	0	0	0	0	0	0	0	0	\$0
<b>TOTALS:</b>		<b>0</b>	<b>80</b>	<b>180</b>	<b>180</b>	<b>128</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>568</b>	<b>\$77,420</b>

EXPENSES		Daily CQA Coverage \$700	Half-Daily CQA Coverage \$500	Field Equipment (est.)	Mileage (mile) \$0.51	Laboratory Costs (est.)	Shipping Costs (est.)	Travel Costs (est.)	Color Copies (pg.) \$2	Drawing Reproduction (est.)	Office Services Fee (5% of Labor)	Subcon- tractors	SUBTOTAL EXPENSES
TASK	DESCRIPTION												
1000	CQA Services	45	20	\$0	0	\$7,000	\$500	\$0.00	0	\$0	\$0	\$0	\$49,000
2000	Construction Management	0	0	\$0	0	\$0	\$0	\$0.00	0	\$0	\$0	\$0	\$0
3000	Design Support	0	0	\$0	0	\$0	\$0	\$0.00	0	\$0	\$0	\$0	\$0
4000	Project Management	0	0	\$0	0	\$0	\$0	\$0.00	0	\$0	\$0	\$0	\$0
5000	Construction Record Documentation Rpt	0	0	\$0	0	\$0	\$0	\$0.00	0	\$0	\$0	\$0	\$0
<b>TOTALS:</b>		<b>\$31,500</b>	<b>\$10,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$7,000</b>	<b>\$500</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$49,000</b>

COST SUMMARY						
TASK	DESCRIPTION	SUBTOTAL LABOR	SUBTOTAL EXPENSES	TASK TOTAL	Original Budget	% Increase
1000	CQA Services	\$5,190	\$49,000	\$54,190	\$399,325	14%
2000	Construction Management	\$23,400	\$0	\$23,400	\$123,831	19%
3000	Design Support	\$22,730	\$0	\$22,730	\$47,790	48%
4000	Project Management	\$26,100	\$0	\$26,100	\$55,325	47%
5000	Construction Record Documentation Rpt	\$0	\$0	\$0	\$37,520	0%
<b>TOTALS</b>		<b>\$77,420</b>	<b>\$49,000</b>	<b>\$126,420</b>	<b>\$663,791</b>	<b>19%</b>

- Notes: 1. The daily CQA rate includes labor 8 and above hrs/day, field vehicle and fuel, H&S equipment, field equipment, and general supplies.  
2. The half-day CQA rate includes labor less than 8 hrs/day, field vehicle and fuel, H&S equipment, field equipment, and general supplies.



October 16, 2012

993-3928.103  
FN: 020

Mr. J. Scott Herring, PE  
West Nassau Landfill  
46026 Landfill Road  
Callahan, FL 32011

**RE: BUDGET AUTHORIZATION REQUEST – TROPICAL STORMS RELATED WORK  
CONSTRUCTION MANAGEMENT, OVERSIGHT AND DESIGN SUPPORT  
FINAL CLOSURE CONSTRUCTION  
WEST NASSAU LANDFILL  
NASSAU COUNTY, FLORIDA**

Dear Mr. Herring:

This budget authorization request letter is submitted to the Nassau County Public Works Department for Golder's work regarding damage repairs and claims related to Tropical Storms Beryl and Debby, which were conducted in addition to the scope of services outlined in Golder's cost proposal to Nassau County dated April 8, 2011 as approved by the Nassau County Board of County Commissioners (Board) at its May 9, 2011 meeting. The billing rates for our services related to this work are the same as those referenced in the April 8, 2011 cost proposal and subsequent adjustments that reduced project costs.

#### **Tropical Storm Beryl**

After this storm impacted the project site on May 28, Task 6 was added to track our costs associated with Tropical Storm Beryl damage assessment, designing and specifying repair methods and evaluating and responding to Comanco's Claim for Equitable Adjustment. Storm related work during this period included daily tracking of Tropical Storm Beryl damage repair work. Additional work included Certifying and Construction Engineering support. The Engineer of Record Kevin Brown, PE made two site visits during this period on June 4 and June 18, 2012.

Construction Management included facilitating Special Project Meeting #7 which was held on June 4, 2012 to assess the damage to the site from Tropical Storm Beryl; Design Support work included providing details for the sequence and scope of repair work; and Project Management work included managing Comanco's Claim for Equitable Adjustment which required two meetings with the County.

These services totaled **\$22,244.25**.

#### **Tropical Storm Debby**

Prior to completion of the repair work related to Tropical Storm Beryl, Tropical Storm Debby impacted the project site on June 26 and 27<sup>th</sup>. Task 7 was then added to track our costs associated with Tropical Storm Debby damage assessment, daily tracking of Comanco's repair work and managing their Claim for Equitable Adjustment. Storm related work during this period included Construction Management assessing the damage to the site from Tropical Storm Debby.

Certifying Engineering Support included the Engineer of Record Kevin Brown, PE's site visit on July 26, 2012, providing design support for failure areas and engineering work evaluating the site's drainage features. Construction Management included site meetings to inspect damage, tracking contractor costs and the progress of the repair work. Project Management included managing

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Comanco's Claim for Equitable Adjustment which required contract evaluation, assessment of repair cost submittals and three meetings with the County.

These services totaled \$ \$13,359.75 through September. However, additional Project Management will likely be required in October, because the Claim is not yet settled. An estimate of this additional cost is \$4,240.00 bringing the total to **\$17,599.75**.

The total budget authorization amount requested for our services related to these two tropical storms is **\$39,844.00**. The details on the costs associated with this amount are presented in the attached Table 1. Please note that this amount does not include any on-site CQA services during this period, which are charged on a daily rate.

Golder appreciates the opportunity to provide continued solid waste engineering services to the County. Should you have any questions or need additional information, please do not hesitate to contact one of the undersigned.

Sincerely,

**GOLDER ASSOCIATES INC.**

  
Glenn R. Carwell III, CHMM  
Senior Engineer and Associate

  
Kevin Brown, PE  
Senior Consultant and Principal

cc: Becky Hiers, PE – Nassau Co. Engineering Services

Attachment – Table 1

FN: G:\Projects\993\993-39\993-3928\103\020\_Budgetary\_Information\Budget authorization request Tropical Storms work revised 10-12-12.docx

**ATTACHMENT  
TABLE 1**

**TABLE 1  
COST DETAIL**

**CQA/CM/Design Support for Final Closure Construction  
West Nassau Landfill  
Callahan, Nassau County, Florida**

**Tropical Storm Beryl**

Task 6003	Cert. & Const. Eng.Support TS Beryl	\$ 4,065.50	Kevin Brown 23.5 hours
Task 6004	Construction Mgmt. TS Beryl	\$ 8,222.50	Glenn Carwell 19.5 hours; Don Grigg 41.5 hours
Task 6005	Design Support TS Beryl Repair	\$ 3,695.00	Kevin Brown 2.5 hours; Glenn Carwell 22.5 hours
Task 6006	Project Mgmt. TS Beryl	\$ 6,261.25	Glenn Carwell 39.25 hours; William Brumund 3.0 hours
		\$ 22,244.25	

**Tropical Storm Debby**

Task 7003	Cert. & Const. Eng.Support TS Debby	\$ 4,408.50	Kevin Brown 4.5 hours; Kenneth Peters 33.0 hours
Task 7004	Construction Mgmt. TS Debby	\$ 4,157.50	Glenn Carwell 8.5 hours; Don Grigg 22.25 hours; Brandon Poiencot 0.5 hours
Task 7005	Design support TS Debby Repair	\$ 290.00	Glenn Carwell 2.0 hours
Task 7006	Project Mgmt. TS Debby	\$ 4,503.75	Glenn Carwell 29.75 hours; William Brumund 1.0 hours
Task 7006	Project Mgmt. TS Debby	\$ 4,240.00	Glenn Carwell 24.0 hours; William Brumund 4.0 hours (Estimated)
		\$ 17,599.75	

Total cost for both Tropical Storms =            \$ 39,844.00