

CHANGE ORDER FORM
DEP Contract No. SP644
Page 1 of 2

Change Order No.: SP644-006 **Contractor Name:** CDM Constructors, Inc. (CDM)

Contractor Contract Manager: Dean Carter **Phone No:** (407) 660-6423

Description of Change(s) (Attach additional documents if referenced in description below.):

Activity Reference Code ¹	Change(s) authorized by this Change Order	Deliverable(s) and Due Date(s)	DEP Deliverable Review in Work Days	Payment Method	Dollar Value of Change (+ or -) ²	Change in Payment Basis
C2 and C3	Pursuant to paragraph 34 and Attachment C of DEP Contract No. SP644, this Change Order provides a price adjustment for changed quantities and the fluctuation in liner resin costs for the HDPE liner material under Tasks C2b. (NGS-S Cap Area), C2c. (OGS Cap Areas), C2d. (NGS Relief Ditch), and C3a. (Phase I Slopes - OGS). Changed liner quantities for these tasks were agreed upon based on the August 2 quantity tabulation included herein. The liner cost adjustment documentation previously submitted and accepted by the Engineer for Change Order SP644-003 is applicable to this change order. The Engineer's review and September 20, 2005, correspondence indicates that the price adjustment herein were reasonable and determined in accordance with contract provisions. The net price adjustment from the overall reduction in liner quantities and increased liner resin costs results in a decrease from \$30,449,853 to \$30,386,580 in the liner lump sum amounts under Tasks C2b., C2c., C2d., and C3a.	No Change	No Change	No Change	(\$63,273.00)	Yes

Total Increase or Decrease in Project Costs resulting from this Change Order: (\$63,273.00)

Ceiling Amount of Contract Impacted? (Yes or No) Yes

Total Impact on Ceiling Amount all Change Orders (SP644-001 to SP644-006) to Date: (\$623,920.00)

Ceiling Adjustments made by Amendments (-- to --) to Date: \$0.00

Current Ceiling Amount Adjustments Needed: (\$623,920.00)

Notes: ¹Activity Reference Code shall conform to the activity code system established in Attachment C. ²Contractor understands that all funding for DEP Contract SP644 is established by authorized funding increment amounts. This Change Order does not increase or decrease the authorized funding increment amount of the Contract. All changes in authorized funding increment amounts shall be processed by letter or contract amendment as addressed in paragraph 7 of the Contract.

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Change(s) in Contract Completion Date Needed as a Result of this Change Order:

Current Contract Completion Date (without renewals):	February 22, 2010
Completion Date of Contract (without renewals) impacted by this Change Order? (Yes or No)	No
Increase or Decrease, in Calendar Days, Needed as a Result of this Change Order:	0
Total Increase/Decrease, in Calendar Days, Needed as a Result of all Change Orders (SP644-001 to SP644-006) to Date:	0
Completion Date Changes (in Calendar Days) Authorized by Amendments (-- to --) to Date:	0
Current Completion Date Changes, in Calendar Days, Needed by Amendment:	0

This Change Order is a modification to the Contract between the Contractor and the Department (DEP), and all contract provisions shall apply unless specifically exempted. The amount and time change designated are the maximum agreed to by both the Department and the Contractor for this change. In consideration of the foregoing adjustments in contract time and contract sum the Contractor hereby releases Department from all claims, demands or causes of action arising out of the transactions, events and occurrences giving rise to this Change Order. This written Change Order is the entire agreement between the Department and Contractor with respect to this Change Order. No other agreements or modifications shall apply to this Change Order unless expressly provided herein.

Approval Required	Signature	Date
Director or Deputy Director, Division of Water Resource Management (Contract Authority, DEP):		9/27/05
DEP Contract Manager, Bureau of Mine Reclamation:		9-27-05
Vice President, CDM Constructors Inc.:		9/26/05

List of Attachments/Exhibits Included with this Change Order:

Specify Type/Reference	Title/Description of Document	Number of Pages
DEP Contract No. SP644, Attachment C	DEP Contract No. SP644, Attachment C revised per Change Order SP644-006	7
August 2 quantity tabulation	August 2 liner quantity tabulation of agreed upon quantities	1
CDM's September 20, 2005 Change Order Request	CDM's September 20, 2005 Change Order Request, as revised by September 22, 2005 telephone conversation between John Coates and Dean Carter.	5

cc: Gwenn Godfrey, Procurement Section (MS93)
DEP Contracts Disbursements Section (MS78) - 2 Copies

**ATTACHMENT C
PAYMENT AND DELIVERABLE SCHEDULE**

DESCRIPTION		Fixed-Price	Lump Sum Unit Rate	APPROVAL PERIOD ⁽⁵⁾	DELIVERABLES	PAYMENT BASIS ⁽⁸⁾
A. OPERATION AND MAINTENANCE						
OPERATION AND MAINTENANCE, Years 1-2		\$6,552,794	NA		Operation and Maintenance activities are to be reported in the "Piney Point Operation and Maintenance Status Report" (Monthly Status Report) to be submitted with the monthly Operation and Maintenance Invoices. The format for the Monthly Status Report shall provide sufficient detail and summary information for the Department Contract Manager to determine the extent to which contract requirements are being met. The specific format will be mutually agreed upon by the Contractor and the Department.	Monthly invoice line items shall be provided as follows: 1. During the first contract month only for Operation & Maintenance (O&M), an invoice line item shall include the price for "O&M Activities and Mobilization" based on the agreed upon lump sum allocation of \$ 375,000. 2. During the second month, and on a monthly basis thereafter, the lump sum O&M amounts shall be invoiced as "Site Operation & Maintenance Activities" based on the agreed upon O&M Monthly Lump Sum Allocation Values shown below for this Scope of Services. The invoice line item should reference the corresponding year and month for services. O&M Monthly Lump Sum Allocation Values, not to exceed: - Contract Year 1, Months 2-12 shall be \$ 268,600 / month - Contract Year 2, Months 1-12 shall be \$ 268,600 / month - Contract Year 3, Months 1-12 shall be \$ 149,950 / month - Contract Year 4, Months 1-12 shall be \$ 100,000 / month - Contract Year 5, Months 1-12 shall be \$ 79,939 / month Retainage: None, unless otherwise specified in Change Order after contract execution.
OPERATION AND MAINTENANCE, Years 3-5		\$3,958,663	NA			
A1	Site Operation and Maintenance (Including Process Water and Runoff Management, Inspections, Site Security, Mowing, Repairs, and Post-Closure Care & Maintenance)				Activity to be included on the Monthly Status Report.	
A2	Utilities (Power, excluding power used in process water consumption, Water, Domestic Wastewater, Refuse Collection, etc.)				Include KWH consumption in the Monthly Status Report.	
A3	Safety Training and Safety Compliance				1. Incident Reports to be included in the Monthly Status Report and verbal notifications provided to DEP Contract Manager as needed. 2. A copy of an Employee Training Log shall be provided monthly showing the required training for employees performing services under this contract, and either the planned or actual dates of corresponding employee training.	
A4	Groundwater Monitoring Plan Implementation				Reporting according to Discharge Monitoring Reports (DMRs) per Administrative Agreement, National Pollutant Discharge Elimination System (NPDES) permit, or other Department issued orders as may be effective, issued, or amended during contract period for the subject site/facilities.	
A5	Surface Water Monitoring Plan Implementation				Reporting according to DMRs per Administrative Agreement, NPDES permit, or other Department issued orders as may be effective, issued, or amended during contract period for the subject site/facilities.	
A6	Project Coordination, Direction & Reporting				Include activity summary information in the Monthly Status Report including Monthly Site Meeting minutes between DEP contract manager, Receiver, Engineer, and Contractor's team.	
A7	Liability Insurance Coverage (Including Pollution Liability)				Copy of effective Insurance Policy showing policy type, coverage limits, and policy term.	

Task A, Total Lump Sum: \$10,511,457

DESCRIPTION		Fixed-Price	Lump Sum Unit Rate	APPROVAL PERIOD ⁽⁵⁾	DELIVERABLES	PAYMENT BASIS ⁽⁸⁾
B. PROCESS WATER CONSUMPTION						
B1	Years 1-2, Up to 712.5 MGal Consumption Years 3-5, Greater than 712.5 MGal Consumption up to 950 MGal Consumption Water consumption shall continue under contract terms for process water consumption; however, volumes greater than 950 MGal are not billable beyond the lump sum amount, except as specified for Tasks B2 and B3. At the end of Years 1-2 from the effective start date for this task, any remaining lump sum balance of the Years 1-2 fixed-price, if any, will be paid upon satisfactory completion of Years 1-2 process water consumption tasks as outlined in this contract. At the end of Years 3-5 from the effective start date for this task, any remaining lump sum balance of the Years 3-5 fixed-price, if any, will be paid upon satisfactory completion of Years 3-5 process water consumption tasks as outlined in this contract.	\$ 7,624,007 \$ 2,021,268 \$ 0.00	\$ 10.70 / 1,000 gal. \$ 8.51 / 1,000 gal. \$ 0.00 / 1,000 gal.		Weekly Water Report spreadsheet including, but not limited to: - daily rainfall, pond water levels, and water volumes for each consumption method (i.e., Double-lime, RO, Spray Evaporation, or Spray Irrigation). - daily measured ammonia nitrogen and estimated total nitrogen concentrations at Outfall 003, - calculated daily total discharge load in lbs. for total nitrogen and ammonia nitrogen at Outfall 003, and - the total discharge volume at Outfall 003, the 15-day rolling average and 30-day rolling average ammonia nitrogen and total nitrogen load (in lbs.) at Outfall 003. The Weekly Water Report shall reflect the weekly period from Tuesday - Monday of a given week and be submitted to the Department within 48 hours of the end of the weekly period. The content and format for the Weekly Water Report shall be as agreed upon by the Department Contract Manager.	Monthly Invoice line items shall be provided as follows: 1. Each monthly invoice shall specify the total water consumption for each day in the period based on: - measured water consumption volumes (by final disposal / discharge method) for double lime, RO permeate, and/or spray irrigation discharges in accordance with Note ⁽¹⁾, and - spray evaporation consumption based on the reported Operation Factor for the period, and the agreed upon monthly adjusted baseline evaporative loss design rates in Note ⁽²⁾, corresponding to each Department approved spray evaporation system. Retainage: None, unless otherwise specified in Change Order after contract execution.
	Spray Evaporation Consumption Adjustment	See B1	See B1			2. An additional invoice line item shall be added to reflect any invoiced amount or credit to be applied for an anticipated semi-annual "Spray Evaporation Consumption Adjustment" that will be determined based on semi-annual water balance modeling results provided by the Engineer. The water balance modeling results, or an alternative method proposed by the Engineer where mutually agreed upon, will be used to determine the spray evaporation consumption taking into consideration the measured or estimated water inputs/outputs and changes in water inventory.
B2	Year 1, Additional 10.6 MGal / inch rainfall above 55 inches Year 2, Additional 7.1 MGal / inch rainfall above 55 inches Year 3, Additional 4.1 MGal / inch rainfall above 55 inches	NA	\$ 12.40 / 1,000 gal. \$ 13.02 / 1,000 gal. \$ 14.66 / 1,000 gal.			3. Pursuant to the Contract terms, an additional invoice line item shall be added at the end of Years 1, 2, and 3 to reflect any additional "Contract Allowance for Rainfall greater than 55 inches/year."
B3	Year 1, Debited 10.6 MGal / inch rainfall less than 50 inches Year 2, Debited 7.1 MGal / inch rainfall less than 50 inches Year 3, Debited 4.1 MGal / inch rainfall less than 50 inches	NA	\$ 5.63 / 1,000 gal. \$ 5.63 / 1,000 gal. \$ 1.66 / 1,000 gal.			4. Pursuant to the Contract terms, an additional invoice line item shall be added at the end of Years 1, 2, and 3 to reflect any "Contract Deduction for Rainfall less than 50 inches/year."
B4	Years 1-2, Allowance for variation in drainable pore water volume and rate Years 3-5, Allowance for variation in drainable pore water volume and rate	\$211,500 \$70,500	NA NA			5. A monthly invoice line item shall include a uniformly allocated "Pore Water Allowance" cost based on the lump sum amount for the indicated period. Accordingly, Years 1-2 shall be invoiced for a total not to exceed \$211,500, or \$8,812.50 / month and Years 3-5 shall be invoiced for a total not to exceed \$70,500, or \$1,985.34 / month.

Task B, Total Lump Sum: \$9,927,275 ⁽³⁾

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DESCRIPTION		Fixed-Price	Lump Sum Unit Rate	APPROVAL PERIOD ⁽⁵⁾	DELIVERABLES	PAYMENT BASIS ⁽⁸⁾
C. CLOSURE CONSTRUCTION ACTIVITIES						1. Invoice based on Percent Complete, approved by Third Party Engineer, of the lump sum amount for each construction phase and each work segment.
	RESERVOIR SLOPE COVER (All 4 Ponds)					Retainage: 25% of each submitted invoice amount, except as specified below for seeding activities, to be released following Engineer's conditional acceptance of a given phase/work segment. Upon completion, submittals shall include a copy of the Engineer's Completion of Construction Certification and As-built Drawings provided by the Contractor.
C1	Reservoir Slope Cover (All 4 Ponds)	\$6,454,324	⁽⁴⁾	10		
	PHASE III - NGS-S COMPARTMENT					
C2a	NGS-S Reservoir (2005)	\$4,158,450	⁽⁴⁾	10	Monthly submittals with Closure Construction Invoice: - Weekly construction meeting minutes, prepared by Engineer - Copies of agenda/minutes from ad hoc construction coordination and update meetings - Percent completion of each phase of each activity and work element - Conditional acceptance by Engineer of each phase/work element for invoicing of closure construction activities. See Note ⁽⁴⁾ . End of Construction Phase: - Engineer's certification of completion of construction for each activity - As Built drawings for each activity	Retainage - seeding subtasks/activities: 40%, with the retainage to be released six months after seeding activity resulting in successful establishment of grassed cover following approval of Engineer.
C2b	NGS-S Cap Area (2005)	\$696,954	⁽⁴⁾	10		
C2c	OGS Cap Areas (2005)	\$735,812	⁽⁴⁾	10		
C2d	NGS-N Relief Ditch (2005)	\$556,198	⁽⁴⁾	10		
C2e	Re-Closure of NGS-N Relief Ditch if Used for Disposal of Plant Scale (at FDEP's Option)	\$1,413,000	⁽⁴⁾	10		2. In accordance with Change Order SP644-005, invoices for Task C1 (NGS-S Lined Slopes) and Tasks C2a, C2b, C2c, and C2d may include a percent complete and corresponding lump sum allocation reflecting borrow source preparation for materials stockpiled for the Gulfstream borrow source as of June 1, 2005. The percent complete for soil cover borrow source preparation activities under Task C1 (NGS-S Lined Slopes) and Tasks C2a, C2b, C2c, and C2d shall be determined based on not more than the agreed upon quantity estimate for the stockpiled soil cover materials, stockpiled as of June 1, 2005, where the estimated quantity has been approved by the Engineer and has an equivalent value not to exceed \$5.50 per cy. The Department may release retainage for invoiced amounts for soil cover borrow source preparation only after the stockpiled materials have been screened for potential pollutants in accordance with a sampling plan accepted by the Department.
	STACK SLOPES AND DITCHES					
C3a	Phase I Slopes - OGS (2005)	\$2,759,426	⁽⁴⁾	10		
C3b	Phase II Slopes - NGS (2006)	\$2,747,917	⁽⁴⁾	10		
	COOLING/SLUDGE PONDS & DITCHES					
C4a	NCP Closure	\$3,787,926	⁽⁴⁾	10		
C4b	SCP Closure	\$7,076,574	⁽⁴⁾	10		

Task C, Total Lump Sum: \$30,386,580

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DESCRIPTION		Fixed-Price	Lump Sum Unit Rate	APPROVAL PERIOD ⁽⁵⁾	DELIVERABLES	PAYMENT BASIS ⁽⁸⁾
	MISCELLANEOUS BILLABLE ITEMS					
E2	Transport Plant Scale to Stack (25,000 cy)	\$250,000	\$ 10.00 / cy	10	Documentation showing percent complete approval from Engineer for scale placement.	Invoice line items to be included on Construction Invoice based on percent task completion as approved by Engineer.
F5	Miscellaneous Lump Sum Costs other than Fluctuation and Plant Scale Costs	\$956,000	NA		Record keeping as required by state law.	Invoice as a separate lump sum line item as "Miscellaneous Lump Sum Costs other than Fluctuation and Plant Scale Costs." This separate invoice item shall be included on the monthly Operation and Maintenance invoices based the contract fixed-price amount, uniformly allocated over the expected 5 year term of the contract.
	Fluctuation in Electric Power Costs - Operation and Maintenance			10	Documentation showing the applicable power usage (in KWH), and the change in unit power cost from Florida Power and Light (FPL) for most favored commercial customers in the Tampa Bay area after considering an escalation corresponding to 3% per year from the FPL base rate charged for such customers in December 2004.	An additional invoice line item shall be added to reflect an invoiced amount (invoice debit or credit) to be applied for the annual "Fluctuation in Electric Power Costs" that shall be determined as outlined in Note ⁽⁶⁾ for electric power costs applicable to Operation and Maintenance activities and electric power costs associated with Process Water Consumption. The line item and amount (invoice credit or debit) shall be invoiced in the monthly invoice for the end of Contract Years 2, 3, 4, and 5.
	Fluctuation in Liner Resin Costs			10	Documentation showing the neat liner quantities for 40-mil, 60-mil, and 80-mil liner determined by the Engineer for planned construction activities in Contract Years 1, 2, and 3, and Liner Resin unit price quotes and unit conversions as outlined in Note ⁽⁷⁾ . The documentation shall show the change in actual liner resin unit cost for Contract Years 1, 2, and 3 after considering an escalation corresponding to 3% per year from the November 2004 Base Liner Resin Unit Cost established as outlined in Note ⁽⁷⁾ .	Documentation showing the neat liner quantities for 40-mil, 60-mil, and 80-mil liner determined by the Engineer from detailed construction drawings for planned construction activities in Contract Years 1, 2, and 3, and supporting documentation for determination of the "lowest adjusted price" (expressed in dollars per square feet) as outlined in Note ⁽⁷⁾ .

Notes:

⁽¹⁾ For days where the calculated 30-day rolling average ammonia nitrogen discharge is greater than 20 lbs./day and less than or equal to 50 lbs./day, the "billable consumption volume" for discharges to Bishop Harbor will be adjusted to reflect 90% of the actual corresponding volume (i.e., equivalent to 0.9 times the lump sum unit price for <= 50 lbs./day ammonia nitrogen). For days where the calculated 30-day rolling average ammonia nitrogen discharge is greater than 50 lbs./day, the "billable consumption volume" for discharges to Bishop Harbor shall be shown as zero. For days where the calculated 30-day rolling average ammonia nitrogen discharge is less or equal to 20 lbs./day, the "billable consumption volume" for discharges to Bishop Harbor shall be the water treatment volume.

⁽²⁾ Monthly Adjusted Baseline Evaporative Loss Design Rates are provided below, for each Department approved system, based on 24-hour/day, 7-days/week operation with an Operating Factor of 0.80.

2.1 SE-1, Existing Spray Evaporation System in NGS-N reservoir where the average Net Spray Consumption rate (in MGD) for the values from January through December is 0.200 MGD, when operating with 1169 nozzles at a minimum nozzle pressure and rate of 50 psi and 2.91 gpm/nozzle, respectively. When operating at sprayfield pressures between 25 and 50 psi, the Net Spray Consumption (MGD) at the given operating pressure may be determined by interpolating or extrapolating the Spray Consumption Factor from those shown in the corresponding table, multiplied by the listed monthly Net Spray Consumption (MGD) for the values at 50 psi to yield the reduced Net Spray Consumption (in MGD) for periods during that month when operating at pressures between 25 and 50 psi.

Month	Average Pond Evaporation (in)	Average Net Spray Consumption (MGD)
Jan	2.48	0.116
Feb	2.62	0.135
Mar	3.88	0.181
Apr	5.42	0.261
May	6.26	0.292
Jun	6.13	0.295

Month	Average Pond Evaporation (in)	Average Net Spray Consumption (MGD)
Jul	5.70	0.267
Aug	5.23	0.244
Sep	4.52	0.218
Oct	3.43	0.160
Nov	2.47	0.119
Dec	2.34	0.109

Spray Consumption Factors		
Pressure (psi)	Net Spray Consumption (MGD)	Spray Consumption Factor (factor)
30	0.08	0.400
40	0.131	0.655
50	0.2	1.000

2.2 Pursuant to Change Order SP644-004, the Average Net Spray Water Consumption rates are shown below for areas SE-3, SE-4, SE-7, and SE-9, as described below, when operating at minimum nozzle pressure of 50 psi and inflow rate of 2.91 gpm/nozzle, respectively. Subject to Department approval, where the indicated number of operating spray system nozzles are changed from those indicated, the net spray consumption rate (in MGD) shall be adjusted accordingly, per nozzle increased or decreased, in the system as constructed. A written approval letter, referencing CDM's proposed construction and operation details, from the Department's Contract Manager must be obtained prior to any construction for SE-9, or any related alteration of the existing spray evaporation system located in the NGS-N reservoir, SE-1, or its supporting infrastructure. Construction and operation of additional spray systems listed below shall provide for drift and erosion monitoring and immediate suspension of individual or all segments of such systems as the Department may determine is warranted.

When operating at sprayfield pressures between 25 and 50 psi, the Net Spray Consumption (MGD) at the given operating pressure may be determined by interpolating or extrapolating the Spray Consumption Factor from those shown in the corresponding table, multiplied by the listed monthly Net Spray Consumption (MGD) for the values at 50 psi to yield the reduced Net Spray Consumption (in MGD) for periods during that month when operating at pressures between 25 and 50 psi.

- SE-3, Spray Evaporation System in South Cooling Pond (SCP) Internal Dams and Ditch Area between Dams.
- SE-4, Spray Evaporation System in North Cooling Pond (NCP).
- SE-7, Spray Evaporation System along the northern and western dikes of SCP-N.
- SE-9, Spray Evaporation System addition along the lined inboard slopes of NGS-N.

Month	SE-3 Average Net Spray Consumption for 614 nozzles (MGD)	SE-4 Average Net Spray Consumption for 360 nozzles (MGD)	SE-7 Average Net Spray Consumption for 203 nozzles (MGD)	SE-9 Average Net Spray Consumption for 500 nozzles (MGD)
Jan	0.0777	0.0363	0.0233	0.0565
Feb	0.0821	0.0384	0.0246	0.0597
Mar	0.1215	0.0569	0.0364	0.0884
Apr	0.1698	0.0794	0.0508	0.1235
May	0.1961	0.0917	0.0587	0.1427
Jun	0.1920	0.0898	0.0575	0.1397
Jul	0.1786	0.0835	0.0535	0.1299
Aug	0.1638	0.0766	0.0490	0.1192
Sep	0.1416	0.0662	0.0424	0.1030
Oct	0.1075	0.0503	0.0322	0.0782
Nov	0.0774	0.0362	0.0232	0.0563
Dec	0.0733	0.0343	0.0219	0.0533

Spray Consumption Factors

Pressure (psi)	Net Spray Consumption (MGD)	Spray Consumption Factor (factor)
30	0.08	0.400
40	0.131	0.655
50	0.2	1.000

⁽³⁾ Total Lump Sum for Process Water Consumption subject to adjustment for items B2 and B3 as governed by contract terms.

⁽⁴⁾ Closure Construction Activities subject to schedule subdivision and future updates by Engineer, including subdivision into mutually agreed upon releasable work segments for progress monitoring and payment purposes. Please see Attachment C, Table 1, Closure Task Breakdown, Piney Point ITN 2005002C for current subdivision of Closure Construction Activities.

⁽⁵⁾ The Approval Period shall be five (5) working days to inspect and approve the invoiced services for payment, unless another period of working days is specified herein.

⁽⁶⁾ The adjustment to pricing, if any, for fluctuations in electric power costs will be made based upon the posted unit price (in \$ per KWH) as charged by Florida Power and Light to its most favored commercial customers in the Tampa Bay area, compared to the adjusted unit price charged by Florida Power and Light to the same customers in December 2004 but after considering an escalation corresponding to 3% inflation per year. The change in unit power cost, relative to the escalated base unit price, in December 2005, December 2006, December 2007 and December 2008 will be used for making the adjustment (either debit or credit) for electric power costs during contract years 2, 3, 4 and 5, assuming a theoretical power usage of 11.3 Million KWH (Year 2), 3.8 Million KWH (Year 3), 2.6 Million KWH (Year 4) and 2.0 Million KWH (Year 5), respectively, during each of the corresponding four contract years.

⁽⁷⁾ The adjustments to pricing, if any, for fluctuations in Liner Resin prices will be made based upon the neat liner quantities determined by the Engineer from detailed design drawings (without any adjustment for liner overlaps, liner buried in anchor trenches, increased liner area due to sloping surfaces, liner for repair patches, waste, etc.) for planned liner installation activities during each calendar year. The adjustment (either debit or credit) will be based upon the lower of either:

1) The lowest documented change in liner sheet unit price from at least two liner manufacturers (expressed in dollars per square feet) for orders placed in November 2004 escalated by 3% inflation per year, compared to orders placed in February 2005 and in December 2005 and December 2006, respectively, for planned construction activities in each of the first three contract years; or

2) The lowest documented change in Liner Resin unit price from at least two liner manufacturers or resin suppliers for orders placed in November 2004 compared to orders placed in February 2005 and in December 2005 and December 2006, respectively, for planned construction activities in each of the first three contract years. The change in actual liner resin unit price (expressed in dollars per pound of resin), after accounting for 3% escalation per year from the November 2004 BAFO unit price of \$0.64/lb. shall be multiplied by 0.237 lb/ft², 0.347 lb/ft² and 0.442 lb/ft² for 40-mil, 60-mil and 80-mil liner, respectively.

The lowest adjusted price as determined above (expressed in dollars per square feet) shall be multiplied by the neat liner quantity from detailed design drawings (expressed in square feet) times a factor of 1.10 adopted herein to accommodate additional liner buried in anchor trenches, liner overlaps, waste, etc.

⁽⁸⁾ Lump Sum Unit rates or monthly allocations of the fixed cost amounts are rounded to the nearest cent or dollar as shown. In all cases, the final monthly invoice for a given period shall reflect the necessary amount so that the indicated fixed-price is not exceeded. There shall be no adjustment to the lump sum pricing presented in Attachment C for any fluctuations in Contractor's costs, including lime costs, fuel costs or any other utility or commodity cost during the term of the contract, except as specifically provided for herein, including Notes ⁽⁶⁾ and ⁽⁷⁾.

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**ATTACHMENT C
TABLE 1**

**CLOSURE TASK BREAKDOWN
PINEY POINT - ITN 2005002C**

Item	Closure Construction Element			Engineer's Estimate	CDM BAFO Estimate	CDM BAFO PRICE	Computed Unit Rate	CDM BAFO Unit Rate		
C1	ITEM C1. RESERVOIR SLOPE COVER (All 4 Ponds)									
	Soil Cover (NGS-N, OGS-S & OGS-N Lined Slopes)	cy	270,000	270,000	\$ 3,350,000	\$ 12.41	\$ 12.41			
	Soil Cover (NGS-S Lined Slopes - From C2)	cy	130,000	140,000	\$ 1,580,924	\$ 11.29	\$ 11.29			
	80-Mil HDPE Liner (Crest Roads)	sf	175,000	175,000	\$ 120,000	\$ 0.69	\$ 0.69			
	Drain Composite (All 4 Ponds)	sy	85,000	85,000	\$ 816,000	\$ 9.60	\$ 9.60			
	Sodding NGS-N, OGS-S & OGS-N Slope Cover	ac	40	40	\$ 351,700	\$ 8,792.50	\$ 8,792.50			
	Sodding NGS-S Slope Cover (From C2)	ac	18	18	\$ 158,300	\$ 8,794.44	\$ 8,794.44			
	Seed or Sod (Soil Crest Cover)	ac	4	4	\$ 9,400	\$ 2,350.00	\$ 2,350.00			
	Other Ancillary	lump	lump	lump	\$ 68,000	-	-			
									TOTAL ITEM C1	
									\$ 6,454,324	
C2	ITEM C2. PHASE III - NGS-S COMPARTMENT									
	Task C2a. NGS-S Reservoir (2005)									
	Sludge Excavation (see Note 4)	cy	5,000	0	\$ -	\$ -	\$ 8.80			
	Gypsum Fill (see Note 4)	cy	380,000	206,500	\$ 1,547,675	\$ 7.49	\$ 5.97			
	80-Mil HDPE Liner (see Note 5)	sf	3,000,000	3,000,000	\$ 2,222,208	\$ 0.741	\$ 0.68			
	Soil Cover	cy	3,000	3,000	\$ 30,794	\$ 10.26	\$ 11.29			
	Seed or Sod (West Dike Crest Road)	ac	1	1	\$ 2,342	\$ 2,341.67	\$ 2,341.67			
	Outlet Structure	lump	lump	lump	\$ 10,000	-	-	Total Task C2a		
	NGS-S Reservoir - Soil Cover Mobilization (see Note 6)	lump	lump	lump	\$ 3,083	-	-			
	Other Ancillary	lump	lump	lump	\$ 342,349	-	-	\$ 4,158,450.12		
	(Note: Soil cover and associated drain composite and sodding were moved from item C2 to item C1)									
	Task C2b. NGS-S Cap Area (2005)									
	Gypsum Fill	cy	5,000	5,000	\$ 29,867	\$ 5.97	\$ 5.97			
	40-Mil HDPE Liner (see Note 7)	sf	500,000	354,250	\$ 152,645	\$ 0.431	\$ 0.40			
	Soil Cover	cy	25,000	37,725	\$ 387,232	\$ 10.26	\$ 11.29			
	Seed or Sod	ac	10.5	10.5	\$ 24,588	\$ 2,341.67	\$ 2,341.67			
	Outlet Structure	lump	lump	lump	\$ 10,000	-	-	Total Task C2b		
	NGS-S Cap Area Soil Cover Mobilization (see Note 6)	lump	lump	lump	\$ 38,771	-	-			
	Other Ancillary	lump	lump	lump	\$ 53,851	-	-	\$ 696,953.50		
	Task C2c. OGS Cap Areas (2005)									
	Gypsum Fill	cy	10,000	10,000	\$ 59,735	\$ 5.97	\$ 5.97			
	60-Mil HDPE Liner (see Note 8)	sf	450,000	419,487	\$ 215,462	\$ 0.514	\$ 0.47			
	Soil Cover	cy	24,000	34,000	\$ 348,996	\$ 10.26	\$ 11.29			
	Seed or Sod	ac	7.5	7.5	\$ 17,563	\$ 2,341.67	\$ 2,341.67			
	Outlet Structures (2)	lump	lump	lump	\$ 6,000	-	-	Total Task C2c		
	OGS Cap Areas Soil Cover Mobilization (see Note 6)	lump	lump	lump	\$ 34,942	-	-			
	Other Ancillary	lump	lump	lump	\$ 53,114	-	-	\$ 735,812.06		
	Task C2d. NGS-N Relief Ditch (2005)									
	Gypsum Fill	cy	5,000	5,000	\$ 29,867	\$ 5.97	\$ 5.97			
	60-Mil HDPE Liner (see Note 9)	sf	300,000	292,703	\$ 150,342	\$ 0.514	\$ 0.47			
	Soil Cover	cy	18,000	22,578	\$ 231,754	\$ 10.26	\$ 11.29			
	Seed or Sod (Soil Cover)	ac	5	5	\$ 11,708	\$ 2,341.67	\$ 2,341.67			
	Amended Gypsum Grassing (From C3)	ac	10	10	\$ 66,636	\$ 6,663.64	\$ 6,663.64			
	Outlet Structure	lump	lump	lump	\$ 3,000	-	-	Total Task C2d		
	NGS-N Relief Ditch Soil Cover Mobilization (see Note 6)	lump	lump	lump	\$ 23,204	-	-			
	Other Ancillary	lump	lump	lump	\$ 39,686	-	-	\$ 556,198.06		
	Task C2e. Re-Closure of NGS-N Relief Ditch if Used for Disposal of Plant Scale (at FDEP's Option)									
	60-Mil HDPE Liner	sf	500,000	500,000	\$ 235,000	\$ 0.47	\$ 0.47			
	Soil Cover	cy	50,000	50,000	\$ 531,000	\$ 10.62	\$ 10.62			
	Sodding	ac	12	12	\$ 105,000	\$ 8,750.00	\$ 8,750.00			
	Outlet Structure Modification	lump	lump	lump	\$ 3,800	-	-			
	Gypsum Fill (Encapsulate Scale)	cy	75,000	75,000	\$ 273,000	\$ 3.64	\$ 3.64			
	Gypsum Borrow Area Work									
	Remove & Restore Soil Cover	cy	25,000	25,000	\$ 93,500	\$ 3.74	\$ 3.74			
	Remove & Replace 40-Mil Liner	sf	350,000	350,000	\$ 139,000	\$ 0.40	\$ 0.40			
	Restore Grass (Seed or Sod)	ac	8	8	\$ 18,400	\$ 2,300.00	\$ 2,300.00	Total Task C2e		
	Other Ancillary	lump	lump	lump	\$ 14,300	-	-	\$ 1,413,000.00		
										TOTAL ITEM C2
										\$ 7,560,413.74
	C3	ITEM C3. STACK SLOPES AND DITCHES								
		Task C3a. Phase I Slopes - OGS (2005)								
		Gypsum Earthwork	cy	50,000	94,318	\$ 194,349	\$ 2.06	\$ 2.06		
		80-Mil HDPE Liner (Runoff Ditches) (see Note 10)	sf	575,000	524,457	\$ 387,956	\$ 0.740	\$ 0.69		
		60-Mil HDPE Liner (Transfer Pond) (See Note 11)	sf	130,000	0	\$ -	-	\$ 0.47		
		60-Mil HDPE Liner (OGS Slope Pond) (See Note 11)	sf	70,925	70,925	\$ 36,483	\$ 0.514	\$ 0.47		
		Drains	lf	5,500	5,610	\$ 647,240	\$ 115.37	\$ 115.37		
		Soil Cover	cy	80,000	88,778	\$ 1,121,598	\$ 12.63	\$ 12.63		
Soil Grassing										
Seeding (Stormwater Ponds)		ac	3	3	\$ 7,031	\$ 2,343.75	\$ 2,343.75			
Sodding (Runoff Ditches)		ac	13	13	\$ 114,263	\$ 8,789.47	\$ 8,789.47			
Amended Gypsum Grassing		ac	23	23	\$ 153,264	\$ 6,663.64	\$ 6,663.64	Total Task C3a		
Other Ancillary		lump	lump	lump	\$ 97,241	-	-	\$ 2,759,425.72		
Task C3b. Phase II Slopes - NGS (2006)										
Gypsum Earthwork		cy	50,000	94,319	\$ 194,351	\$ 2.06	\$ 2.06			
80-Mil HDPE Liner (Runoff Ditches)		sf	225,000	225,000	\$ 154,125	\$ 0.685	\$ 0.69			
60-Mil HDPE Liner (Stormwater Pond)		sf	570,000	570,000	\$ 268,714	\$ 0.471	\$ 0.47			
Drains		lf	7,000	7,140	\$ 823,760	\$ 115.37	\$ 115.37			
Soil Cover		cy	70,000	77,681	\$ 981,402	\$ 12.63	\$ 12.63			
Soil Grassing										
Seeding (Stormwater Pond)		ac	13	13	\$ 30,469	\$ 2,343.75	\$ 2,343.75			
Sodding (Runoff Ditches)		ac	6	6	\$ 52,737	\$ 8,789.47	\$ 8,789.47			
Amended Gypsum Grassing		ac	22	22	\$ 146,600	\$ 6,663.64	\$ 6,663.64	Total Task C3b		
Other Ancillary		lump	lump	lump	\$ 95,759	-	-	\$ 2,747,916.59		
									TOTAL ITEM C3	
									\$ 5,507,342.31	

**ATTACHMENT C
TABLE 1**

**CLOSURE TASK BREAKDOWN
PINEY POINT - ITN 2005002C**

Item	Closure Construction Element		Engineer's Estimate	CDM BAFO Estimate	CDM BAFO PRICE	Computed Unit Rate	CDM BAFO Unit Rate	
C4	ITEM C4. COOLING/SLUDGE PONDS & DITCHES							
	Task C4a. NCP Closure							
	Earthwork (Soil)	cy	200,000	198,050	\$ 1,351,225	\$ 6.82	\$ 6.82	
	80-Mil HDPE Liner (Runoff Ditches)	sf	100,000	100,000	\$ 68,500	\$ 0.685	\$ 0.69	
	40-Mil HDPE Liner	sf	1,300,000	1,300,000	\$ 514,800	\$ 0.396	\$ 0.40	
	Drains	lf	2,500	2,560	\$ 293,880	\$ 114.80	\$ 114.80	
	Soil Cover	cy	110,000	103,184	\$ 1,400,008	\$ 13.57	\$ 13.57	
	Soil Grassing							
	Seeding (Cap Areas)	ac	30	30	\$ 70,292	\$ 2,343.08	\$ 2,343.08	
	Sodding (Runoff Ditches)	ac	4	4	\$ 35,180	\$ 8,795.00	\$ 8,795.00	
	Other Ancillary	lump	lump	lump	\$ 54,041			Total Task C4a
	Task C4b. SCP Closure							\$ 3,787,925.60
	Earthwork (Soil)		50,000	49508	\$ 337,775	\$ 6.82	\$ 6.82	
	80-Mil HDPE Liner (Process Water Sump)	sf	485,000	485,000	\$ 332,225	\$ 0.685	\$ 0.69	
	80-Mil HDPE Liner (Runoff Ditches)	sf	415,000	415000	\$ 284,275	\$ 0.685	\$ 0.69	
	40-Mil HDPE Liner	sf	3,200,000	3,200,000	\$ 1,267,200	\$ 0.396	\$ 0.40	
	Drains	lf	6,500	6665	\$ 765,120	\$ 114.80	\$ 114.80	
	Soil Cover	cy	290,000	266360	\$ 3,613,992	\$ 13.57	\$ 13.57	
	Soil Grassing							
	Seeding (Cap Areas and Plant Areas)	ac	100	100	\$ 234,308	\$ 2,343.08	\$ 2,343.08	
	Sodding (Runoff Ditches)		16	16	\$ 140,720	\$ 8,795.00	\$ 8,795.00	Total Task C4b
	Other Ancillary	lump	lump	lump	\$ 100,959			\$ 7,076,574.40
ITEM C - CLOSURE CONSTRUCTION TOTAL					\$ 30,386,580			
								\$ 30,386,580
NOTES: 1. The "Engineer's Estimate" column reflects those quantities provided by the Engineer for the Department under the ITN and BAFO. 2. In some cases, the values for the CDM BAFO Estimate and the CDM BAFO Price indicate task breakdowns that were computed proportionately to the Department's breakdown values for elements where CDM's BAFO quantity is less than or greater than the Engineer's estimated quantity. 3. CDM's BAFO values for Other Ancillary items were prorated to individual tasks on the basis of total task price. 4. CDM's original BAFO Estimate and Price for Sludge Excavation was revised from 5,000 cy and \$44,000 to 0 cy and \$0 per Change Order SP644-002. CDM's original BAFO Estimate and Price for Gypsum Fill was revised from 373,740 cy and \$2,232,530 to 206,500 cy and \$1,547,675 per Change Order SP644-002. 5. CDM's original BAFO Price for 80-mil HDPE liner was revised from \$2,054,000 to \$2,222,208 per Change Order SP644-003 for the fluctuation in liner resin costs. 6. CDM's original BAFO Prices for soil cover placement Tasks C2a, C2b, C2c, and C2d were reduced to allocate prorated costs from the existing lump sum prices for expedited cover soil mobilization work elements per Change Order SP644-005. 7. CDM's original BAFO quantity for 40-mil liner on the NGS cap area was revised from 373,000 sf and \$198,000 to 354,219 sf and \$152,645, per Change Order SP644-006, based on updated quantities and fluctuation in liner resin costs. 8. CDM's original BAFO quantity for 60-mil liner on the OGS cap area was revised from 450,000 sf and \$ 211,800 to 419,487 sf and \$215,462, per Change Order SP644-006, based on updated quantities and fluctuation in liner resin costs. 9. CDM's original BAFO quantity for 60-mil liner for the NGS Relief Ditch area was revised from 300,000 sf and \$ 141,200 to 292,703 sf and \$150,342, per Change Order SP644-006, based on updated quantities and fluctuation in liner resin costs. 10. CDM's original BAFO quantity for 80-mil liner for the OGS runoff ditches was revised from 575,000 sf and \$393,875 to 524,457 sf and \$387,956, per Change Order SP644-006, based on updated quantities and fluctuation in liner resin costs. 11. CDM's original BAFO quantity for the 60-mil liner for the OGS Transfer Pond was revised from 130,000 sf and \$61,286 to 0 sf and \$0, per Change Order SP644-006, based on elimination of this pond from the design. The 60-mil lined OGS Slope pond was added at 70,925 sf and \$36,453 based on similar BAFO unit rates and adjusting for fluctuation in liner resin costs per Change Order SP644-006.								
								TOTAL ITEM C4
								\$ 10,864,500
								\$ 30,386,580

Rev. 1

PINEY POINT CLOSURE - LINER SUMMARY

OGS SLOPES AND CAPS, NGS-S CAP AND NGS-N RELIEF DITCH

Area I.D.	Liner Type	NEAT HDPE LINER QUANTITIES (sf)				CDM BAFO Quantity	BAFO Deviation (%)
		5/17/05 Drawings		7/13/05 Drawings			
		Ardaman	CDM/CEC	Ardaman	CDM/CEC		
OGS Caps	60 Mil T/T	403,600	406,770	419,487	419,500	450,000	-6.8
NGS-S Cap	40 Mil T/T	373,000	373,115	354,219	354,250	500,000	-29.2
NGS-N Relief Ditch	60 Mil T/T	302,500	298,295	292,703	292,705	300,000	-2.4
OGS Slope Pond	60 Mil T/T	71,000	71,800	70,925	70,930	575,000	3.5
OGS Toe Ditch	80 Mil T/T	507,000		524,457	524,460	(Note 1)	(Note 1)
Transfer Pond (Note 2)	60 Mil	0	0	0	0	130,000	-100.0

1. The width of the 80-mil HDPE lined ditch along the toe of the OGS North slope was narrowed and the 60-mil HDPE lined OGS Slope Pond was added.

2. The lined stormwater transfer pond that was included in the conceptual BAFO design has been omitted.

3. Neat liner quantities are based on plan areas (without slope area corrections) and do not include liner buried in anchor trenches, overlaps, waste, etc.

Coates, John

From: Carter, Dean [CarterDE@cdm.com] **Sent:** Tue 9/20/2005 9:46 AM
To: Coates, John; Fuleihan, N (Priority); Werner, Rob
Cc: Solters, Stephen; Cruz, Michael; Edgar, Michael
Subject: Revised Liner Quantity Adjustment Change Order
Attachments:  [OGS Phase 1 Liner - 8.29.05.XLS\(42KB\)](#)

John,

Attached please find revised excel spreadsheets for liner quantity adjustments for the cap areas, relief ditch and slope pond.

Dean

<<OGS Phase 1 Liner - 8.29.05.XLS>>

PINEY POINT CLOSURE - LINER SUMMARY
OGS SLOPES AND CAPS, NGS-S CAP AND NGS-N RELIEF DITCH

Area I.D.	Liner Type	NEAT HDPE LINER QUANTITIES (sf)					BAFO Deviation (%)
		5/17/05 Drawings		7/13/05 Drawings		CDM BAFO Quantity	
		Ardaman	CDM/CEC	Ardaman	CDM/CEC		
OGS Caps	60 Mil T/T	403,600	406,770	419,487	419,500	450,000	-6.8
NGS-S Cap	40 Mil T/T	373,000	373,115	354,219	354,250	500,000	-29.2
NGS-N Relief Ditch	60 Mil T/T	302,500	298,295	292,703	292,705	300,000	-2.4
OGS Slope Pond	60 Mil T/T	71,000	71,800	70,925	70,930	575,000	3.5
OGS Toe Ditch	80 Mil T/T	507,000		524,457	524,460	(Note 1)	(Note 1)
Transfer Pond (Note 2)	60 Mil	0	0	0	0	130,000	-100.0
1. The width of the 80-mil HDPE lined ditch along the toe of the OGS North slope was narrowed and the 60-mil HDPE lined OGS Slope Pond was added.							
2. The lined stormwater transfer pond that was included in the conceptual BAFO design has been omitted.							
3. Neat liner quantities are based on plan areas (without slope area corrections) and do not include liner buried in anchor trenches, overlaps, waste, etc.							

		BAFO QTY	REV QTY	VARIATION	% Variation	UNIT PRICE	CHANGE IN BAFO COST
C3	80 Mil T/T						
	OGS Toe Ditch	575,000	524,457	-50,543		\$0.68500	-\$34,621.96
	Total	575,000	524,457	-50,543	-8.79%		-\$34,621.96
C2	60 Mil T/T						
	OGS Cap	450,000	419,487	-30,513		\$0.47067	-\$14,361.55
	NGS-N Relief Ditch	300,000	292,703	-7,297		\$0.47067	-\$3,434.48
	Total	750,000	712,190	-37,810	-5.04%		-\$17,796.03
C2	40 Mil T/T						
	NGS Cap	500,000	354,219	-100,000		\$0.396	-\$39,600.00
				-45,750		\$0.353	-\$16,149.75
	Total	500,000	354,219	-145,750	-29.15%		-\$55,749.75
C3	60 Mil T/T						
	Transfer Pond	130,000	0	-130,000		\$0.47143	-\$61,285.90
	OGS Slope Pond	0	70,925	70,925		\$0.47143	\$33,436.17
	Total	130,000	70,925	-59,075	-45.44%		-\$27,849.727
	Total Change in Price Due to Quantity Changes						-\$136,017.465
	Total Change in Price Due to Resin Increase (see following worksheets)						\$72,744.58
	Total Change in Contract Price						-\$63,272.88

Change in Liner Resin Unit Price

Adjusted Liner Resin Increase per Change Order #3 \$0.1052 per pound See Change Order #3 for Backup Documentation

Change in unit cost after accounting for 3% per year from November 2004:	\$0.0249 per sf
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Result:

$[(\$0.1052 \text{ lb}) \times (.237 \text{ 40 mil textured}) \times (\text{multiplied by the Estimated } 354,219 \text{ sf Neat lined area})] \times (\text{multiplied by } 1.10 \text{ for waste and o-lap}) =$ **\$9,714.68**

CDM Markup: **\$680.03**

Total Calculated Change Order Amount: **\$10,394.71**

Change in Liner Resin Unit Price

Adjusted Liner Resin Increase per Change Order #3 \$0.1052 per pound See Change Order #3 for Backup Documentation

Change in unit cost after accounting for 3% per year from November 2004:	\$0.0365 per sf
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Result:

$[(\$0.1052 \text{ lb}) \times (.347 \text{ for 60 Mil textured}) \times (\text{multiplied by the Estimated } 783,115 \text{ sf Neat lined area})] \times (\text{multiplied by } 1.10 \text{ for waste and o-lap}) =$ **\$31,445.86**

CDM Markup: **\$2,201.21**

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Total Calculated Change Order Amount: **\$33,647.07**

Change in Liner Resin Unit Price

Adjusted Liner Resin Increase per Change Order #3 \$0.1052 per pound See Change Order #3 for Backup Documentation

Change in unit cost after accounting for 3% per year from November 2004:	\$0.0465 per sf
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Result:
[(\$.1052 lb) x (.442 for 80mil textured) x (multiplied by the Estimated 524,457 sf Neat lined area)] x (multiplied by 1.10 for waste and o-lap) = **\$26,825.05**

CDM Markup: **\$1,877.75**
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Total Calculated Change Order Amount: **\$28,702.81**