

## Subject 4 Qualifications of Respondent in Meeting Areas of Expertise Needed

The CDM Team is highly qualified and prepared to provide services for the management, operation and closure of the Piney Point Phosphates Phosphogypsum Stack System and to meet the goals of the FDEP. CDM is one of the nation's top environmental engineering firms and the subcontractors we have chosen for this project are unparalleled in the industry and together we possess the technical expertise and management know-how that will ensure a successful project for the FDEP. The CDM team has a special understanding of the environmental and regulatory situation of this facility and within Florida, and comes prepared with proven technical solutions and skills from years of experience within the phosphate industry. Provided in the following pages is the experience and expertise of the CDM Team in each of the areas/categories identified in the ITN.

### A. Operator Qualifications

Mr. Paul Roberts, an employee of CDM, has been assigned the position of Facilities Project Manager and therefore, as per the ITN, Section C, Subject 4, A, "Alternatively, respondent must have on its staff one or more employee(s) that would be assigned to this project having at least 5 years demonstrated experience in operation, inspection, and maintenance of a phosphogypsum stack system," we have included below Mr. Roberts' demonstrated, extensive experience associated with the operation, inspection, and maintenance of a phosphogypsum stack system, process water management and emergency dike repair. His experience also includes the successful operation, inspection, and maintenance of an active phosphogypsum stack system and a phosphogypsum stack system undergoing closure.

Process Water Management, Operations Manager and  
Engineering Manager CF Industries, Inc. 1994-2003

Process Water Management on 2,800 Acre CF Industries,  
Inc. Facility Shutdown, Bartow, Florida - Phosphate  
Chemical Complex with 900 Acre Phosphogypsum Stack System

- 2 billion gallons of acidic process water were discharged in compliance with FDEP permit requirements using two-stage liming and air stripping systems.
- The two-stage liming facility and air stripper design were upgraded to ensure discharge compliance.

*Mr. Roberts was responsible for the permitting, overseeing design alternative reviews, and construction of a \$60 million phased closure of the 900 acre gypsum stack and process water pond system.*

*Mr. Roberts supervised the dike inspection team at C.F. Industries, Inc., Plant City site from 1980 to 1994.*



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- Designed, constructed and operated four large scale spray evaporation systems with major cost savings for process water disposal and reduced environmental impact.
- Waste lime neutralization of all of the phosphogypsum process water system preceding spray evaporation to preclude fluoride emissions.
- Designed, constructed and operated wetland nutrient reduction sludge handling system and studied ion exchange water treating option.

#### Phosphogypsum Stack Closure

- Permitted and oversaw design alternative reviews and construction of the \$60 million phased closure of the 900 acre gypsum stack and process water pond system,
- Responsible for the 1995 Phase 1 completion and oversaw the closure of 350 acres by 2003.
- Permitted 2.5 million cubic yard borrow pits for closure soil cover.
- Used unconventional hydraulic gypsum movement methods for closure reconfiguration which resulted in major cost savings.
- Managed rain water collection/storage to optimize treated process water discharges.
- Optimized treated process water discharges.

#### Emergency Dike Repair

Phosphogypsum Dike Repairs – routine and scheduled inspections of dikes were completed. Maintenance and repairs were completed in conjunction with third party engineers from Ardaman and Associates. Repairs included spillways, foundation toe boils, rainwater washouts, cuts and back fills for drainage of stored process water, settlement cracks, new dike construction associated with phased closure of the phosphogypsum stack system and other associated constructions and repairs.

The dike construction and repair teams were supervised at the CF Industries, Inc, Plant City site from 1995 to 2003 as operations and engineering manager. Mr. Roberts supervised the dike inspection team at C.F. Industries, Inc., Plant City site from 1980 to 1994. Annual dam training was received as specified by Rule 62-672, F.A.C. for each of the above time periods.

#### General site Duties

- Oversight of site remediation and consent order compliance associated with process water impacts to groundwater.
- Developed long-term closure plans for the chemical plant and areas outside the gypsum stack footprint including demolition of plants with management of process waste and sludges, PCB, Asbestos, and radioactive materials abatement and management of non-process stormwater and groundwater.

Engineering Manager CF Industries, Inc., Plant City, Florida 1980 to 1994

Phosphate Chemical complex with 525 acre Phosphogypsum Stack System

- Responsible for the management of the following activities:
- Permitting of 1987 groundwater monitoring plan
- Permitting and lining of 93 acre process water pond with clay, 60 MIL, HPDE Liner, and Gypsum completed October 1995
- All site environmental activities

Chief Process Engineer from 1973 to 1980 at CF Industries, Inc. Bartow, Florida

Phosphate Chemical Complex responsibilities included the following:

- Supervised environmental monitoring program, permitting and technical solutions
- Coordinated environmental agency and industry trade association interactions for the Florida Region including two (2) chemical plant complexes, port facility and phosphate mining operations.

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Mr. Roberts will be assisted in his responsibilities by Mr. Craig Kovach. Mr. Kovach's experience most recently included management and direction of environmental affairs and programs for CF Industries, Inc., one of the five phosphate fertilizer producers in Florida, with facilities in Hillsborough, Polk, and Hardee Counties. From 1996 through 2003, Mr. Kovach was directly responsible for all environmental permitting and regulatory compliance for the company's 2800-acre Bartow Phosphate Complex and two Port terminal facilities on Tampa Bay. The former facility is an idle processing plant that has not produced fertilizer since 1989; therefore, process water management and gypsum stack closure have comprised critical environmental program areas. Full experience for Mr. Kovach can be found in Section C – Subject 3 (Resumes and Experience of Personnel).

In addition to the operations experience CDM and Mr. Roberts bring to this project, our team member IMC, has additional extensive operations experience of Gyp Stack Systems as detailed on the following pages.

## Summary of IMC Gypsum Stack Experience - Florida Facility Operations

### New Wales Facility

The original phosphogypsum stack at New Wales, the North Stack, covers a base area of about 430 acres and is surrounded by the cooling pond and cooling channels. Prior to beginning closure construction, the North Stack elevation reached an average height of about 200 feet above grade. The cooling pond and channels surrounding the original gypsum stack occupy a total water surface area of approximately 280 acres.

A sinkhole underneath the North Stack was remediated by pressure grouting the throat on the confining unit to reestablish pre sinkhole piezometric water pressures in the gypsum stack and the foundation sands.

The gypsum stack system was expanded by the construction of the Phase I Stack. The Phase I expansion encompassed an area of 394 acres within the inside edge of the crest of the perimeter dike. The stack was built using a 60 mil HDPE liner over the entire base and the upstream face of the perimeter dikes. The lined perimeter dike face was protected with a two-foot thick cover of compacted gypsum.

Three concentric rings of perimeter drains were installed over the HDPE liner beneath the projected slope of the stack. The drains consist of six-inch diameter slotted HDPE pipe surrounded by silica gravel, wrapped within a polypropylene filter fabric and covered with gypsum hauled from the North Stack. A two-ditch system was incorporated into the stack expansion design.

The Phase II expansion stack construction was completed for initial gypsum deposition in November 2003. The Phase II expansion consisted of an approximately 310-acre lined area abutting the Phase I Stack to the south. The Phase II and Phase I HDPE liners are tied in together by a continuous 6,400 feet long extrusion weld so that a total lined stack area of 705 acres is now in service.

Closure is scheduled to be completed by May 31, 2005. Features of the construction include:

- Two HDPE lined Emergency Surge Ponds atop the stack to provide storage for 1,200 acre feet of process water.
- A 45 acre area lined with HDPE liner and soil cover.
- Two concentric subsurface side slope drains in addition to a perimeter toe drain
- Regrading the side slopes to incorporate a mid-level and a lower HDPE lined runoff collection ditch.
- Grassing of the side slopes using remediated gypsum in which dolomitic limestone is applied to adjust the gypsum pH and followed by direct seeding and fertilization.

- Construction of a stormwater reservoir to receive the stormwater runoff from the closed stack for transfer to a permitted outfall.
- Installation of piping ranging in size from 12 inch diameter to 48 inch diameter to route stormwater to the reservoir.

#### South Pierce Gypsum Stack, Florida

The majority of the South Pierce gypsum stack is located within unreclaimed mined land having been mined before the mid-60s. The gypsum stack was raised using the upstream method of construction and expanded into mined out areas to the north during the 1970s.

In the 1980s portions of the existing cooling pond to the west of the stack were converted to gypsum storage. The perimeter starter dike for this expansion was constructed with dozer-shaped overburden soils. A partially penetrating cut-off trench upstream of the starter dike and backfilled with sedimented gypsum was implemented to improve seepage control through continuous overburden piles that extended beneath the stack.

In 2003, a HDPE lined Emergency Holding Pond (EHP) was constructed within the footprint of the gypsum stack in a low area at the south end of the stack. This lined pond has a capacity of 340 acre feet of water storage equivalent to an 8.5 inch rainfall over the stack watershed.

#### Nichols Facility, Florida

The Nichols facility was purchased by IMC in 1993. During 1997-1998, the Elevated South Ditch located at the toe of the west gypsum field was lined with a 60 mil HDPE geomembrane, and the existing cooling pond was also lined.

In 1999, a project to line the tops of the west and center gypsum fields, construct gravel drains atop the liner and prepare the areas for future gypsum disposal was completed. Additionally a soil bentonite cutoff wall was added along the east side of the stack in advance of the adjacent area being mined by others.

In 2002, a pipeline was constructed to transfer process water from the Nichols facility to the New Wales facility. The 12-inch diameter HDPE carrier pipe is contained within a 16-inch diameter casing. Leak detector stations using conductivity measurement are installed along the length of the pipeline.

The gypsum stack closure permit was issued by FDEP in 2002. The permit provides for an eight year closure construction schedule. To date, the closure work completed consists of rerouting existing pipelines, installing a stormwater pipeline to the secondary lime treatment pond, and regrading and grassing the west field side slopes.

## B. Team Leader Qualifications

John Brafford will serve as the Team Leader for the CDM Piney Point Phosphogypsum Stack Closure Team. He will serve as the point of contact between the Department and the CDM team and be responsible for coordination of all activities and reporting to the Department under this contract. His integrity and experience are well known and respected in the community.

His professional experience consists of 37 years of service to the phosphate industry leading technical project engineering teams. He has extensive familiarity interfacing with public agencies and interest groups. He is knowledgeable in dealing with a variety of regulators and public entities including Polk County Commissioners, Central Florida Regional Planning Council members, staff of the Florida Dept. of Environmental Protection, news media editorial boards such as The Lakeland Ledger and The St. Petersburg Times, environmental groups such as the Audubon Society and the Sierra Club and industry organizations like Florida Institute for Phosphate Research (FIPR) and the Florida Phosphate Council (FPC). He also has experience as an Expert Witness in several permitting hearings, and an intervention suit brought by the environmental watchdog group Manasota-88.

*Mr. Brafford is especially adept at managing diverse groups in difficult times. After the development of a sinkhole under the active gypsum stack at the IMC New Wales Plant, he was involved in the development of a remediation plan with Ardaman & Associates., and their sub-contractors.*

Mr. Brafford is especially adept at managing diverse groups in difficult times. After the development of a sinkhole under the active gypsum stack at the IMC New Wales Plant, he was involved in development of a remediation plan with Ardaman & Associates, and their sub-contractors. He also acted as the IMC contact person with all interested parties and the news media, including newspapers and television.

His success in interacting with environmental groups is proven by his receipt of an award from the Florida Audubon Society "For Your Lifelong Leadership in Promoting Conservation in Florida".



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consultants inc.

## C. Water Treatment Contractor Qualifications

IMC's primary responsibilities will be for water treatment, using a variety of tried and proven technologies, to reduce the volume for water on the site and treatment discharge to meet permit requirements. IMC will be assisted by PENN PRO for process engineering design. Successful treatment of the water on-site is essential to the success of this project. We have assembled the best team available to meet these challenges. The treatment of the pond water in the near term to allow closure activities to proceed and the gyp stack pore water in the long run to minimize environmental impacts is critical. We understand that and we have the best, most experienced technical staff for the job.

### IMC and Penn Pro

The goal of the CDM team is to treat the water on site to reduce the volume as quickly as possible and dispose of it with the least cost and environmental impact. A summary of some of the tried and proven yet innovative water treatment technologies to be employed are included below, however more detail can be found in the Section C - Subject 5 Scope.

*The goal of the CDM team is to treat the water on site to reduce the volume as quickly as possible and dispose of it with the least cost and environmental impact. A summary of some of the tried and proven yet innovative water treatment technologies to be employed are included below, however more detail can be found in the Section C - Subject 5 Scope.*

The CDM team has proven success treating pond and gyp stack water at numerous IMC plants and other phosphate facilities in the central Florida area. Our team has successfully designed, fabricated, operated and maintained all of the necessary treatment options from spray evaporation to double liming to Reverse Osmosis (RO). We have the only RO pretreatment capability to allow this technology to be employed for the entire duration of the project, if necessary. Although the team has the best RO process water treatment capacity in the world, we will utilize available tried and proven methods to achieve our goals. A history of the development of IMC's technical qualifications follows in this section.

### US Filter and Veolia Water

Additionally, CDM has been in contact with US Filter regarding the current contract with the FDEP and the work that US Filter is engaged in at the Piney Point site. Bill Perpich with US Filter is in agreement that it is the intention of CDM and US Filter to continue to provide the best level of service to the FDEP possible. It may require US Filter to assign or amend the current contract or work closely with CDM and it's subcontractors to ensure the continued water volume reduction and water quality treatment to meet or exceed discharge standards. CDM has also been in contact with Veolia Water, the design engineering team that supported US Filter on the Piney Point project. Robert Zick of Veolia has also committed to work with CDM to maintain the US



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Filter plant or other water treatment and sludge handling needs, if called upon. We believe this is the best solution to continued, uninterrupted service at the site now and in the future.

#### IMC Qualifications for Water Treatment Technology

A detailed discussion of the history of the technology development for IMC qualifications for water treatment follows.

#### Use of Unique Pre-Treatment Technology, Freeport Sulphur Company, Caminada, and Grand Isle Off-Shore Sulphur Mines, New Orleans, Louisiana – 1980

The production of Frasch sulphur requires that several millions of gallons per day of seawater are heated to about 350 degrees Fahrenheit and pumped into the sulphur bearing formation in order to melt the sulphur. The liberated sulphur pools at the bottom of the well and the hydrostatic pressure brings the sulphur to within a few hundred feet of the surface, being brought the rest of the way to the surface by air lifting. Seawater contains significant quantities of calcium, sulphate and dissolved carbon dioxide and has a propensity to scale during heating as calcium sulphate has a reverse solubility relationship with temperature. The technology that was developed hinged upon the addition of various chemical additives and manipulation of the pH which allowed the resultant water to be heated with neither calcium sulphate nor calcium carbonate scaling, and with acceptable corrosion performance.

In addition, during Frasch mining the formation pressures are relieved by removing water from the periphery of the dome, and as the mine life extends, this water becomes ever more scaling, corrosive and superheated. Typically, this water is saturated with calcium sulphate, calcium carbonate and contains large amounts of dissolved carbon dioxide, hydrogen sulphide and methane. This offshore project involved the piloting and commercial demonstration of a process that would reheat this bleed-water stream to 300 degrees Fahrenheit without scaling or corrosion of the mild steel heat exchangers, and any subsequent re-injection piping. After several months of test work IMC pilot operations succeeded in re-heating this water to 320 F without scaling or corroding the mild steel equipment.

#### Manipulation of Phase Equilibria to Inhibit Scale, Freeport McMoRan, Salton Sea Geothermal Brine Facilities, California 1984-1985

The recovery of energy and the valuable mineral and salt content of the superheated brines located deep underground in Southern California are problematic due to the very high super-saturated nature of these brines. The ability to process these brines by manipulating the chemistry to flash off the steam and recover both the energy and the valuable minerals without encumbering the equipment with massive amounts of scale was a challenging undertaking. However, research was undertaken to understand the

scaling species and to develop process enhancements to alleviate the scale. Our success in mitigating the scaling problems made commercial mineral recovery operations feasible in the Salton Sea area in Southern California.

The experience learned in both the Sulphur and the geothermal brine industry has been invaluable in developing a solid understanding of mechanisms involved in handling processes that operate in a scaling environment. The control of calcium scaling compounds was an integral part of the above development work, and led to much of the current insight and the development of our present pond water pre-treatment technologies.

#### Phosphate Containing Pond Water Treatment Technology and Experience Using Conventional Tried and Proven Treatment Methods

IMC also has extensive experience with pond water treatment using conventional double liming technology. Large scale double liming operations are currently being operated at the IMC Nichols plant in Florida and the IMC Faustina plant in Louisiana.

Since the Nichols plant was idled permanently in late 1999, the facility has been treating process water for discharge to reduce the inventory on site and allow closure construction activities to proceed. The capacity of the lime treating facility is about 1.8 MGD. Actual operation has been at about 0.9 MGD. Discharge of the treated water is via an internal outfall which combines with other plant water streams before discharging to waters of the state.

The Faustina plant in Louisiana temporarily suspended phosphoric acid production in November 1999 and has treated and discharged process water to maintain control of the process water inventory within the existing gypsum stack systems. Prior to this plant shutdown period, the water treatment rates were about 0.9 MGD. Following the shutdown, modifications were made to phosphoric acid plant vessels to utilize them for increased treatment capacity. Monthly average treatment rates in the past year have been as high as 1.8 MGD with the typical rates in the range of 1.8 MGD.

Use of Novel Pre-Treatment Technology, IMC Uncle Sam Plant (Internal Client), Uncle Sam, Louisiana Plant Contact: B. J. McAllister, Staff Process Engineer January 2001 (225-473-5905)

Due to the temporary suspension of production at Uncle Sam and abnormally heavy rainfall, the IMC Uncle Sam concentrates plant in Louisiana was rapidly approaching the point at which process (pond) water would have to be treated and discharged. After considerable laboratory testing IMC Technology Development Group in Florida developed a process for pre-treating the process water that was considered adequate for feeding to a reverse osmosis (RO) system. The pretreatment process consists of first

adding a calcium compound, generally hydrated lime, to the pond water to form insoluble calcium compounds such as calcium fluoride ( $\text{CaF}_2$ ) and calcium fluosilicate ( $\text{CaSiF}_6$ ). The quantity of calcium added is based on the molar balance of calcium and fluorine in the pond water. Next a second base is added to pond water-lime slurry to raise the pH to the value of minimum fluoride solubility. The Uncle Sam water requires a pH of approximately 5.7. An important consideration for this second base is that its phosphate salts must remain soluble in the pond water. For the Uncle Sam plant both caustic ( $\text{NaOH}$ ) and ammonia ( $\text{NH}_3$ ) were found to be viable basic compounds. However, when it is desirable to minimize the ammonia concentration of the final permeate from the RO system, caustic is preferred. The pond water slurry is then transferred to a clarifier where the solids are separated, either with or without the use of flocculents. The overflow from the clarifier is then aged for about 36 hours to allow the silicic acid present in the liquid to decompose into hydrated silicon dioxide. A flocculent is then added to the pond water to settle and remove the hydrated silicon dioxide. For pond water with a high silicon concentration, such as the Uncle Sam pond water, this is a critical step. Otherwise the silicon dioxide would quickly foul the RO membranes. At this point the pond water is still saturated with respect to Ca, F and possibly  $\text{SiO}_2$ . Thus, a small quantity of sulfuric acid is added to the pond water to increase the solubility of the ions remaining in solution. Typically about 160 ppm of sulfuric acid is sufficient to decrease the pH to 3. This pH is acceptable for the RO membranes and is low enough to prevent precipitate formation in the RO reject (concentrate) stream.

Pilot scale testing of the pretreatment and RO processes during June and July of 2001 confirmed the ability of the processes to produce excellent quality discharge water. Preliminary engineering work was then started on design and cost estimates for a 2,000,000 GPM water treatment plant (WTP) at the Uncle Sam site. This work consisted of equipment sizing, specification and cost estimating, construction cost estimates and operating cost estimates. However, after the restart of production at the Uncle Sam plant in September of 2001, water balance model predictions indicated that water treatment and discharge would not be required; thus, this project was terminated in November 2001.

Based on the work at Uncle Sam two U.S. patent applications were filed during February 2002 for the pond water pretreatment technology (No. 10/082,841 – Purification of Phosphoric Acid Plant Pond Water and No. 10/082,564 – Simplified Purification of Phosphoric Acid Plant Pond Water), with the patents (No. 6,758,976 and No. 6,758,977) being issued July 6, 2004.

Mulberry Corporation, Piney Point Plant – Receiver: Louis Timchak, Attorney at Law  
November 2003 to July 2004 (813-948-6644)

IMC began test work with the Piney Point pond water in January 2002. At this time the pH of the pond water sample provided was 2.86, with a fluorine concentration of 455

ppm and a calcium concentration of 582 ppm. After some initial screening tests a pretreatment process was selected based on previous work at the IMC Uncle Sam plant.

This process consisted of adding a small amount of lime slurry to the pond water and then adjusting the pH with caustic. A flocculent was then used to help separate the sludge and the pH of the clear liquid was adjusted again with sulfuric acid. The pretreatment produced a feed solution that was believed suitable for feed to a medium pressure RO system. Using this process approximately 900 gallons of Piney Point pond water were pretreated and approximately 800 gallons of the pretreated water were processed through a single membrane, pilot scale, first pass RO system. Average RO feed conductivity was about 9000 mmho/cm and average permeate conductivity was 415 mmho/cm. Approximately 310 gallons of the first pass RO permeate were then used for second pass RO tests. These tests were run at several feed pH values and at pressures from 200 psig to 350 psig. These tests indicated that, at optimum conditions, permeate recoveries approaching 95 percent could be obtained with permeate fluoride concentrations less than 0.50 mg/L. A final test was run with about 55 gallons of the second pass permeate and a water softening resin. This test indicated that it was possible to lower the ammonia concentration in the second pass permeate to less than 0.1 mg/L (as N). After the conclusion of the above pilot scale work, IMC independently started engineering work on an 800,000 GPD RO based pond WTP for the Piney Point site.

This work consisted of developing flow sheets, P&ID's, operating and capital cost estimates and specific equipment lists, with long lead time items identified. At this time IMC purchased four skid mounted RO modules for potential use at Piney Point. One of the novel features considered during the preliminary design, both to reduce costs and speed construction time, was the use of some of the existing double liming equipment at the Piney Point site. After forming a joint venture with Mobile Process Technology that resulted in the formation of Florida Pines LLC, this work eventually resulted in the awarding of a contract to treat Piney Point process water on October 7, 2003.

Florida Pines started operation at Piney Point on November 6, 2003 with a 20 gpm pretreatment pilot plant. The purpose of the pilot plant was to fulfill a contractual obligation of producing 5,000 gallons of pretreated pond water containing low enough fluoride and calcium concentrations to be deemed acceptable for feeding to a RO system. This contractual obligation was achieved on November 20.

Pretreatment pilot operations continued through January of 2004 to fine tune the pretreatment process parameters for the full scale plant. This work was needed due to the significant changes that had occurred in the chemical composition of the Piney Point pond water since the initial testing that was conducted in 2002. Starting December 8, 2003, large samples of the pretreated pond water from the pilot plant were transported to the IMC Technology Development laboratory near Mulberry, Florida for processing through a single element pilot scale RO system. This system was set up as the 1st pass RO. The objectives of this work were to confirm earlier RO test results and to obtain

extended operating time with the RO to check for potential membrane fouling. The pilot RO was operated for approximately 10 days, with no evidence of irreversible membrane fouling. Water quality from the pilot scale RO was excellent with an average 1st pass permeate conductivity of less than 515 mmho/cm.

Concurrently with the pilot operations, the design and construction of the full scale plant was in progress. As a result of the pilot testing, several pretreatment process changes were needed to accommodate the different pond water composition (compared to 2002). Thus, some design changes were required in the full scale plant and were solved quickly without significant construction delays.

From initial start-up on February 19, 2004 until contractual shut down on June 30, 2004, the Florida Pines RO based WTP produced 46,020,000 gallons of permeate, of which 45,890,000 gallons (99.74%) met specifications for discharge. All out of spec. water was produced during the first two days of operation, with 67,500 gallons from February 19 being out pH spec. and 53,500 gallons from February 20 being discounted due an instrument malfunction. Permeate from several other days was initially contested as being out of specifications in terms of the ammonia concentration. However, subsequent analyses of back-up 24-hour composite samples by an EPA accredited laboratory indicated that the ammonia concentration in all disputed samples was within the contract limit.

Of the 133 days between February 19 and June 30, the Piney Point plant was scheduled to operate 124 days. Nine days of scheduled down time were taken from April 11 through April 19 to upgrade some piping and several pumps to permit increased production in the 1st pass RO modules. During the 124 days of scheduled production the operating factor of the plant was 92 percent with an average daily permeate production of 402,600 gallons, while operating. Average daily production after the retrofit was 412,000 gallons per day.

#### IMC Phosphates, New Wales Plant (Internal Client) July 2004

Research into pond water pretreatment for RO processing continues to be a high priority project in the Technology Development Group at IMC. Present efforts are directed at processing highly concentrated pond waters, lowering costs and improving recoveries. Full-time resources devoted to this project consist of a manager, two professionals and three technicians, with additional professionals and technicians used on an as-needed basis.

As previously stated, in addition to IMC's primary role as water treatment contractor, IMC will utilize their extensive global experience in gyp stack management to assist the CDM Team in the gyp stack closure.

## D. Liner Contractor Qualifications

The CDM Team has enlisted the service of COMANCO (CEC) to provide sub-consultant services for the Liner component of the ITN. CEC has 16 years of diverse experience and is respected as one of the nation's most qualified environmental lining construction companies. CEC is a qualified Liner Installer and is trained and licensed to install the HDPE liner used for this project.

CEC has built the foundation of its company around the clients and gypsum stack projects located in Central Florida and elsewhere in the Southeast United States. They are presently working for all four major phosphate processing companies in Florida, including the Piney Point facility; CEC holds the most complete understanding of Phosphogypsum Stack Lining and related Engineering CQA requirements of any firm in the country.

- CEC is an approved contractor trained and licensed to install smooth and textured HDPE lining for use on the Piney Point Phosphogypsum Stack Closure Project.
- The firm has installed liners manufactured by Agru-America, Inc., GSE Lining Technology, Inc., and Poly-Flex, Inc. at numerous phosphate facilities over the last 16 years. These installations make up in excess of 300,000,000 square feet of installed 40-mil to 80-mil liner products in the phosphogypsum stacks of Florida alone. Attached is a partial list of relevant experience of Liner related projects
- Attached CEC list of "Master Seamers" have in excess of 5 million square feet of certified installation.
- CEC is presently working for all four major phosphate processing companies in Florida, including the Piney Point facility. Scopes of work actively being performed include liner installation, geonets, geotextile and geocomposite installation, erosion control measures, HDPE Drain piping, protective soil placement and compaction, ballast trench construction and other related construction scopes.
- The firm holds the most complete understanding of Phosphogypsum Stack Lining and related Engineering CQA requirements of any firm in the United States.

The following is a partial list of over 4 million square feet of relevant project experience of COMANCO including; the name, location and date of installation, name of the Owner, Engineer, Liner Manufacturer, the type and thickness of HDPE liner installed and surface area covered and the type of field seaming/welding performed.

Section C – Subject 4

Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

|                                              |                                                                                                 |                                              |                                                                                                                                                           |
|----------------------------------------------|-------------------------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project 1 Name:                              | Cooling Pond                                                                                    | Project 2 Name:                              | Gypsum Stack Expansion                                                                                                                                    |
| Location:                                    | Bartow, Florida                                                                                 | Location:                                    | Bartow, Florida                                                                                                                                           |
| Date:                                        | 1997                                                                                            | Date:                                        | December, 2000 - September, 2001                                                                                                                          |
| Owner:                                       | C.F. Industries, Inc.                                                                           | Owner:                                       | Farmland Hydro L.P. Now Cargill Fertilizer                                                                                                                |
| Liner Manufacturer:                          | GSE - Houston, TX                                                                               | Liner Manufacturer:                          | Agru America - Georgetown, SC                                                                                                                             |
| Project Contact:                             | Walt Wolverton<br>863-533-0528                                                                  | Project Contact:                             | Ralph Remmert<br>863-534-9601                                                                                                                             |
| Type of Thickness:                           | 60 Mil Smooth & Textured HDPE Liner & Geocomposite                                              | Type of Thickness:                           | 60 Mil Textured and Smooth HDPE Liner                                                                                                                     |
| Surface Area Covered:                        | 80 Acre Cooling Pond of Acid Solution<br>3.5 Million Sq. Ft. of 60 Mil HDPE Liner & Geotextiles | Surface Area Covered:                        | 300 Acres<br>14,000,000 Square Feet of 60 Mil HDPE Liner<br>2,000,000 Square Feet of Geonet Composite<br>1,400,000 Square Feet of 802 Nonwoven Geotextile |
| Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld And Extrusion Welding.                                             | Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion Welding                                                                                                        |
| Project Manager:                             | Mark Topp                                                                                       | Project Manager:                             | Tommy Topp                                                                                                                                                |
| Project Supervisor:                          | Jerry Pryor                                                                                     | Project Supervisor:                          | Dragan Milosavljevic                                                                                                                                      |
|                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407-855-3860                      |                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860                                                                               |

Section C – Subject 4

Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

|                                              |                                                                              |                                              |                                                                             |
|----------------------------------------------|------------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------|
| Project 3 Name:                              | Ditch Lining                                                                 | Project 4 Name:                              | Retention Pond                                                              |
| Location:                                    | Ft. Meade, Florida                                                           | Location:                                    | Riverview, Florida                                                          |
| Date:                                        | June, 2004                                                                   | Date:                                        | 1999                                                                        |
| Owner:                                       | U.S. Agri Chemicals                                                          | Owner:                                       | Cargill Fertilizer                                                          |
| Liner Manufacturer:                          | Poly-Flex - Grand Prairie, TX                                                | Liner Manufacturer:                          | GSE - Houston, TX                                                           |
| Project Contact:                             | Phong Vo<br>863-285-8121                                                     | Project Contact:                             | Ralph Remmert<br>863-534-9601                                               |
| Type of Thickness:                           | 60 Mil Textured HDPE Liner                                                   | Type of Thickness:                           | 60 Mil HDPE Smooth & Textured                                               |
| Surface Area Covered:                        | 230,000 Sq. Ft. of 60 Mil Textured & 33,000 Sq. Ft. of Geotextile Composite. | Surface Area Covered:                        | 565,000 Sq. Ft. Smooth & Textured HDPE Liner and Composite                  |
| Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion Welding.                          | Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion Welding.                         |
| Project Manager:                             | Tommy Topp                                                                   | Project Manager:                             | Mark Topp                                                                   |
| Project Supervisor:                          | Stuart Taylor                                                                | Project Supervisor:                          | Jerry Pryor                                                                 |
|                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860  |                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860 |

Section C – Subject 4

Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

|                                              |                                                                                                         |                                              |                                                                                                   |
|----------------------------------------------|---------------------------------------------------------------------------------------------------------|----------------------------------------------|---------------------------------------------------------------------------------------------------|
| Project 5 Name:                              | Gypsum Stack Closure                                                                                    | Project 6 Name:                              | Gypsum Stack Closure                                                                              |
| Location:                                    | Riverview, Florida                                                                                      | Location:                                    | Bartow, Florida                                                                                   |
| Date:                                        | December, 1992 - 1994                                                                                   | Date:                                        | 1994 - 2004 Total of 6 Cells                                                                      |
| Owner:                                       | Cargill Fertilizer, Inc.                                                                                | Owner:                                       | C.F. Industries, Inc.                                                                             |
| Liner Manufacturer:                          | GSE - Houston, TX                                                                                       | Liner Manufacturer:                          | GSE & Agru - Houston, TX & Georgetown, SC                                                         |
| Project Contact:                             | Ralph Remmert<br>863-534-9601                                                                           | Project Contact:                             | Lynn Vadelund<br>863-533-3181                                                                     |
| Type of Thickness:                           | 60 Mil & 80 Mil Smooth & Textured HDPE Liner                                                            | Type of Thickness:                           | 40 Mil Smooth & Textured & Geotextile                                                             |
| Surface Area Covered:                        | 100 Acre Closure System 4.4 million Sq. Ft. of HDPE Liner and 4.4 million Sq. Ft. of Geotextile Fabric. | Surface Area Covered:                        | A total of 6 Cell Closures with a total of over 225 Acres of HDPE Liner; 9.8 million square feet. |
| Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion Welding.                                                     | Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion.                                                       |
| Project Manager:                             | Mark Topp                                                                                               | Project Manager:                             | Tommy Topp                                                                                        |
| Project Supervisor:                          | Jerry Pryor                                                                                             | Project Supervisor:                          | Dragan Milosavijevic                                                                              |
|                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860                             |                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860                       |

Section C – Subject 4

Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

|                                              |                                                                             |                                              |                                                                             |
|----------------------------------------------|-----------------------------------------------------------------------------|----------------------------------------------|-----------------------------------------------------------------------------|
| Project 7<br>Name:                           | Gypsum Stack Closure                                                        | Project 8<br>Name:                           | Gypsum Stack Expansion                                                      |
|                                              | Geismar, LA                                                                 |                                              | Mulberry, Florida                                                           |
|                                              | Location:                                                                   |                                              | Location:                                                                   |
|                                              | January, 2001 to date                                                       |                                              | 2002 - 2003                                                                 |
|                                              | Date:                                                                       |                                              | Date:                                                                       |
|                                              | PCS Nitrogen                                                                |                                              | IMC Phosphate                                                               |
|                                              | Owner:                                                                      |                                              | Owner:                                                                      |
|                                              | GSE & Agru - Houston, TX & Georgetown, SC                                   |                                              | GSE, Houston, TX                                                            |
|                                              | Liner Manufacturer:                                                         |                                              | Liner Manufacturer:                                                         |
|                                              | Mike Bilowich<br>225-621-1659                                               |                                              | Johnny Prewitt<br>863-428-7388                                              |
| Project Contact:                             | 60 Mil Smooth & Textured HDPE Liner                                         | Project Contact:                             | 60 Mil Smooth & Textured                                                    |
|                                              | 2,800,000 Sq. Ft. 60 Mil & Composite                                        |                                              | 320 Acres (13.9 million square feet) HDPE Liner with Geocomposite Expansion |
| Type of Thickness:                           |                                                                             | Type of Thickness:                           |                                                                             |
| Surface Area Covered:                        | Double Fusion Hot Wedge Weld and Extrusion Welding.                         | Surface Area Covered:                        | Double Fusion Hot Wedge Weld and Extrusion Welding.                         |
| Type of Field Seaming and Welding Performed: |                                                                             | Type of Field Seaming and Welding Performed: |                                                                             |
| Project Manager:                             | Jerry Pryor                                                                 | Project Manager:                             | Joe Benz                                                                    |
| Project Supervisor:                          | Dragon Milosaljevic                                                         | Project Supervisor:                          | Dragan Milosavijevic                                                        |
|                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860 |                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860 |

Section C – Subject 4

Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

|                                              |                                                                                               |                                              |                                                                                      |
|----------------------------------------------|-----------------------------------------------------------------------------------------------|----------------------------------------------|--------------------------------------------------------------------------------------|
| Project 9 Name:                              | Gypsum Stack Vertical Expansion                                                               | Project 10 Name:                             | New Gypsum Field                                                                     |
| Location:                                    | Bartow, Florida                                                                               | Location:                                    | Plant City, Florida                                                                  |
| Date:                                        | June 2002                                                                                     | Date:                                        | 1998 - 1999                                                                          |
| Owner:                                       | Cargill Fertilizer, Inc.                                                                      | Owner:                                       | C.F. Industries, Inc.                                                                |
| Liner Manufacturer:                          | GSE, Houston, TX                                                                              | Liner Manufacturer:                          | GSE, Houston, TX                                                                     |
| Project Contact:                             | Ralph Remmert<br>863-534-9601                                                                 | Project Contact:                             | Walt Wolverton<br>863-533-0528                                                       |
| Type of Thickness:                           | 60 Mil Smooth & Textured HDPE Liner                                                           | Type of Thickness:                           | 60 Mil & 80 Mil Smooth & Textured HDPE Liner                                         |
| Surface Area Covered:                        | 5,400,000 Sq. Ft. of 60 Mil HDPE Textured Liner and 4,500,000 Sq. Ft. of 60 Mil Smooth Liner. | Surface Area Covered:                        | 400 Acre double Lined Industrial Waste Containment System to Store Phosphate Gypsum. |
| Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion Welding.                                           | Type of Field Seaming and Welding Performed: | Double Fusion Hot Wedge Weld and Extrusion Welding.                                  |
| Project Manager:                             | Tommy Topp                                                                                    | Project Manager:                             | Mark Topp                                                                            |
| Project Supervisor:                          | Dragan Milosavijevic                                                                          | Project Supervisor:                          | Jerry Pryor                                                                          |
|                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860                   |                                              | All Engineering was performed by:<br>Ardaman & Associates,<br>407- 855-3860          |

### Master Seamer(s)/Welder(s)

The following CEC Liner Master Seamer(s)/Welder(s) assigned to this project have similar-type experience on similar-type completed facilities totaling over 5 million square feet of certified HDPE liner installation each. CEC is experienced in placing and compacting soil above a liner, and in the handling and installation of geonet/geotextile composites, geotextiles, concrete erosion control mats, straw erosion mats, sod and all other materials required to complete the work. The following list of "Master Seamers" all have in excess of 5 million square feet of certified installation.

| Liner Contractor Personnel | Installation of Smooth HDPE Liner (3 million sf minimum) | Installation of Textured HDPE Liner (3 million sf minimum) | Installation of Geonets / Geotextiles (3 million sf minimum) | Installation of Erosion Controls | Seaming & Welding | Quality Control |
|----------------------------|----------------------------------------------------------|------------------------------------------------------------|--------------------------------------------------------------|----------------------------------|-------------------|-----------------|
| Thomas Topp                | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Joe Benz                   | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Dragon Milosajevic         | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Stuart Taylor              | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Encarnacion Osorio         | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Gerardo Rosales            | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Juan Padilla               | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Roberto Serrano            | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Justino Ruiz               | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |
| Roberto Zabeleta           | ✓                                                        | ✓                                                          | ✓                                                            | ✓                                | ✓                 | ✓               |

Designated Project Manager - Joe Benz, CEC,

Mr. Joe Benz has four (4) years of experience installing HDPE smooth and texture liners. Mr. Benz has recently managed a project similar to the Piney Point Project that involved installing liners on a phosphogypsum stack system. Mr. Benz is directly involved in all phases of project work including supervision, safety, subcontractor relations, customer relations, administration and completion. Mr. Benz has supervised projects involving more than 23 million square feet of HDPE liner. His role as Project Manager has most recently involved him in the management responsibilities at the IMC Phase II Expansion project which consisted of 320 acres of 60 mil HDPE Liner.

Designated Site Supervisor - Dragan Milosavljevic, CEC

Mr. Dragan Milosavljevic has more than 10 years of experience installing HDPE smooth and texture liners. Mr. Milosavljevic has recently managed a project similar to the Piney Point Project that involved installing liners on a phosphogypsum stack system. His 10 plus years of experience includes working on and supervising a variety of phosphate construction projects including closures, liner installation, drain installation and excavation. Mr. Milosavljevic has supervised projects involving more than 23 million square feet of HDPE liner. His role as General Superintendent has most recently involved him in the supervisory responsibilities at the IMC Phase II Expansion project which consisted of 320 acres of 60 mil HDPE Liner. Similar projects in size and scope also include stack closures for Cargill and CF Industries in Bartow, FL. and PSC Nitrogen in Geismar, LA.

Full resumes for Mr. Benz and Mr. Milosavljevic are included in Section C – Subject 3 (Resumes/Experience of Personnel) of this proposal.

## E. Earthwork Contractor Qualifications

Moretrench has extensive experience handling earthwork projects in, on, and around phosphogypsum stacks. As illustrated in Moretrench job references and projects descriptions, they have acted as contracting lead for stack closures, dike raisings, and other related excavation project work. Moretrench managed and completed the entire 80+ acre gyp stack closure at the Cargill Mulberry site formerly owned by Mulberry Corporation. They also have ongoing gypsum stack maintenance contracts at several client sites.

### Designated Site Supervisor - Paul Davis

Mr. Davis has worked on two projects of similar size and scope to the Piney Point project: Cargill Green Bay and Cargill Mulberry, as referenced below in the Moretrench project descriptions. Mr. Davis is a Superintendent for MES. He is the designated Site Supervisor for the closure of the Piney Point Phosphogypsum Stack System project. He has worked as a MES superintendent for over one (1) year, and previously worked as superintendent for McDonald Company for the last five (5) years of his nine (9) years of employment. Mr. Davis has over 10 years of experience working on and supervising a variety phosphate construction projects including excavation and grading work, stack closures, drain installations, liner installations, liming operations, and gypsum stack maintenance.

### Designated Project Manager – Michael Panny

Mr. Panny is Project Manager/ Superintendent for MES. During his 19 years with MES, he has acted as field lead for a variety of construction projects including phosphogypsum stack closures, toe drain installations, relief well systems, grouting, boil remediation, gypsum stack maintenance, geotechnical drilling, plant service and maintenance work, and groundwater control. Mr. Panny will be responsible for overseeing the site grading; dike construction; compaction; reinforced concrete drainage structure construction; installation of relief drains with collector pipes, filter gravel and filter fabric; fine grading and maintenance of surfaces to receive a geomembrane liner.

Full resumes for Mr. Davis and Mr. Panny are included in Section C – Subject 3 (Resumes/Experience of Personnel) of this proposal.

#### Project 1 - Cargill Mulberry, Florida - North Gypsum Stack Closure Project - November 2003

Owner: Cargill Fertilizer, Owner's Contact: Ralph Remmert (863-534-9601)

Engineer: Ardaman & Associates, Engineer's Contact: Ashraf Riad (407-855-3860)

Moretrench provided closure services for an approximately 80-acre gypsum stack in Mulberry Florida. The facility where the stack is located was previously owned and operated by the Mulberry Corporation. Some months after the corporation declared bankruptcy in 2001, Cargill agreed to take over management of the site from the FDEP. Moretrench's work at the



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gypsum stack has included:

- Dewatering of three cells at the top of the stack
- Draining and drying the wet gypsum at the top of the stack
- Preparation of the subgrade for installation of a liner system.
- Installing 15,000 feet of toe drains and 2000 feet of mid level drains
- Grading of side slopes to finished grades varying from 2½: 1 to 3½:1
- Excavation and placement of 550,000 cubic yards of top soil cover including 2 foot soil cover on the top of stack, and 6 inch of soil cover on the side slopes
- Placement of grass seed on 60 acres at the top of the stack, and on 40 acres of side slopes
- Grading, placement of 2 feet of topsoil cover and seeding of a stormwater collection system

**Project 2 - IMC New Wales North Stack Closure - Phase I Northside - February 2004**

Owner: IMC, Owner's Contact: Bill Maisel (deceased)

Engineer: Ardaman & Associates, Engineer's Contact: Nadim Fuleihan (407-855-3860)

Moretrench was responsible for the excavation and placement of over 204,000 cubic yards of gypsum and soil.

**Project 3 - IMC New Wales North Stack Closure - W and SW areas Ongoing**

Owner: IMC, Owner's Contact: Johnny Prewitt (863-428-7388)

Engineer: Ardaman & Associates, Engineer's Contact: Nadim Fuleihan (407-855-3860)

Moretrench is responsible for the excavation and placement of over 261,000 cubic yards of gypsum and soil.

**Project 4 - IMC New Wales - North Stack Closure - Phase III B - SE slope - Ongoing**

Owner: IMC, Owner's Contact: Johnny Prewitt (863-428-7388)

Engineer: Ardaman & Associates, Engineer's Contact: Nadim Fuleihan (407-855-3860)

Moretrench is responsible for the excavation and placement of over 260,000 cubic yards of gypsum and soil.

**Project 5 - Cargill Bartow, Florida - North Stack Closure - North Cell - Ongoing**

Owner: Cargill Fertilizer, Owner's Contact: Ralph Remmert (863-534-9601)

Engineer: Ardaman & Associates, Engineer's Contact: Ashraf Riad (407-855-3860)

Moretrench is responsible for the excavation and placement of over 500,000 cubic yards of gypsum and soil.

**Project 6 - IMC South Pierce Holding Pond - September 2003**

Owner: IMC, Owner's Contact: Bill Maisel (deceased)

Engineer: Ardaman & Associates, Engineer's Contact: Bill Jackson (407-855-3860)

Moretrench provided excavation services for the construction of a new, 25-acre holding pond at their South Pierce plant. Approximately 75,000 cubic yards of gypsum fill was drained and excavated from the middle of the existing basin. In all, over 250,000 cubic yards of gypsum fill was placed and compacted to complete the construction of a pond and the surrounding dikes.

**Project 7 - Cargill Bartow, Florida - South Pond Divider Dike - September 2003**

**Owner:** Cargill Fertilizer, **Owner's Contact:** Ralph Remmert (863-534-9601)

**Engineer:** Ardaman & Associates, **Engineer's Contact:** Ashraf Riad (407-855-3860)

Moretrench constructed a new divider dike in the SR South Pond at Cargill Bartow to assist liming operations of the process water. The construction of the dike required the hauling, placement, and compaction of 267,000 cubic yards of gypsum fill material. The project was completed in September 2003.

**Project 8 - Cargill Mulberry, Florida - South Stack Earthwork - Ongoing**

**Owner:** Cargill Fertilizer, **Owner's Contact:** Ralph Remmert (863-534-9601)

**Engineer:** Ardaman & Associates, **Engineer's Contact:** Ashraf Riad (407-855-3860)

Moretrench is responsible for the excavation and placement of over 450,000 cubic yards of gypsum and soil.

**Project 9 - Cargill Bartow, Florida - North Dike Raising- July 2003**

**Owner:** Cargill Fertilizer, **Owner's Contact:** Ralph Remmert (863-534-9601)

**Engineer:** Ardaman & Associates, **Engineer's Contact:** Ashraf Riad (407-855-3860)

Moretrench raised the elevation of a portion of the dike at Cargill Bartow's North Stack. The project required the hauling, placement, and compaction of over 260,000 cubic yards of gypsum fill material to raise the dike at North end of the stack by 12 feet. The project was completed in July 2003.

**Project 10 - PCS Phosphates Pressure Relief Well System - White Springs, Florida - March 2002**

**Owner:** PCS, **Owner's Contact:** Sam Akly (904-397-8480)

**Engineer:** Ardaman & Associates, **Engineer's Contact:** Bill Jackson (407-855-3860)

Moretrench installed a 5,200 foot pressure relief well system around a gypsum stack at PSC Phosphate's facility in White Springs, Florida. Ninety-four (94) relief wells, with 50-foot and 60-foot spacings, were predrilled with a Failing CF15 rotary drill rig. Twelve inch steel casings with a 6-inch punch were jetted and washed in the borehole using a once through freshwater supply. Once the casing for each well reached full depth, the punch was pulled out, and the well was installed. Wells were sanded inside the casing to approximately five (5) feet below the ground surface with 6/20 sand, and the casings were extracted following the sanding. Each well was developed using airlift pumping methods to ensure maximum efficiency and removal of fines. Double 3-inch wells were installed to approximately 50 feet below the ground surface. The wells were screened with slot screen (each with about 40 feet of screen), filter packed with a select silica sand, and included 1/8 inch by 8-inch polyethylene dividers between the two screens in each well to facilitate cleaning. One-inch observation wells were installed for troubleshooting and maintenance of the system. Following construction of the wells, a common 12 inch PVC header was built to connect the wells to a 36 inch SDR 11 manifold and a liquid ring vacuum pump system that included a 316 stainless steel pump and 25HP/460V motor. The manifold level was controlled by a Drexelbrook Level Sensor, connected to a Variable Frequency Drive motor on the water transfer pump.

Project 11 - Farmland Hydro (now Cargill Green Bay) Construction of Lined, Concrete Process Ditch including Earthwork, Grading, and Relief Well Extension for site dewatering - Bartow, Florida - September 2000

Owner: Farmland Hydro, L.P. - Owner's Contact: Robert Dobson

Engineer: Ardaman & Associates, Engineer's Contact: Ashraf Riad (407-855-3860)

Moretrench installed a concrete-lined process water ditch for a phosphate fertilizer manufacturing plant in Bartow Florida. The installation of the concrete ditch was preceded by the extension of a relief well system previously installed by Moretrench at the base of an existing gypsum stack. The 450 foot extension consisted of 18 relief wells connected to a 12 inch PVC header mounted on concrete pedestals. Once the project area was dewatered, and final grading was completed, Moretrench installed approximately 1,000 LF of 24 foot wide concrete ditch coupled with 270 LF of 5 feet wide concrete ditch. The entire length of ditch was lined with HDPE liner prior to the pouring and forming of the concrete. The structure included 2,200 LF of 10 inch HDPE pipe, over 1,300 LF of 36 inch and 48 inch culverts, and over 750 LF of 48 inch overflow piping.

Project 12 - Cargill Riverview, Florida - 32 Acre Process Ponds Lining Project - October 2000

Owner: Cargill Fertilizer, Owner's Contact: Ralph Remmert (863-534-9601)

Engineer: Ardaman & Associates, Engineer's Contact: Ashraf Riad (407-855-3860)

This project involved the lining of two (2) holding ponds totaling 32 acres; integral parts of a closed-loop, process water system for a private industrial client in Riverview, Florida. The phosphate manufacturer installed a double-lined system for their process water ponds to meet FDEP permit conditions. During the 21-month project, Moretrench, acting as the general contractor, faced the challenge of managing a continuous flow of process water (up to 50,000 gpm) while constructing 32 acres of liner systems, associated piping, diversion structures, and pumping stations. Gypsum with moisture content of up to 50-60 percent was excavated, dried, and relocated to construct the liner system and berms for the new containment system. Water management provided an additional challenge given heavy volumes of rain and related stormwater runoff during critical stages of the project. Moretrench engineered and constructed several structures that played integral roles in the completed liner system. Structures included a process water diversion structure activated in October 1999, a bridge across the hot process water channel, and a cold water pump station and platform.

## F. HDPE Pipe and Drain Subcontractor Qualifications

Moretrench has arguably installed as much or more HDPE pipe, including 24-inch, as any piping contractor in the Southeast. As illustrated in their job references and projects descriptions, they have over 5 years experience with the installation of process and drain piping with a number of phosphate industry clients. They own and maintain a full compliment of HDPE pipe fusion equipment which is operated by well-trained Moretrench field crews. They are a preferred drain installation contractor for Cargill Fertilizer.

### Project 1 - Mulberry Corporation, Florida - Emergency HDPE Pipeline - August 2001

Receiver: Louis Timchak, Attorney at Law (813-948-6644)

Engineer: Ardaman and Associates, Orlando

Moretrench worked as subcontractor for attorney/receiver Louis Timchak and IT Corporation to install 3½ miles of dual containment HDPE pipeline for Mulberry Corporation's (former owner of Piney Point) closed fertilizer plant in Mulberry, FL. The closed facility, mired in Chapter 11 bankruptcy, was holding a dangerously high level of low pH process water within an inactive gypsum stack. Additional water, generated by the impending rainy season, threatened to raise water levels and cause an overflow into the neighboring Alafia River. In 1997, an overflow of process water from this facility caused a massive fish kill in the river, and untold environmental damage. Moretrench, working during the rainy season under a 31 day time schedule, fused and installed 3½ miles of dual-contained 10 inch and 12 inch HDPE pipeline, assembled two (2) booster pump stations, and completed two (2) jack and bores within the required timeframe. Upon completion of the project, process water from the Mulberry facility was delivered across the properties of two neighboring phosphate fertilizer plants, and into a holding pond with the capacity to handle millions of gallons of acid water and eliminate the threat of its release to the environment.

### Project 2 - Cargill Mulberry, (Former Mulberry Corporation) - North Gypsum Stack Closure Project - November 2003

Owner: Cargill Fertilizer, Owner's Contact: Ralph Remmert (863-534-9601); Engineer: Ardaman & Associates, Engineer's Contact: Ashraf Riad (407-855-3860)

Moretrench provided closure services for an approximately 80-acre gypsum stack in Mulberry, Florida. The facility where the stack is located was previously owned and operated by Mulberry Corporation, former owner of Piney Point. Some months after the corporation declared bankruptcy in 2001, Cargill agreed to take over management of the site from the FDEP. Moretrench's work at the gypsum stack has included:

- Dewatering of three (3) cells at the top of the stack.
- Draining and drying the wet gypsum at the top of the stack
- Preparation of the sub grade for installation of a liner system.
- Installing 15,000 feet of toe drains and 2000 feet of mid-level drains.
- Grading of side slopes to finished grades varying from 2½: 1 to 3½:1.

- Excavation and placement of ~550,000 cubic yards of top soil cover including 2 feet soil cover on the top of stack, and 6 inch of soil cover on the side slopes.
- Placement of grass seed on 60 acres at the top of the stack, and on 40 acres of side slopes.
- Grading, placement of 2 feet of topsoil cover, and seeding of a stormwater collection system.

Project 3 - Cargill Bartow, Florida - 1-A and 1-B Gypsum Stack, Drains and Outlets - February 2001

Owner: Cargill Fertilizer, Owner's Contact: Ralph Remmert (863-534-9601)

Engineer: Ardaman & Associates (407-855-3860)

Moretrench installed approximately 20,000 LF of corrugated and smooth HDPE collection pipes, and solid outlet pipes, at a newly constructed gypsum stack at their Bartow fertilizer plant. Slotted collection pipes were enclosed with an envelope of pea gravel, and compacted under 18 inches of gypsum. The project also included installation of silica gravel collection zones with non-woven filter fabric wrapping, and several concrete fabriform outlets pads.

Project 4 - Cargill Bartow, Florida - Installation of Process/Cooling Water Transfer Lines May 2001

Owner: Cargill Fertilizer, Owner's Contact: Steve Johnson (813-671-6200);

Engineer: Ardaman & Associates (407-855-3860)

Moretrench fused and installed 5,400 LF of dual contained 36 inch and 48 inch HDPE pipe at the Cargill Riverview fertilizer plant, just south of Tampa Florida. The HDPE piping was part of a closed-loop system that transferred and circulated process water between two cooling ponds and the plant. Since the cooling ponds were located on the opposite side of a four-lane highway (State Road 41), the project included dewatering, jack and bore services and subsequent backfilling of excavations at the cooling ponds and at the highway crossing.

Project 4 - Farmland Hydro (now Cargill Green Bay) Construction of Lined, Concrete Process Ditch including Earthwork, Grading, and Relief Well Extension for site dewatering - Bartow, Florida - September 2000

Owner: Farmland Hydro. L.P. / Owner's Contact: Robert Dodson

Engineer: Ardaman & Associates (407-855-3860)

Moretrench installed a concrete-lined process water ditch for a phosphate fertilizer manufacturing plant in Bartow, Florida. The installation of the concrete ditch was preceded by the extension of a relief well system previously installed by Moretrench at the base of an existing gypsum stack. The 450 foot extension consisted of 18 relief wells connected to a 12 inch PVC header mounted on concrete pedestals. Once the project area was dewatered, and final grading was completed, Moretrench installed approximately 1,000 LF of 24 foot wide concrete ditch coupled with 270 LF of 5 feet wide concrete ditch. The entire length of ditch was lined with HDPE liner prior to the pouring and forming of the concrete. The structure included 2,200 LF of 10 inch HDPE pipe, over 1,300 LF of 36 inch and 48 inch culverts, and over 750 LF of 48 inch overflow piping.

## G. Grassing Contractor or Subcontractor Qualifications

In Moretrench's work with the phosphate industry, they have also gained over 5 years significant experience in sodding and seeding of closed gypsum stacks in Florida. Moretrench has experience in ground preparation, amending phosphogypsum with dolomitic limestone, applying fertilizer and mulch and seeding and sodding. As illustrated in their job references and projects descriptions, Moretrench has handled phosphate stack grassing projects as large as 200 acres. Moretrench is very familiar with the challenges of establishing a successful grass cover on closed gypsum stack side slopes and covers.

### Project 1 - Cargill Riverview, Florida- New Gypsum Field 80' Level - April 1998

Moretrench was responsible for the supply of all labor, supervision, equipment and materials necessary to transport and place approximately 6,180 CY of fill at the 80 foot level of the side slope of the new gypsum field. Hydro seed the newly placed fill with Japanese Millet at 40 lbs. per acre, Bermuda grass at 35 lbs. per acre, and fertilizer mixture 10-10-10 at 500 lbs. per acre.

### Project 2 - Cargill Riverview, Florida - West Gypsum Field 100' Level - April 1998

Moretrench was responsible for the supply of all labor, supervision, equipment and materials necessary to install 30,000 SF of Bermuda sod on the north and east side slopes at the 100 foot level of the stack.

### Project 3 - Cargill Riverview, Florida - Old Gypsum Field Fire Breaks - April 1998

Moretrench was responsible for the supply of all labor, supervision, equipment and materials necessary to transport and place approximately 800 CY of fill along the fire breaks; regrade the charred areas on the closed gypsum field. Hydro seed the newly placed or graded fill with Japanese Millet at 40lbs. per acre, Bermuda grass at 35lbs. per acre, and fertilizer mixture 10-10-10 at 500 lbs. per acre.

### Project 4 - Cargill Mulberry, Florida - North Stack Closure - May 2003

Moretrench was responsible for the placement of 2 feet of top soil cover on the top of stack atop the geomembrane liner, and 6 inch of soil cover on the side slopes. Placement of grass seed on 60 acres at the top of the stack, and on 40 acres of side slopes. Grading, placement of 2 feet of topsoil cover and seeding of a stormwater collection ditch.

### Project 5 - Cargill Green Bay, Bartow Florida - Main Gypsum Stack Side Slope Topsoil Placement and Grassing - April 2003

Moretrench was responsible for the placement of 162,000 CY of soil covering and on the side slope seeding of 201 acres of gypsum stack with millet/Bermuda grass seed mix.

# Subject 5

## Detailed Project Proposal/Scope of Work

### A. Facility Operation & Maintenance, including Gyp Stack Systems and Ponds

#### 1. Site Operation & Maintenance

CDM will develop and implement a site operations and maintenance (O&M) plan and a contingency plan in accordance with applicable laws, regulations and rules. The system will be operated to safely maintain the transfer of process water among the impoundments and to provide water to the water treatment processes. The existing gyp stack system will be inspected and maintained to ensure the integrity of the impoundments. The existing infrastructure consisting of pumps, spillways, pipelines, power systems, etc. will be operated and maintained in compliance with the O&M plan and the contingency plan.

CDM staff and subcontractors will inspect dikes, dams, and water control structures on a daily and weekly basis as necessary to ensure safe conditions and to meet applicable regulatory criteria. These structures and ancillary equipment will be maintained or repaired as necessary. Although the previous operator kept full time staff on hand for repair functions, it is our experience that this function is most effective and economical when outsourced on an as-needed basis.

CDM will also measure and record rainfall data, piezometer levels, impoundment water levels, and other water management information and report necessary data to Ardaman and FDEP.

#### 2. Site Security and Safety Compliance

CDM will implement a site security plan for the Piney Point facility. Site access will be restricted to authorized personnel only and will be limited to one entry/exit point that will be manned by a security guard. The guard will maintain a log of all persons entering and exiting the site on a daily basis.

CDM will develop a project specific Health and Safety Plan. The site health officer will be responsible for the implementation of this plan. The Health and Safety Plan will address the physical, chemical, biological and radiological hazards associated with site operations and each specific work task to be performed. The Health and Safety Plan will specify the work procedures and personal protective equipment required for each task to minimize or mitigate the risk to personnel during the execution of the project.

The site safety officer will hold daily safety meetings relevant to the work being performed each day. The site safety officer will also be responsible for oversight of all health and safety employee training and for certification of all medical criteria, as appropriate and required.

### 3. Groundwater Monitoring Plan Implementation

CDM will prepare the groundwater-monitoring plan in accordance with the Administrative Agreement that will be in effect between the State of Florida Department of Environmental Protection (FDEP) and CDM. The plan will comply with Rule 62-522.600; F.A.C. CDM will perform all monitoring well sampling, water level measurements, and field parameter collection. All groundwater sampling will be performed in accordance with FDEP Standard Operating Procedures (SOP) for groundwater sampling and field analyses. CDM staff, under the guidance of Jason Mills, P.G. have extensive experience in groundwater monitoring and sampling and are thoroughly trained in FDEP field SOP's. Groundwater samples will be sent to an approved laboratory for analyses in accordance with the approved monitoring plan.

CDM will prepare and submit the groundwater quality reports on a quarterly basis in accordance with the interim Administrative Agreement requirements and subsequent NPDES requirements, as applicable.

### 4. Surface Water Monitoring Plan Implementation

CDM will implement a surface water monitoring plan in accordance with the Administrative Agreement that will be in effect between FDEP and CDM for interim sampling and maintenance of Outfall 002 and Outfall 003. CDM will collect flow data and perform sampling as required by the Agreement whenever surface water discharges occur. All samples will be analyzed by a laboratory certified in accordance with Chapter 62-160 F.A.C. CDM will submit a report with the results of surface water quality monitoring in accordance with the schedule in the Agreement or subsequent NPDES permit, as applicable.

### 5. Project Coordination, Direction & Reporting

The CDM project team will be led by the Team Leader, John Brafford; Facilities Project Manager, Paul Roberts; and the Project Manager, Dean Carter. CDM will coordinate on a daily basis with the FDEP, Receiver and Ardaman & Associates to maintain proper project communication. Weekly meetings will be held to resolve current issues, plan work schedules and update the project status to all parties.

#### Project Coordination Meeting

CDM anticipates at least one coordination meeting with all contractors and subcontractors, the Engineer, and the Project Manager after the work is awarded and before construction is started. The purpose of the meeting will be to introduce team members, define relationships between the team members, develop general SOPs and details, and reaffirm project execution and coordination.

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

During the first project coordination meeting, CDM and each of its subcontractors will submit Gantt bar chart type construction schedules to the Receiver and FDEP. The schedule will show all construction activities, and it will be updated weekly and provided to the Engineer as the work progresses. CDM principal team members and its subcontractor's designated site supervisors will also attend coordination meeting(s).

#### Weekly Construction Meetings

The Receiver and Engineer will hold a weekly construction meeting at the project site on a day of the week and time to be determined. CDM principal team members and its subcontractor representatives shall be present at the weekly construction meetings.

### B. Process Water Consumption

#### Water Consumption Plan for Piney Point Closure

The CDM team has years of experience in managing contaminated watersheds within operating phosphate plants and idle phosphate plants which will be invaluable in managing the Piney Point watershed to ensure as little excess rainfall as possible is added to the process water system. This will allow us to minimize the amount of water that must be treated and to manage such water with the best available treatment or disposal option.

##### Phase 1

During Phase 1 we will continue with the present treatment plan with a target consumption rate of 1,000,000 GPD. Phase 1 will be limited to less than three months. This time is to make necessary modifications to utilize one of the lime clarifiers in the IMC pretreatment process. The pre-existing treatment plan comprises skimming the easy, least expensive water, thereby leaving a more concentrated and expensive water to treat. It is important that we move to Phase 2 as rapidly as possible in order to halt the degradation of the quality of water left to treat.

##### Phase 2

Phase 2 will commence within three months of the start of the contract. Figure 1 (Water Treatment Process Diagram), located on the following page, shows the proposed water treatment process after the Phase 1 modifications have been completed. By January 2005 or soon thereafter, Reverse Osmosis (RO) permeate capacity will increase to more than 750,000 gallons per day. The IMC proprietary pretreatment system will utilize the lime clarifier not currently operating. The acidification section will be relocated from the DAP warehouse to near the lime clarifier. This will ensure that the line to the DAP warehouse will be non-scaling. The target consumption rate will be 1,000,000 GPD (or as needed) to eliminate ponded water inventory by the end of 2006. The maximum total ammonia nitrogen loading will be held at 20 pounds per day or less to Outfall 003. The IMC RO units will produce a reject stream which is only about 40 percent of the RO feed. This reject stream will be processed directly to the double lime treatment system to limit the overall concentrating effect of the RO reject stream on the pond system.

Figure 1

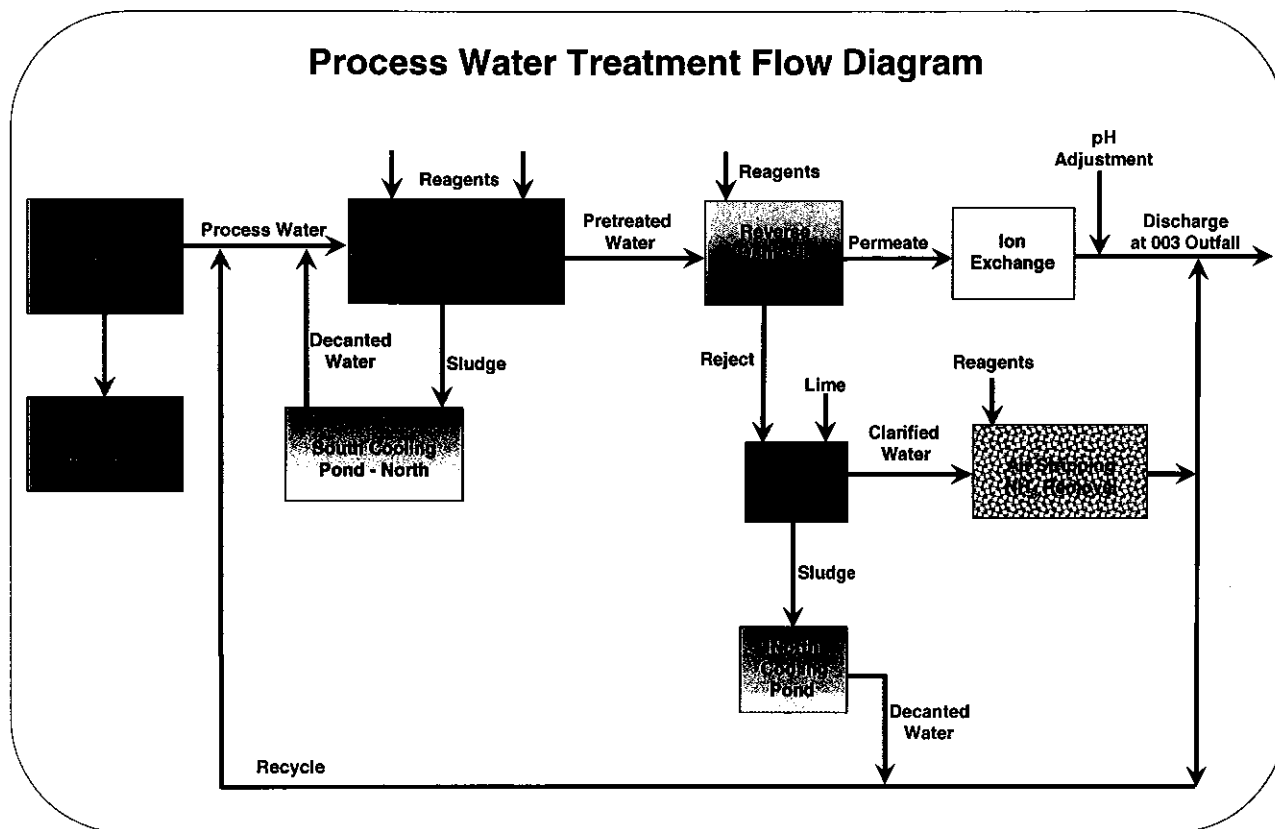


Table 1 (Lime Plant Sludge from RO Reject Treatment) shows a characterization of the sludge from the double lime treatment of the RO reject.

Table 1  
 Lime Plant Sludge from R.O. Reject Treatment

| Parameter | Units | Concentration |
|-----------|-------|---------------|
| Arsenic   | ppb   | 570.5         |
| Barium    | ppb   | 698.8         |
| Cadmium   | ppb   | 83.4          |
| Lead      | ppb   | 57.8          |
| Mercury   | ppb   | 2.1           |
| Selenium  | ppb   | 99.1          |
| Silver    | ppb   | ND            |

Contaminated process water in the New Gyp Stack South (NGS-S) will be consolidated with the contaminated process water in the lined NGS-N, where the evaporation spray field is located. This will allow construction to start closing the NGS-S as soon as possible. The IMC pretreatment system will be relocated as soon as possible to the idle lime treatment clarifier. Underflow will report back to the SCP-N. Underflow will be 10 to 15 percent of the feed stream and very low percent solids. These solids will be fast settling and compact. The underflow transport water will be fed forward to RO pretreatment. Greater than 85 percent of the clarifier feed stream will be effluent and will be fed forward to two first pass RO units. Each unit will produce 400,000 to 500,000 gallons per day permeate. Yield on these units will be about 60 percent. The reject stream will be well below all RCRA limits. See Table 2 (Typical Reverse Osmosis Reject) for a more detailed characterization of the reject stream.

Table 2  
Typical Reverse Osmosis Reject

| Parameter        | Units      | Concentration |
|------------------|------------|---------------|
| pH               | Std. Units | 2.4           |
| Conductivity     | mho/cm     | 22,700        |
| Arsenic          | mg/L       | 0.76          |
| Barium           | mg/L       | 0.018         |
| Cadmium          | mg/L       | 0.065         |
| Lead             | mg/L       | <0.0075       |
| Mercury          | mg/L       | <0.0001       |
| Selenium         | mg/L       | <0.026        |
| Silver           | mg/L       | <0.0095       |
| Total Phosphorus | mg/L       | 2,200         |
| Fluoride         | mg/L       | 90            |
| Sulfate          | mg/L       | 14,500        |
| Ammonia Nitrogen | mg/L       | 1,500         |

Note: This stream will be fed directly to the double lime plant.

Final polishing of the RO permeate will consist of processing through ion exchange units and pH adjustment. The typical RO permeate produced will be less than 1 mg/L ammonia nitrogen. Please refer to Table 3 (Typical Reverse Osmosis Permeate), on the following page, for a more detailed characterization of the final permeate.

**Table 3**  
**Typical Reverse Osmosis Permeate**

| Parameter                 | Units      | Concentration |
|---------------------------|------------|---------------|
| pH                        | Std. Units | 6.5           |
| Conductivity              | mho/cm     | 650           |
| Turbidity                 | NTU        | 0.5           |
| Alkalinity                | mg/L       | 10            |
| Gross Alpha               | pCi/L      | 0.103         |
| Radium 226                | pCi/L      | 0.00319       |
| Radium 228                | pCi/L      | 1.46          |
| Total Nitrogen            | mg/L       | 0.751         |
| Ammonia Nitrogen          | mg/L       | 0.257         |
| Un-ionized Ammonia        | mg/L       | 0.00056       |
| Total Phosphorus          | mg/L       | 1.9           |
| Antimony                  | mg/L       | 0.0041        |
| Arsenic                   | mg/L       | 0.0035        |
| Beryllium                 | mg/L       | 0.0006        |
| Cadmium                   | mg/L       | 0.0007        |
| Chlorine (total residual) | mg/L       | 0.01          |
| Chromium                  | mg/L       | 0.0017        |
| Copper                    | mg/L       | 0.0013        |
| Detergents (MBAs)         | mg/L       | 0.117         |
| Dissolved Oxygen          | mg/L       | 7.8           |
| Fluoride                  | mg/L       | 1.4           |
| Trihalomethanes           | g/L        | 13.44         |
| Iron                      | mg/L       | 0.037         |
| Lead                      | mg/L       | 0.0015        |
| Mercury                   | g/L        | 0.00085       |
| Nickel                    | mg/L       | 0.0047        |
| Oil and Grease            | mg/L       | 0.73          |
| Phthalate Esters          | g/L        | 3.4           |
| Selenium                  | mg/L       | 0.0045        |
| Thallium                  | mg/L       | 0.0050        |
| Zinc                      | mg/L       | 0.0059        |

While improvements to the IMC pretreatment system will result in excess RO capacity, if abnormally heavy rainfall or other conditions make it necessary to increase discharge capacity to 1,500,000 gallons per day, a third first pass rental RO unit can be added. Table 4 (Water Treatment Capacity) shows anticipated water treatment capacity by category.

Table 4  
Water Treatment Capacity

|                                      | K gallons / day |    |       |
|--------------------------------------|-----------------|----|-------|
| IMC Propriety Pretreatment plus R.O. | 800             | To | 1,000 |
| Evaporation Spray Field              | 100             | To | 200   |
| Double Lime                          | 100             | To | 200   |
| Total                                | 1,000           | To | 1,400 |
| Add Third RO if needed               | 400             | To | 500   |
| Expanded TOTAL                       | 1,400           | To | 1,900 |

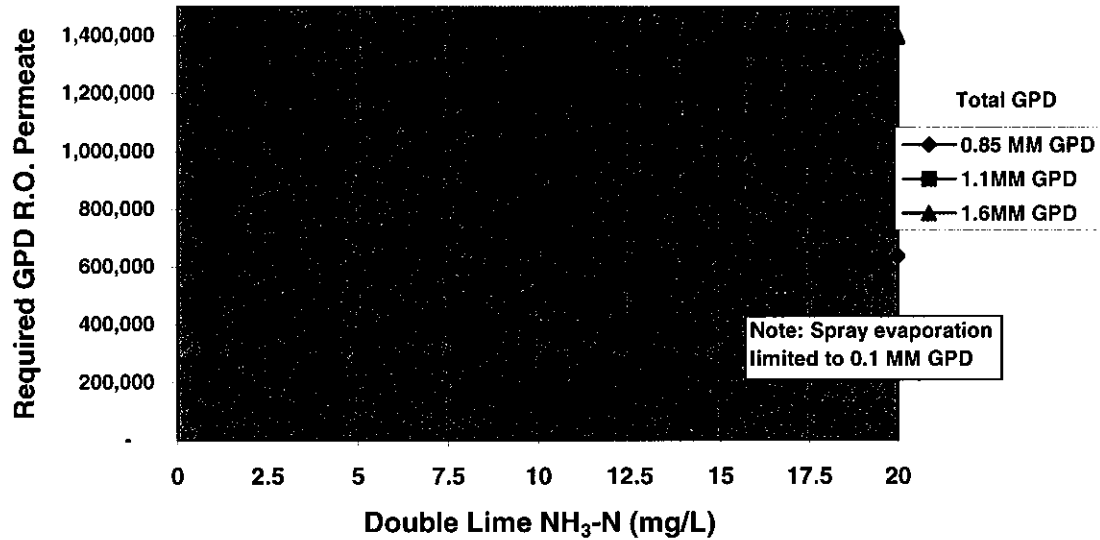
The initial split between RO and double lime treated water will be forced by the 60 percent permeate to 40 percent reject split of the RO units. This will meet the 20 pound ammonia nitrogen discharge target during warm months. Please refer to Figure 2 (RO Output for 20 lbs/day Total NH<sub>3</sub>-N Loadings) located on the following page. During cooler months, if needed, we will utilize an enhanced method of ammonia air stripping employing down stream pH control. As further insurance that we can meet the 20 pound per day ammonia discharge criteria, the excess RO capacity anticipated during cooler months can be used to recycle double limed, air stripped effluent to the IMC proprietary treatment system for processing through the RO units. This will ensure the ability to control discharge below the 20 pound per day criteria.

In order to further ensure that the RO permeate meets whole effluent toxicity (WET) requirements, other water streams will be added prior to discharge. In order of priority: double lime treated water, uncontaminated storm water, and as a last resort, well water. Tests reported on the FDEP (ITN) website show that 1.6 percent well water added to 98.4 percent RO permeate produces an effluent meeting WET requirements. This ratio will ensure that the 25,000 gallons per day maximum well water usage will be maintained even if only RO permeate and well water are discharged.

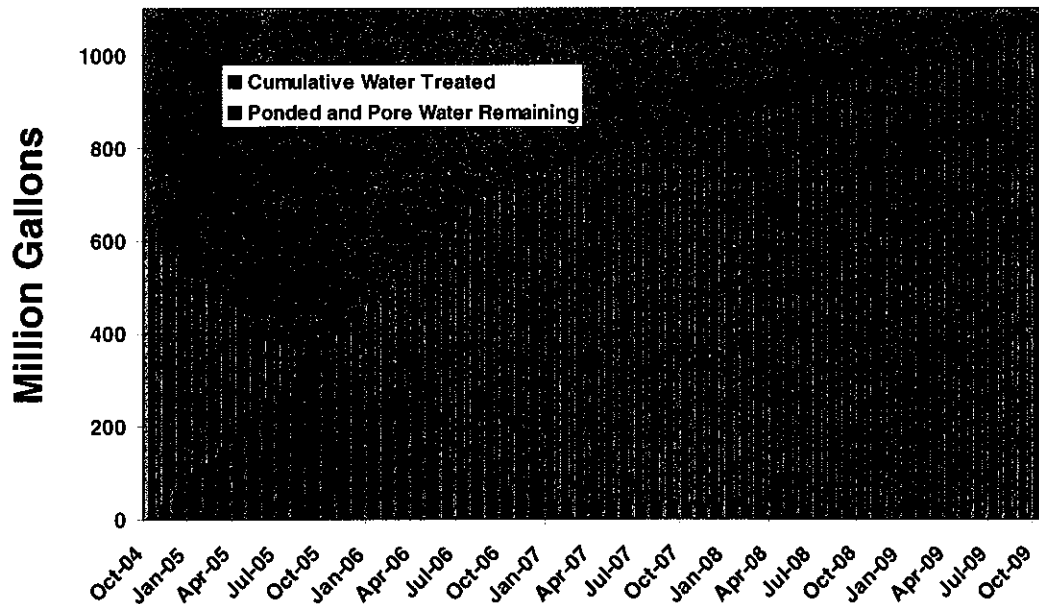
### Phase 3

It is anticipated that after about September 2006, water treatment volumes will decrease to about 500,000 GPD and continue at this rate through November 2006. Thereafter, anticipated treatment volumes will decrease to about 300,000 GPD and continue at this rate through the remainder of the contract. Figure 3 (Piney Point Water Treatment) located on the following page, shows anticipated water treatment volumes and water remaining on site through the end of this period.

**Figure 2**  
**R.O. Output for 20 lbs/day Total NH<sub>3</sub>-N Loadings**



**Figure 3**  
**Piney Point Water Treatment**



Once all ponded process water has been treated, the stack has been closed, and seepage water is the only stream necessary to treat, the proven and innovative IMC pretreatment/RO process with the reject stream managed by second stage lime treatment will remain effective through closure. The North Cooling Pond (NCP) can be closed while water treatment continues, or may alternatively be used for process water management until the stack is drained. This will be determined in consultation with Ardaman and FDEP. If left open, this will mean that the NCP does not need lined unless it is demonstrated that it has been the source of groundwater contamination beyond the property boundary. It could then be capped with soil after all pore water has been evaporated.

If closed, underflow from the lime treated RO reject will be injected by positive displacement pump into the capped sludge layer in the NCP, thereby making this a valid treatment strategy to complete closure. CDM will propose an alternate cooling pond closure plan to facilitate this water treatment strategy. Spray evaporation will continue to be an important part of water treatment as long as possible. Other options also exist once the seepage flow gets very small, including transport and consumption of the concentrated RO reject to an operating IMC plant or other operating fertilizer plant. Once treatment volumes decrease, contaminated seepage water will be collected and treated on an intermittent basis (for example 12 hours shifts 3 or 4 days/week as needed).

The CDM team has years of experience in managing contaminated watersheds within operating phosphate plants and idle phosphate plants which will be invaluable in managing the Piney Point watershed to ensure as little excess rainfall as possible is added to the process water system. This will allow us to minimize the amount of water that must be treated and to manage such water with the best available treatment or disposal option. By November 2006, we will achieve a no discharge condition for water with elevated nutrient levels. We will utilize all available means such as spray irrigation, evaporation, reuse and treatment to prevent nitrogen discharge in the effluent.

Once areas of the stack are closed and grassed, to maintain the 20 pound per day ammonia loading limit, it may be necessary to install treatment equipment specifically to handle this stormwater run-off. Although this water would be suitable for direct discharge based on normal criteria, the low nitrogen limit in this proposal will probably dictate treatment through sand filters and ion exchange to lower the ammonia level. Installation and operation of this equipment is not included in the scope of this contract.

### C. Closure Construction

The closure construction planned for the Piney Point facility consists of the major work tasks as follows:

- Facility Maintenance and Operations
- Process Water Consumption

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

- Construct Lined Pond at NGS-S
- Construct NGS-S Cap
- Construct Lined Drainage Channels, Ditches, Swales and Ponds
- Construct OGS Cap
- Construct NGS-N Relief Ditch
- Construct Seepage Collection Drain and Transfer Piping Network
- Dispose Plant Scale and Sludge
- Close GYP Stack Side Slopes
- Construct Lined Stormwater Transfer Pond
- Close South Cooling Pond
- Close North Cooling Pond
- Close Remaining Top Gradients

The design work for the closure work will be completed by Ardaman & Associates prior to award of the contract. CDM will perform the work in accordance with the design plans and specifications.

This section describes the activities that will be performed to complete the closure construction for the Piney point facility. The sequence of activities for the closure work is presented in Subject 5 - D Closure Sequence of this technical proposal.

#### Closure of New Gyp Stack South

The closure of the New South Gyp Stack (NGS-S) consists of the construction of approximately 100 acres of high density polyethylene (HDPE)-lined reservoir and/or conventional top gradient cover. The closure will consist of site preparation and dewatering, gypsum earthwork, liner installation, cover soil placement, grassing and other associated work required to complete the closure. The activities to be performed are further described as follows.

#### Site Preparation and Dewatering

The work will include the construction of haul roads, construction of a network of dewatering trenches, clearing of work areas and construction of any temporary structure required for the construction of NGS-S pond. In addition, ditch grades will be established and maintained to promote gravity drainage of seepage and rainfall runoff towards a sump area.

CDM will convey all process water, extracted gypsum pore water, and rainwater runoff from the pond to the New Gyp Stack North (NGS-N) or to the seepage collection ditch in a manner and to a location approved by the Engineer.

#### Gypsum Earthwork

The gypsum earthwork will consist of the excavation of the gyp stack pond area and the placement of fill to construct the gypsum dikes. The gypsum earthwork will be performed by CDM team member Moretrench Environmental.

Prior to placement of any fill for constructing the dikes, the existing surface will be wetted or dried, as needed, recompacted and scarified to provide for proper bonding between the existing gypsum surface and new gypsum fill. The dikes will be constructed by placement and compaction of gypsum fill in successive layers. The gypsum material for the construction of the dikes will be obtained from the excavation of the pond area of the gyp stack and from side slope closures. The earthwork will be performed in accordance with the technical requirements in the design plans and specifications.

All gypsum surfaces to receive the HDPE liner will be free from all deleterious materials and will be fine graded to within the grading tolerances specified.

#### HDPE Liner Installation

Prior to lining in any given area, Comanco and the Quality Control project representative will inspect the condition of the surfaces to receive the liner for compliance with the Specifications, and will accept and approve, in writing, the condition of the surfaces on which the liner will be installed.

Comanco will submit a panel layout plan indicating the proposed liner panel configuration, and identifying field seams, anchor trenches, permanent wind ballast trenches, permanent bag wind ballast atop the liner, vents, inlet structure connections, and other details needed to complete the work. The liner will be anchored in anchor trenches in the crest of the dikes at the locations shown on the Design Drawings and specified in the Specifications. Comanco will place adequate temporary loading over the liner that will not cause damage during installation as needed to prevent uplift by wind and by rapid changes in barometric pressure.

The liner on the pond bottom area and dike slopes will be anchored using permanent wind ballast trenches at the locations and to the lines and dimensions shown on the Drawings.

#### Cover Soil Placement

Soil materials used for cover on the lined areas will be non-cemented and free from rocks, stones, gravel and other deleterious materials. Placement of the cover will be undertaken by light track-mounted or rubber-tired equipment exerting a relatively low contact stress (e.g., low ground pressure D-4 or D-5 dozer exerting less than 4.5 lb/in<sup>2</sup> of contact stress) and traveling on a minimum of 18-inches of soil and dumped ahead of the equipment with front-end loaders. Care will be exercised during placement to not damage the HDPE liner and pipe vents, or damage or displace the geonet/geotextile drainage layer and plywood protection sheets above the HDPE liner with the blade, bucket, tracks or tires of the equipment.

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

**Grassing**

The cover soil will be seeded using a mix of grass seed most suitable for the season of application. The seed will be sown only when the soil is moist and in proper condition to induce growth. Four thousand pounds per acre of dry hay mulch material will be applied uniformly over the seeded area, and the mulch material cut into the soil. The newly grassed areas will be watered as required to prevent the grass from drying out and to maintain the necessary soil moisture for a period of 60 days following planting until acceptance of the work by the Receiver and Engineer

**Closure of Gyp Stack Side Slopes**

The exterior side slopes of the new and old gyp stacks will be closed by amending the gypsum surface and grassing to prevent erosion. The closure of the gyp stack side slopes consist of site preparation and regrading of the side slope area, amendment of the gypsum surface and grassing of the amended side slope. This work will be accomplished as described below.

Site preparation will consist of clearing the work area of any obstructions and temporary facilities such as access roads, transfer piping and other structures which may be present. Temporary stormwater controls shall be installed to direct runoff away from the work area. Erosion control measures will also be installed as necessary.

The side slopes to be closed will be regraded as necessary to conform to the design plans and specifications. The grading will be performed primarily using bulldozers to shape the side slopes. In areas of significant cuts the gypsum material will be excavated and loading into off road trucks for placement in other fill areas. Any excess gypsum material will be removed from the side slopes and placed in other areas requiring gypsum fill.

The regraded side slopes of the gypsum stack will be amended with dolomitic limestone to increase the pH of the gypsum to not less than 5.0 and to render the gypsum less deficient in magnesium and/or potassium.

Based on results of limited testing performed in conjunction with a test plot on the west slope of the New Gypsum Stack - North (NGS-N) dolomitic limestone will be applied at a rate in the range of 2 to 4 tons per acre where the near surface gypsum is leached, and at rates of about 8 to 10 tons per acre where the gypsum is freshly exposed or consists of gypsum fill obtained from pond interior areas in conjunction with other stack closure operations.

The amended side slopes will be seeded using a mix of grass seed most suitable for the season of application. The seed will be sown only when the soil is moist and in proper condition to induce growth. Four thousand pounds per acre of dry hay mulch material will be applied uniformly over the seeded area, and the mulch material cut into the soil.

The newly grassed areas will be watered as required to prevent the grass from drying out and to maintain the necessary soil moisture for a period of 60 days following planting until acceptance of the work by the Receiver and Engineer.

#### Closure of Cooling Ponds and Aeration Basins

Closure of the cooling ponds, sludge ponds and aeration basins which contain varying amounts of lime treatment sludges will involve grading of the outer dikes, desiccation of the sludge surface, gradually placing soil (with reinforcement) using light equipment to minimize mud-waving of the sludge, and installation of a 40-mil HDPE liner in turn protected with a 2-foot thick grassed soil cover. Closure of the cooling ponds and sludge ponds also includes installation of a buried drain system to collect seepage and construction of an 80 mil lined sump pond and runoff collection and transfer ditches.

#### Construction of Lined Runoff Collection Ditches and Seepage Drains

The lined runoff collection ditches and perimeter seepage drains will be constructed concurrently. The seepage drains will be constructed after completion of the side slope closure on each of the exterior sides of the gyp stack system. The lined runoff ditch will be constructed on top of the seepage drain as the construction progresses.

The perimeter seepage pipe will consist of a 6-inch diameter slotted corrugated HDPE pipe bedded on twelve inches of silica gravel. One of two 12-inch HDPE header pipe(s) will also be installed with the seepage pipe. Following installation of the HDPE pipes, silica gravel will then be placed on both sides of each pipe and above the pipe to the minimum thickness and dimensions shown on the Drawings. The silica gravel will be encased in a nonwoven geotextile filter fabric with field sewn seams and a HDPE geonet/geotextile composite will be installed under the liner on the gyp stack side slope in accordance with the design.

The lined runoff collection ditch will be constructed by placing an 80 mil HDPE textured liner over the seepage drain and extending the liner up the side slopes of the collection ditch. The liner will be covered with 2 feet of cover soil. The lined ditch will then be seeded and mulched to provide a grass cover for erosion protection.

#### Stormwater Detention Ponds

The lined stormwater detention pond on the north side of the new gyp stack will be constructed at the same time as the lined runoff ditch and perimeter seepage drain. The seepage drain will be constructed after completion of the side slope closure on each of the exterior sides of the gyp stack system. The lined runoff ditch will be constructed on top of the seepage drain as the construction progresses.

The perimeter seepage pipe will consist of a 6-inch diameter slotted corrugated HDPE pipe bedded on twelve inches of silica gravel. One of two 12-inch HDPE header pipe(s) will also be installed with the seepage pipe. Following installation of the HDPE pipe, silica gravel will then be placed on both sides of each pipe and above the pipes to the minimum thickness and dimensions shown on the Drawings. The silica gravel will be

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

encased in a nonwoven geotextile filter fabric with field sewn seams and a HDPE geonet/geotextile composite will be installed on the gyp stack slope in accordance with the design plans.

The lined runoff collection ditch will be constructed by placing an 80 mil HDPE textured liner over the seepage drain and extending the liner up the side slopes of the collection ditch. The liner will be covered with 2 feet of cover soil. The lined ditch will then be seeded and mulched to provide a grass cover for erosion protection.

#### Outlet Structure Construction

During the closure activities an estimated twelve outlet structures will be constructed to permit the conveyance of stormwater to various ponds and impoundments. The outlets structures will be constructed at the same time as the earthwork associated with each stormwater feature is being performed. As an example the outlet structure to convey the stormwater from the Old Gyp Stack South (OGS-S) cap area will be constructed during the earthwork portion of the closure of the cap area. The structures will be constructed in accordance with the design plans and specifications.

#### Disposal of Plant Scale

If this work is selected by the FDEP, designated solid waste material from the plant related to the production and conveyance of phosphogypsum and cooling pond water, including plant scale and radioactive waste material subject to licensure by the Department of Health, will be disposed of by CDM on the phosphogypsum stack in the NGS-N Relief Ditch unless specifically designated otherwise by the third party engineer. All such, waste material will be encapsulated and covered with sluiced or slurried gypsum, during disposal, as needed to produce a suitable foundation for the liner and final cover. We believe there may be an alternative method of placing gypsum on the disposed plant scale that could result in significant cost savings, and we look forward to discussing that FDEP and Ardaman.

### D. Closure Sequence and Closure Schedule

The sequence of work to be followed during the Piney Point Phosphogypsum Stack System Closure was developed to expedite the completion of this project in a timely manner. The sequence described below is designed to reduce the watershed area that contributes to the generation of contaminated runoff and seepage water at the site in the most expeditious manner. The closure activities are sequenced to cover the gypsum stacks in logical progression while maintaining the ability of the system to collect, process and discharge runoff and seepage water. The sequence is also scheduled in a logical manner that utilizes an economy of material gypsum movement to fully exploit the cut and fill balance of the site.

The closure of the gypsum stack system can generally be divided into three phases of work. The first phase consists of the closure of the New Gyp Stack South (NGS-S) and the side slope closures for the Old Gyp Stack (OGS) and the west slope of the northern compartment of the New Gyp Stack (NGS-N). The second phase consists of the closure

of the remaining gyp stack side slope areas and the south cooling pond (SCP). The third phase of the closure consists of the closure of the remaining pond areas and final closure of relief ditch used for the disposal of plant scale and other gypsum materials. **A Bar Chart Schedule is located in Section C-Subject 13 of this response in accordance with requirements for the ITN, Addendum 2. The Phased Bar Chart Schedule details graphically the proposed sequence of work described below.**

#### Phase 1

Work will begin within the NGS-S Pond with the installation of a temporary network of drainage ditches. The ditch network will dewater the area in preparation of bottom grading and dike construction to build the pond. Once gypsum is workable, grading within the pond will begin. Gypsum removed from the bottom elevation of the pond will be used primarily to construct the western dike of the pond.

Concurrent to the installation of the dewatering ditches in the NGS-S Pond, the first phase of the gypsum stack slope closures will begin with grading along the northern and western slope of OGS. The toe of the slopes of the OGS will be rough graded to form the lined drainage channel under laid by a seepage collection drain. The seepage collection drain and header pipes will be installed and the channel will be fine graded; lined, covered and grassed after all slope closures are complete to prevent damage from equipment.

Slope closure will continue in a southerly direction. Rough grading of the lined drainage ditch will continue with the elevation gradually decreasing in a southerly direction. When the OGS-N northern slope is completed, grading the OGS Cap will begin. Two inlet structures will be constructed as part of the OGS Cap. After the structures are complete the OGS Cap area will be fine graded and the liner and cover will be installed. Gypsum removed during the OGS Cap construction that is acceptable for use as construction material will be used to construct dikes for NGS-S Pond.

As the first phase of the slope closure continues a quantity of gypsum will be cut from both the western and southern slopes of the OGS-S. Gypsum removed from the area will be used to construct dikes at the NGS-S Pond or as construction material in other areas.

Construction of the northern dike of the NGS-S Pond will coincide with the start of construction of the NGS-S Cap because the cap is contiguous to the pond. Grading will begin on the NGS-N Relief Ditch, working from the northern end of the ditch toward the OGS Cap. Liner will be placed on the northern end of the NGS-N Relief Ditch after it has been fine graded. The liner at the southern end of the NGS-N Relief Ditch will be placed after an outlet structure had been constructed in that end of the ditch.

Fine grading and liner installation of the NGS-S Pond will begin with the completion of the northern dike. An outlet structure will be constructed between the NGS-S Cap and the NGS-N Relief Ditch.

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

At the completion of Phase 1 the watershed area will be reduced to approximately 215 acres and the water inventory onsite will be approximately 400 acre-feet.

### Phase 2

The second phase of slope closure will start with the NGS-N northern slope. The toe of the northern slope of the NGS-N will be graded to form the high end of the eastern lined drainage channel. As slope closure continues in an easterly then southerly direction, rough grading of the lined drainage ditch will continue with the elevation gradually decreasing toward the southeast corner of the NGS-S Pond. The existing HDPE pipeline in the outer slope of OGS-N will be removed and relocated to OGS-S Crest Road.

The lined stormwater pond, seepage collection drain, header pipe(s) and drainage ditch will be constructed after all the grading work is complete on the NGS-N north slope. Work on the seepage collection ditch and the lined drainage ditch will continue to the east and follow the NGS-N north slope and NGS-S east and south slope closure work. Construction of the western portion of the seepage collection drain and lined stormwater ditch will begin after the lined stormwater pond is complete.

Concurrent with the construction of the stormwater pond, closure of the South Cooling Pond (SCP) will begin and the Process Water Sump and Lined Stormwater Transfer Pond will be constructed.

At the end of Phase 2 the watershed area will have been further reduced to approximately 130 acres and the water inventory should be close to 0 acre-feet. The remaining water to treat during Phase 3 will consist of pore water collected in the seepage ditches.

### Phase 3

After the SCP Closure has been completed closure of the North Cooling Pond (NCP) will begin. The eastern portion of the liner will be tied into the stormwater drainage ditch constructed at the toe of the NGS-N west slope. The outlet structure for the NCP will be constructed during the pond closure. The seepage drain and lined stormwater ditch will then be constructed along the west and north side of the NCP. All grassing will be completed and the site will be in a maintenance operation at the end of Phase 3.

At the end of Phase 3 the watershed area will consist of the plant area watershed.

## E. Innovative Proposal Opportunities for Piney Point Water Management, Site Operations, and Site Development

### Manatee County Agricultural Reuse Supply

The CDM Team has held discussions with Mr. John Zimmerman, Water Manager for Manatee County Utility Operations regarding Piney Point water discharge and reuse by Manatee County. Mr. Zimmerman confirmed that Manatee County is interested in augmenting their ongoing MARS System (Manatee County Agricultural Reuse Supply)

by enhancing the wet weather storage capacity utilizing the Piney Point Lined Storage Ponds. An engineering feasibility study is underway by the County's consultants to evaluate the project requirements and identify the facilities needed to interconnect the systems.

The Piney Point lined storage ponds could provide additional volume of approximately 1.2 BG, which could be used store excess reclaimed water during the wet weather. With additional pumping, filtration, and disinfection facilities at Piney Point, stored reclaimed water and stormwater would then be delivered into the MARS system through a pipeline interconnect to the Manatee County North Regional Wastewater Treatment Plant. The feasibility study has identified the additional pumping and filtration facilities at an estimated cost of \$1.5 Million and the pipeline interconnect at \$4.2 Million. The study also identifies additional storage ponds and piping improvements (beyond what is planned by FDEP) at a cost of \$3.0 Million, for a total MARS project cost of \$8.7 Million.

One of the key issues to be addressed in implementing reclamation of Piney Point water with Manatee County's MARS system is the management and control of total dissolved solids and chlorides. The TDS is expected to be highly variable with seasonal variations in rainfall and with time over the project operating life. Manatee County's North Regional WWTP is an advanced secondary biological activated sludge treatment process designed to remove suspended solids and BOD, but not TDS or chlorides. It will, therefore, be critically important to closely coordinate the blending of Piney Point water with Manatee County reclaimed water, so that the blended water does not exceed acceptable TDS or chloride levels for agricultural reuse. Opportunities for blending would be available both at the Piney Point lined ponds, and at the other end of the proposed pipeline interconnect at the North WWTP effluent storage facilities. The CDM Team will work closely with Manatee County to implement a reclamation program which meets the needs and common goals of FDEP and Manatee County. Manatee County has applied for 2005 Cooperative Grant Funding to the Southwest Florida Water Management District for this project.

#### UCPM

CDM and Universal City Property Management (UCPM) have worked together for seven years on a very large and high profile site remediation and redevelopment project in Orlando, Florida. UCPM is a subsidiary of Stan Thomas Enterprises Inc, one of the largest retail - commercial mixed use and industrial developers in the SE US. In the mid-1990's Lockheed- Martin Corp. sold over 2000 acres of a former weapons test and manufacturing facility in Orlando to UCPM. Since that time, UCPM and CDM have partnered to execute one of the premier site remediation and redevelopment projects in US EPA Region 4. Site activities have included the excavation and disposal of over 300,000 cu.yds. of contaminated soil and waste, and treatment of millions of gallons of water for disposal by spray irrigation. The redevelopment effort has resulted in the expansion of the Orange County Convention Center with 1,000,000 square feet of

meeting space, over \$180,000,000.00 in land sales for hotel and golf course use, and two Awards of Excellence from US EPA Region 4.

CDM and UCPM have entered into discussion regarding the future site use strategy for the Piney Point site. Many legal hurdles regarding the bankruptcy court and site closure need to be addressed, including recent court rulings by Judge Alexander Paskay regarding the assets, but we believe that some conceptual preliminary plans may be:

- Develop the linear strip fronting Highway 41 as mixed use industrial commercial related to light manufacturing, shipping, and warehouse. The proximity to multi-modal transportation (Port of Manatee, rail and truck) makes this prime real estate with tremendous potential.
- Use of the lined ponds for potable, agricultural and reuse water supply. This was discussed above.
- Proper decommissioning, dismantling, and recycle/disposal of the existing chemical plant facilities.

Although much of the facility infrastructure is of scrap value or needs to be disposed of in the gypsum stack closure, there are many sections of the plant with high re-sale value. An example is the cooling towers installed just before the bankruptcy. CDM, our Facilities Project Manager and the members of our team such as John O'Connor and Moretrench have extensive experience in plant decommissioning for maximum value retention. CDM has decommissioned facilities ranging from radioactive sludge removal at Oak Ridge National Labs to metal foundries and petrochemical refineries.

UCPM has the proven experience and financial resources to bring these and other site redevelopment plans to fruition. The CDM team looks forward to discussing these with the FDEP during the interview stage of this selection process.

#### Moretrench

Moretrench maintains its company owned equipment under a Preventative Maintenance Program Contract with Ring Power, the authorized Factory Service Center for Caterpillar Equipment.

Through the use of a GPS-based transmitter system, each piece of equipment transmits its location, hours of operation, fuel consumption, and various operating parameters to Caterpillar. As specific equipment data is captured and monitored on Caterpillar's website, preventative maintenance service calls are triggered automatically according to parameters established for each piece of construction equipment. Service crews show up at the job sites to inspect the equipment, take oil samples from all major systems, and submit the samples for analyses. Results of the oil sample analyses are used to predict and schedule future equipment service and maintenance needs.

The GPS units are also tied to the electronic computer module of the equipment. Sensors at such points as fuel pressure, air intake, operating temperature are connected to the GPS system, and any data outside normal ranges sends an alert to the Moretrench

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

Superintendent and the Ring Power Service Department. This allows such things as clogging fuel filters or air cleaners to be identified early, and repaired or replaced before causing downtime.

Utilizing this technology, Moretrench is able to operate its fleet of construction equipment at uptime rates that far exceed the industry averages. This helps us complete our projects on schedule.

#### IMC and PennPro

The goal of the CDM team is to treat the water on site to reduce the volume as quickly as possible and dispose of it with the least cost and environmental impact. Some of the tried and proven yet innovative water treatment technologies to be employed include:

- Reverse osmosis permeate capacity will increase to more than 750,000 gallons per day. The IMC proprietary pretreatment system will make use of the lime clarifier not currently operating. The acidification section will be relocated from the DAP warehouse near the clarifier. This will insure the line to the DAP warehouse will be non scaling. The target consumption rate will be 1,000,000 GPD or as needed to eliminate ponded water inventory by the end of 2006. The maximum total ammonia nitrogen loading will be held at 20 pounds per day or less to the 003 outfall. The IMC reverse osmosis units will produce a reject stream which is only about 40 percent of the RO feed. This reject stream will be processed directly to the double lime treatment system to limit the overall concentrating effect of the RO reject stream on the pond system.
- Contaminated process water in the New Gyp Stack South (NGS-S) will be consolidated with the contaminated process water in the lined NGS-N where the evaporation spray field is located. This will allow construction to start closing the NGS-S as soon as possible.
- The initial split between reverse osmosis and double lime treated water will be forced by the 60 percent permeate to 40 percent reject split of the RO units. This will meet the 20 pound ammonia nitrogen discharge target during warm months. During cooler months, if needed, we will utilize an enhanced method of ammonia air stripping employing down stream pH control.
- Final polishing of the R.O permeate will consist of processing through ion exchange units and pH adjustment. The typical RO permeate produced will be less than 1 mg/L ammonia nitrogen and the reject stream will be well below all RCRA limits.

#### Levine Fricke Recon

CDM has also had discussions with Levine-Fricke Recon (LFR) about the use of an innovative slope stabilization procedure. LFR's ENCAPCO Stabilization Technology

This patented Stabilization Technology:

- Potentially Converts Radionuclide-Affected Wastes and Soil into Usable Construction Material
- Improves Slope Stabilization to Enhance Vegetation Establishment

## Closure of the Piney Point Phosphogypsum Stack System Invitation to Negotiate

The ENCAPCO emulsion stabilization process is a new technology that uses non-hazardous chemical binders that permanently stabilize heavy metals by mineralizing them into stable phosphate phases. The process combines tall oil pitch (TOP), setting agents and other proprietary reagents with contaminated soil and transforms the resulting mixture into a highly stable, non-leaching material. Asphalt emulsion recycling is applicable to soils and potentially to phosphogypsum, plant scale, or other wastes on the Piney Point site that are contaminated with heavy metals, or other migratory contamination. For its application for heavy metals contaminated soil, the emulsion process includes the use of additional reagents to chemically fix the metals by mineralizing them into stable, non-leachable phases, thus reducing their solubility. Slope stability can be enhanced through the application of a less viscous mixture of tall oil pitch and other reagents to permeate the surface soils creating a less porous surface capable of being vegetated in accordance with current slope stabilization plans. This would significantly enhance the success of the soil stabilization, and minimize the amount of contaminated storm waters which must be captured and treated over the 5 year offering period. It also offers the possibility of re-use of some of the site materials for on-site or off-site aggregate needs and other foundational uses.

We are evaluating the use of the ENCAPCO technology at this time, and we believe that Ardaman & Associates may wish to join in this effort for possible application at the site.

## Subject 6 Technology and Support

### Electronic Communication of Documentation

CDM presently uses a variety of protocols and technologies to efficiently deliver electronic documents or information to clients and regulatory agencies. Electronic delivery options provided by CDM include:

File Transfer Protocol (FTP) links to allow programs, reports, data, or other information to be transferred securely from the CDM team to the FDEP and Ardaman & Associates via the internet. We also use:

- Customized databases with secure remote access capabilities with export and import of sampling data in FDEP formats.
- eRoom to share and track changes to documents using the internet allowing simultaneous instant access for the FDEP and the entire CDM team
- Remote access telemetry systems to monitor numerous onsite functions, store formatted data, and send reports based on data from the field.
- PDF, Zip, or file transfer using high speed internet connections.

### Computer Capabilities

Our wide area network links all CDM offices for communications and electronic file transfer. The backbone of this network is a high-speed communications line linking the firm's mainframe systems located in Cambridge, Orlando, and Denver. Each local office uses a local area network (LAN) server to tie the local computer system into the CDM mainframe system. This network gives us the ability to share reports, drawings, details and specifications between offices quickly and efficiently, thus allowing for prompt review and coordination of project efforts. In short, our computer network makes the complete design resources of CDM available for every project. Through these tools and systems, our clients can profit technically and economically from CDM's more than 50 years of experience and our substantial collective technical expertise.

### Earthwork and Liner Technologies

CDM has designed and managed numerous landfill projects across the country providing construction management, construction quality assurance (CQA) testing and oversight, and turnkey construction services on numerous Subtitle C and Subtitle D landfill projects using both conventional soil liners and geosynthetic clay liners.



Alcoa  
Massena, New York

CDM technical staff have extensive experience in the permitting, design, and construction of both Subtitle C and Subtitle D landfills. Most of CDM's members have worked together on numerous projects over the past several years. Our complete in-house capabilities, which include civil design, geotechnical, construction services, and geotechnical/geosynthetic laboratory, improves project efficiency and reduces cost by facilitating better communications between the owner, designer, and construction group.

Examples of our experience in landfill technologies include: the Wingate Landfill Closure, Ft. Lauderdale, Florida. In June 2000, the design/build team of CDM and the IT Group was selected to conduct the remediation and closure of the site. CDM was tasked with designing the final site closure plan to account for all remedial and demolition debris being placed in the landfill and to provide for a versatile end use. CDM also provided services to the Closure of Spent Potlining Pile I, Cap, Slurry Wall and Groundwater Collection Trench in Massena, New York. CDM provided all design and field engineering services for the closure of Spent Potlining Pile I at Aluminum Corporation of America's (Alcoa) aluminum manufacturing facility in Massena, New York. Potlining Pile I is a 4-acre hazardous waste pile composed of spent potlining, a carbon used to line the smelting pots during the aluminum smelting process.

## Championing Membrane Technologies

Many water utilities and industries throughout the United States are facing more rigorous treatment requirements, and must upgrade facilities to meet stricter regulatory criteria. To address today's problems, CDM is serving clients across the nation with advanced engineering approaches to help ensure adequate drinking and reuse water supplies for tomorrow. Using membrane technologies is one such approach.

Membrane technology—microfiltration, ultrafiltration, nanofiltration, and reverse osmosis—is becoming an indispensable treatment alternative. CDM is designing membrane solutions that cover a wide range of applications from surface water treatment using microfiltration to desalination of seawater using reverse osmosis.

The specific capabilities of IMC in treating process water from ponds and pore water from stacks is discussed in Section C – Subject 5 of this document.

CDM brings a wealth of experience in membrane technologies, providing full-service capabilities for membrane treatment plants, from feasibility studies and pilot testing, through design and permitting, to construction and O&M services. We have successfully designed and/or started up numerous membrane plants across the country and currently have over 400 mgd of membrane projects under design, construction or operation. Some representative examples of CDM projects include:

A 40-mgd nanofiltration plant in Boca Raton, Florida—this will be the largest nanofiltration membrane plant in the world at the time of its completion. This facility will take the lead from CDM's Palm Beach County System No. 9 Plant, which is currently the largest nanofiltration plant in operation in North America. CDM currently has over 130 mgd of membrane softening plants under design and/or construction in Florida.

A 35-mgd ultrafiltration WTP being designed in Racine, Wisconsin and a 14.5-mgd microfiltration WTP operating in Manitowoc, Wisconsin, which provide a reliable barrier against *Cryptosporidium* and other pathogens. CDM-designed membrane plants treat surface water from Saratoga, California to Lincoln, Massachusetts and around the globe—demonstrating we provide the local perspective necessary for a successful project.

Design of a wide range of brackish water treatment projects from nitrate removal projects in California and Colorado to a 6-mgd reverse osmosis treatment plant, converting a brackish water supply into high-quality drinking water, in Newport News, Virginia.

A two-stage, low-pressure ultrafiltration membrane process in Georgetown, Texas, delivering 3.24 mgd of drinking water, with operating costs that are a third of typical O&M costs associated with conventional treatment technologies.

For the groundwater replenishment project in southern California, CDM is the lead consultant for a project that will use 80 mgd of microfiltration and 70 mgd of reverse osmosis to treat secondary effluent to potable water standards to supplement the saltwater intrusion barrier and for aquifer recharge. This will be the largest membrane treatment facility in the U.S. at the time of its completion.

## Treatability Studies to Meet New Technical Challenges

CDM performs water quality and treatability studies to screen various treatment technologies to optimize processes. Some of the technologies tested include: bioreactors (SBR, AS, FBR, BNR, CH<sub>4</sub>, etc.), chemical/physical (coagulation, flocculation, filtration); membranes (UF, MF, RO, etc.); and constructed wetlands. These treatability tests also are used to identify recalcitrant chemicals and are often used as a precursor or support to larger-scale pilot studies.

CDM maintains environmental treatability laboratories in Bellevue, Washington and Denver, Colorado, and we commonly conduct the studies on-site at our clients' facilities as well. CDM provides customized water, wastewater, and soil treatability studies.

- Physical separation techniques

- Chemical treatment processes
- In situ and ex situ biological treatment systems
- Solidification/stabilization techniques

CDM can conduct jar tests and can fabricate small-scale reactors to simulate treatment processes. Sequencing batch, fluidized bed, trickling filter and rotating disk reactors are just some of the configurations that have been used. This support can help to:

- Evaluate treatability of unusual water and waste streams
- Determine engineering design parameters
- Evaluate vendor claims or compare competing vendor's processes
- Develop technologies
- Conduct research and development

## Creative and Innovative Technologies

### Libby Asbestos Survey Project

CDM developed a Tablet PC data entry application for the town of Libby, MT to be used by surveyors when assessing asbestos contamination of residential and commercial properties. The application is used by field crews to record information about a property including electronic survey checklists, digital images, and site specific CADD drawings. The data is then synchronized with a central server at the field station in Libby which makes it available for analysis by support staff located in Denver, CO. Using the Tablet PC and latest available programming technology significant reductions in manpower costs have been realized.

### Hartsfield-Jackson Atlanta International Airport Environmental Programs Database Application

CDM was asked to develop a secure web based application to help the Environmental Programs department to track chemical spills, deicing events, fuel remediation events, and other groundwater concerns for the Hartsfield-Jackson Atlanta International Airport. An older version of an environmental monitoring database quickly outgrew its potential and a better long term solution with further reaching goals was required. The application can be run from any desktop within the HJAIA Environmental Programs department and also has a built in document management system that allows users to store electronic files. It has a GIS component which allows monitoring of well locations as well as underground and above ground storage tanks. Electronic sampling data can be imported directly from the laboratory into the application and email reminders of upcoming deadlines related to permits or other activities can be added into the application. Using this type of solution has allowed the Environmental Programs department to view data faster than the older system and keeps the data secure and in one location.

## CDM Comprehensive GIS Services

CDM provides a complete range of professional services to assist our clients in successfully applying geographic information system (GIS) technology to their diverse needs. In addressing these needs, we have developed expertise in several GIS software packages, including:

|                |              |                  |
|----------------|--------------|------------------|
| ARC/INFO       | MapInfo      | AutoCAD World    |
| ArcCAD         | Intergraph   | ArcView / Avenue |
| AutoCAD Map    | GeomediaCYBE | Geo/SQL          |
| Intergraph MGE | RNET         |                  |
|                | Autodesk ADE |                  |

To complement our knowledge of these software packages, we employ several system programmers who are proficient in languages such as Visual Basic, Avenue, MapObjects, Java, and Power Builder to customize GIS software to meet the exact needs of our clients. Our staff includes certified GIS instructors and networking specialists, experienced in training clients using these and other systems.

### Leaders in the Field

CDM has been a leader in the application of GIS technology since 1986. Our projects, which range from basic engineering support to application development to complete system implementation, have involved completion of a needs assessment, mapping from aerial photography, extensive GIS data layer development, facility-wide networked GIS access, custom applications programming, and implementation of training programs. We specialize in "enterprise-wide" GIS systems and have unparalleled experience in the design, implementation, and management of these types of systems.

Many of our GIS needs assessments have won local and regional awards or other types of special recognition. For example, our Auburn, Maine, needs assessment won two awards for most outstanding GIS study (Northern New England Association of Planners Award and Maine Municipal Association Award); and our Marlborough, Massachusetts, GIS needs assessment is used by the state EOCD as the prototype GIS needs assessment for Massachusetts municipalities.

### GIS Program Management and Technical Assistance

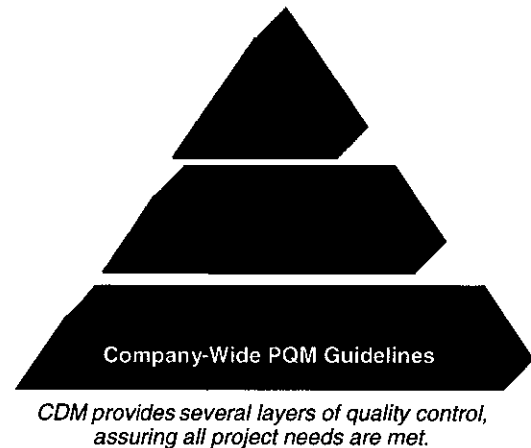
The most effective project management programs bring the client and consultant into a true partnership. CDM's approach enjoins the client in a partnership that combines and focuses the capabilities, experience and knowledge of both client and consultant. Together, we will solve the current problems and develop long-term solutions.

## Subject 7 Business Processes

To help project teams manage more effectively, we have developed and routinely apply business processes or project management systems and procedures to control the planning, development, and completion of large, complex projects. These systems and procedures were developed for, and were initially applied to, the planning, design, and construction management of multimillion-dollar remediation projects and are now used on all major projects. These management systems are results-oriented and provide a project-delivery focus that enhances our ability to achieve project goals in regard to performance, cost, and schedule. Many of the projects to which these management systems have been applied have attendant contractual incentive or penalty provisions that place a significant financial premium on achieving a quality end product ahead of schedule and below budget.

### Quality Assurance/Quality Control

Quality has been the cornerstone of CDM's reputation for half a century. From the smallest study or environmental assessment, to the most complex treatment facility design and construction, quality management is fully integrated into every CDM project task. Project quality management, or PQM, is the umbrella process by which we impose the most stringent quality controls on our projects, and can be implemented to various degrees, depending on the nature and magnitude of a given project.



PQM calls for a matrix analysis approach to project planning by involving the entire project team in the upfront development of project objectives. The team members reach consensus on the factors necessary for the project to succeed, and take responsibility for implementing the results of the PQM meeting, if one is held, or of the project-specific Quality Management Plan. Central to the success of this rigorous quality management program are three main elements: client participation, standardization, and independent technical reviews.

### Management Philosophy

CDM's philosophy for project management focuses on three fundamental objectives:

1. Complete the project within budget while maintaining firm control of deliverables and communications.
2. Complete the project in a timely manner so that the intent of the project is met at the earliest possible date.
3. Complete the project to meet the quality expectations of the staff responsible for successful operation of the finished project.

## Technical Review Committee (TRC)

The project-specific technical review committee (TRC) is at the heart of individual project quality management. The TRC is composed of senior-level professionals with in-depth experience directly applicable to a particular project, but who are not directly involved in day-to-day project activities, thus ensuring objectivity. The TRC is established during the earliest project planning stages based on the specific areas of expertise needed to carry out assertive, independent evaluations of each project deliverable—planning and study reports; pre-design packages; and final design, construction packages for Piney Point, including reports, drawings, and specifications. These technical advisors review key project concepts, evaluating the work for:

- Adequacy and soundness of conclusions, including "constructibility" factors
- Thoroughness and level of detail in regulatory review, for both existing and anticipated regulations
- Appropriate application of existing and new technology, if applicable
- Use of sound, practical, and cost-effective engineering approaches to problem solving

## Planning

The foundation of effective project management is established in the project management plan (PMP) that sets forth the elements of budget and schedule control, project communication protocols, and production management. Immediately following receipt of Notice to Proceed, we prepare the PMP in a standardized format. The document sets forth the following elements of the project:

- Work breakdown structure
- Staffing plan
- Staff and client communication procedures
- Budgets
- Schedules
- Deliverable formats
- Work product standards
- Production management
- Quality management measures
- Constructibility/operability reviews

When completed, the document is distributed to all members of the project team. This work plan serves as the coordination and guidance tool throughout the duration of the work, in addition to aiding in clarifying key elements of the project requiring management attention. As part of the project work plan development, the project team attends a project kick-off meeting to:

- Develop and finalize project plans and priorities from the outset of the project
- Schedule technical reviews
- Establish checking protocols
- Establish procedures for computations, filing, progress, audits, and record management

- Review project issues critical to success and assign project staff specific responsibilities for meeting all critical success factors

Project management is essential to the proper control and successful completion of a project. CDM uses tested and proven management tools and techniques to provide cost-effective and responsive delivery of our technical products. CDM management systems consist of four basic components:

- Project status reporting
- Technical quality assurance and control
- Project communications
- Computerized cost controls

### Project Communications

John Brafford will be the primary point of contact between the FDEP and the CDM team and will be responsible for disseminating information to regulatory and environmental entities and agencies, State and County governments, non-technical public and the press. He will also communicate regularly with the FDEP on compliance issues and for necessary approvals. He will monitor and report to the FDEP and Receiver, contractor compliance with all applicable laws, rules and regulations that govern the operation and management of the gyp stack system.

The success of any project is dependent, to a great extent, on the exchange of information between the consultant and the client. As the project progresses and data is evaluated, new insights are gained relating to the overall scope of work. The project approach must at times be adjusted to ensure that the client's needs are fully satisfied at every stage of the project. Our approach will be to work very closely with FDEP through constant communication, both formally and informally.

### Progress Reporting

Progress reports are submitted to identify work performed to date, to discuss any potential problems and their resolution, and to indicate decisions made. Periodic progress review meetings will be held with FDEP to discuss, in detail, various aspects of the project to date. Informally, we anticipate ongoing communications with FDEP staff. All meetings and communications with FDEP will be documented for future reference.

### Client Reviews

The need for client, including department heads and/or regulatory agency reviews vary from project to project, subject to contractual obligations, project complexity, and direction from the client. CDM's quality control approach is that all projects are reviewed at reasonable and appropriate frequency. Client involvement and review are a fundamental component of CDM's project delivery process. Following appropriate action on the TRC's recommendations, the project manager will review the work completed to date with FDEP as appropriate. The Piney Point Phosphogypsum Stack System project is a major project and as such requires reviews at milestones specified in the PMP.



### Computerized Cost Controls

CDM has developed a flexible project cost accounting and tracking system that is fully integrated with CDM's financial accounting and payroll systems. This system provides users with a powerful database management system that makes it possible to: 1) establish work assignment, task, and activity budgets; 2) track expenditures against budget; 3) identify progress against pre-determined milestones; 4) and estimate cost at completion given expenditures to date and progress on tasks.

### Management of Subcontractors

CDM's teaming philosophy is to integrate our comprehensive in-house capabilities with competent, proven firms that can provide complementary services and enhance project performance for multi-disciplinary and multi-project assignments. Our project team consists of the subcontractors previously identified in the Personnel Organizational Chart in Section C – Subject 13 in the areas of operations, water treatment, liner contractor, earthwork, HDPE pipe and drain and grassing. We believe all of our subcontract firms have demonstrated the level of service expected by CDM and FDEP, and our established relationships with these firms provide us with a solid working knowledge of their capabilities and level of service.

Management of our subcontractor relationships begins with a streamlined procurement process in which we set up standard ordering agreements. These agreements, which are executed prior to identifying a specific scope of work, allow us to obtain firm bids during scope development on individual projects and eliminate any delays associated with negotiations over contract terms once specific project requirements are identified.

Secondly, the performance of each subcontractor will be evaluated at completion of each assignment by the CDM project manager and monitored by our contract manager to provide trend data on the subcontractor's performance. Finally, on a yearly basis, CDM will assess the past performance of each subcontractor and propose any subcontract pool additions or deletions to FDEP. This continuous improvement process provides a means for any necessary adjustments of the subcontract pool to maintain high performance subcontractors throughout the life of the contract.

CDM also understands the need to carefully control the technical and financial aspects of work performed by our team. Our approach is as follows:

- Our project manager will work closely with our subcontractors to define clear written scopes of work, cost and invoicing terms, and schedule requirements.
- Our contracts may include incentives (higher award fees for early completion) for superior work completion and disincentives for substandard performance (termination/reduction of assignments and liquidated damages).
- If a subcontractor does not meet performance expectations, we require a corrective action plan and monitor the plan for conformance. For continued substandard performance, the subcontractor would be replaced by another pre-qualified firm.

### Contract Data Management Information System

The heart of our project management and control procedures for project management, planning, scheduling, and cost control is our PC-based software in conjunction with our Contract Data Management Information System (CDMIS). The PC-based software consists of Primavera (version 3.2) for the project management database, Primavision (version 3.1) for graphics and plotting, and Parade (version 3.0) for financial information.

Primavera allows the project manager to set up a project using Critical Path Method (CPM) scheduling, and it offers superior graphic outputs as well as the capability to accept financial information downloaded from the CDMIS mainframe system. It integrates the project plan, schedule, status, work hours, and performance data, providing management with a variety of cost and schedule status information reports to facilitate "real-time" decisions.

Using this software, the project manager can perform comparison analyses of actual costs for work performed, budgeted costs for work performed, and budgeted costs of work scheduled. The relationship of these three factors can be plotted on an S-curve that shows the current financial and scheduled status of a project.

## Subject 8 Subcontractor Support

In addition to the extensive CDM resources available, we have assembled an outstanding project team, who will serve as subcontractors on this project. Each offers unique experience, expertise and resources designed to meet specific FDEP needs:

### IMC Global Inc.

The IMC Water Treatment Technology team will be responsible for all aspects of water treatment needs evaluation, engineering, and system operation. IMC staff will most likely enhance the spray evaporation system to increase that water disposal method, optimize the double liming system through system upgrade and operational changes, work in conjunction with PENN PRO Engineering to enlarge capacity of the RO system at the facility, and explore other options such as spray irrigation for agricultural purposes and water reuse with Manatee County. In addition to IMC's primary role as water treatment contractor, IMC will utilize their extensive global experience in gypsum stack management to assist the CDM Team in the gypsum stack closure.

### PENN PRO, Inc.

PENN PRO will be responsible for process engineering in support of IMC on the water treatment team. PENN PRO was instrumental in the original design of the pilot system currently at the Piney Point Plant. The PENN PRO staff, that includes more than 250 man-years of phosphate experience, will be lead by John O'Connor, an civil engineer with over 30 years experience in the phosphate industry. John has also been an elected Soil and Water Conservation District Supervisor in Manatee County since 1976 and is a Director and President of the Florida West Coast Resource Conservation and Development District that is working to bring treated water to the agricultural community. He has knowledge of the agricultural activities in the area, especially in the area of water conservation and irrigation uses. John will also be assisting in the development of long-term water management and use strategies for the facility that will be beneficial to the surrounding communities.

### QuietEarth Consultants, Inc.

Mr. Kovach from Quiet Earth will provide regulatory compliance and operations assistance to Mr. Roberts and the CDM Team. Mr. Craig A. Kovach, president of Quiet Earth has over 17 years experience in the phosphate industry dealing with complex technical, regulatory compliance and community relations issues. His areas of specialty include phosphogypsum stack management/closure; phosphoric acid process water treatment and inventory reduction techniques; phosphate chemical plant closure, including process waste, PCB, asbestos, lead paint, and radioactive materials abatement; environmental regulatory compliance and programs; all phases and types of environmental permitting with particular expertise in surface and groundwater

discharge and monitoring programs. Mr. Kovach will serve as a consultant to CDM on the Piney Point project, specifically in the assistance of Paul Roberts and John Brafford in their roles.

### **COMANCO Environmental Corporation**

CEC will be responsible for all aspects of installation of smooth and textured liners and soil cover on the stack system and pond closures. CEC has 16 years of diverse experience and is respected as one of the nation's most qualified environmental lining construction companies. CEC has built the very foundation of its company around the clients and gypsum stack project located in Central Florida and elsewhere in the Southeast United States. Presently working for all four major phosphate processing companies in Florida, including the Piney Point facility. CEC holds the most complete understanding of Phosphogypsum Stack Lining and related Engineering QA requirements of any firm in the country.

### **Moretrench Environmental Services, Inc.**

Moretrench will perform all of the functions associated with Earthwork, HDPE Pipe and Drain work and Grassing associated with the Piney Point Phosphogypsum Stack System Closure project. Moretrench has served the Tampa area with the finest in civil and environmental contracting services since 1945. As a Florida licensed general, utility, and plumbing contractor, they have worked for a variety of manufacturing, utility, and phosphate industry clients across the state. Moretrench field crews are Phosphate Council, MSHA, and OSHA safety trained; and they employ some of the finest project superintendents in Central Florida. Moretrench has completed dozens of similar projects for every major phosphate company in Florida including Cargill, IMC, and PCS Phosphates. Moretrench has been involved with projects for Stack Closure and HDPE pipeline construction for the closed Mulberry Corporation facility under the supervision of Louis Timchak and the Cargill Corp. They will also provide these services at Piney Point.

## Subject 9 Proposed Pricing

CDM is proposing to perform the work on this contract on a cost plus basis with a guaranteed maximum price negotiated for each definitive phase of the work. This type of arrangement allows for the most flexibility in the performance of the work and fosters the team approach with all the parties involved. A lump sum type of contract for a multi- year program management type contract such as this would result in the contractor including in their pricing a considerable amount of money to cover the contingencies and risk involved with the project. The cost plus arrangement would allow the work to be broken down into finite segments during the contract period and the budgets for each portion of the work would be agreed to by all parties. The cost of the work planned during the budget phase and the actual costs during execution would be available for review and audit by the FDEP and the Engineer. The guaranteed maximum price is the mechanism that provides the FDEP with the assurance that the work will be completed within the established budget and schedule.

The proposed pricing is based on the information contained in the FDEP Solicitation #2005002C dated 7/16/04, a site visit at the Piney Point Facility held on 8/5/04, Addendum #1 dated 8/23/04, Addendum #2 dated 8/26/04, Addendum #3 dated 8/30/04 and Addendum #4 dated 9/3/04 and the information made available through the FDEP website. The price proposal is based on the following assumptions and clarifications:

### General

- Technical Specifications contained within the ITN Package and used for the purposes of this estimation will be virtually the same as those under development for the Work covered by this Proposal.
- Adjustments to pricing may be made based on a fully developed Technical Design made available prior to negotiation of pricing.
- No costs for Performance and Payment Bonds have been included for the prime respondent or any subcontractors
- CDM and its subcontractors will be allowed equitable time and contract price adjustment for Force Majeure delays or standby.
- A mutual waiver of consequential damage will be discussed during negotiations with the DEP.

### Item A Operation and Maintenance

- The Operation and Maintenance staffing and equipment meets the requirements of the contingency plan currently in place for the site.

### Item B Process Water Consumption

- The costs for process water consumption include the estimated electricity costs for the operation of the treatment system. The electricity cost has been estimated at \$0.10/KWH. We were unable to obtain a quote from the local utility due to their response to the repair efforts being performed as a result of the recent hurricanes.

### Item C Closure Construction

- The balance between cut and fill within the gypsum stack area is reportedly equal, requiring no imported fill and no off site disposal of excess cut material.
- The closure construction requires approximately 1,000,000 cubic yards of clean fill material which will be obtained from offsite sources. The pricing presented has approximately \$10,000,000.00 for the purchase and delivery of this fill material. CDM is confident that better fill sources located closer to the project could be obtained during the negotiation process.
- Approximately 80 Acres of sod will be installed on the soil fill areas of the top gradients of the NGS-S, OGS and the NGS-S compartment. The remaining areas will be seeded and mulched.

### Item D Allowances & Allocations

- The disposal of the plant scale is based on the 25,000 cubic yards plant scale being stockpiled by others for loading and disposal in the relief ditch. The allowance also includes the cost of importing, placing and compacting 51,500 cubic yards of offsite clean fill.

### Item E Miscellaneous

- A full-time site safety officer has been included in the safety training line item for the first two and half years of the project. This is to provide adequate safety monitoring and training during the closure construction and process water consumption work.

**ATTACHMENT D-1  
REVISED COST INFORMATION SHEET**

| <b>TYPE OF CONTRACT</b><br>(Propose/Specify One)                                                                                                                                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Fixed Price (Lump Sum) <input type="checkbox"/> Combination Fixed Price/Cost Reimbursement<br><input checked="" type="checkbox"/> Cost Reimbursement Not-To-Exceed <input type="checkbox"/> Other: _____ |                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Item                                                                                                                                                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                              | Estimated Quantity                                                                                                                                                                                                                | Proposed Price (\$)    |
| <b>A. OPERATION AND MAINTENANCE</b>                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                          | Initial 5 Years<br>(for evaluation purposes only)                                                                                                                                                                                 | <b>\$ 10,654,773 *</b> |
| A1                                                                                                                                                                                                                           | Site Operation & Maintenance (Including Water & Waste Management, Inspections, Repairs, and Post-Closure Care and Maintenance).                                                                                                                                                                                                                                                                                          | Lump                                                                                                                                                                                                                              | \$ 8,089,384           |
| A2                                                                                                                                                                                                                           | Site Security & Safety Compliance                                                                                                                                                                                                                                                                                                                                                                                        | Lump                                                                                                                                                                                                                              | \$ 720,720             |
| A3                                                                                                                                                                                                                           | Groundwater Monitoring Plan Implementation                                                                                                                                                                                                                                                                                                                                                                               | Lump                                                                                                                                                                                                                              | \$ 521,380             |
| A4                                                                                                                                                                                                                           | Surface Water Monitoring Plan Implementation                                                                                                                                                                                                                                                                                                                                                                             | Lump                                                                                                                                                                                                                              | \$ 269,610             |
| A5                                                                                                                                                                                                                           | Project Coordination, Direction & Reporting                                                                                                                                                                                                                                                                                                                                                                              | Lump                                                                                                                                                                                                                              | \$ 1,053,679           |
| <b>B. PROCESS WATER CONSUMPTION</b><br>Specify Method(s): <u>Combination Reverse</u><br><u>Osmosis and Double Lime Treatment, spray</u><br><u>irrigation, agricultural application and reuse</u><br><u>in Manatee County</u> |                                                                                                                                                                                                                                                                                                                                                                                                                          | Ponded Water Plus Pore Water<br>620 Million Gallons<br>(MGal) ± Plus Rainfall                                                                                                                                                     | <b>\$ 19,060,124 *</b> |
| B1                                                                                                                                                                                                                           | Process Water Consumption<br>(Fill All Applicable Ammonia Nitrogen Loading Criteria<br>Including Estimated MGal of Water Consumed at Any Given<br>Loading, and Corresponding Price)<br><input type="checkbox"/> Loading Less Than 100 lbs/day<br><input type="checkbox"/> Loading Less Than 75 lbs/day<br><input type="checkbox"/> Loading Less Than 50 lbs/day<br><input type="checkbox"/> Loading Less Than 20 lbs/day | Lump ( <u>0</u> MGal)      \$ <u>0</u><br>Lump ( <u>0</u> MGal)      \$ <u>0</u><br>Lump ( <u>90</u> MGal)      \$ <u>1,370,647</u><br>Lump ( <u>1,010</u> MGal)      \$ <u>17,689,477</u>                                        |                        |
| B2                                                                                                                                                                                                                           | Additional Compensation Per Inch of Rainfall Over 55 Inches<br>Per Year<br><input type="checkbox"/> Year 1<br><input type="checkbox"/> Year 2<br><input type="checkbox"/> Year 3<br><input type="checkbox"/> Year 4 and 5                                                                                                                                                                                                | 10.6 MGal/Inch      125,807 \$/Inch<br>7.1 MGal/Inch      85,945 \$/Inch<br>4.1 MGal/Inch      49,276 \$/Inch<br>None      Not Applicable                                                                                         |                        |
| B3                                                                                                                                                                                                                           | Credit Per Inch of Rainfall Below 50 Inches Per Year<br><input type="checkbox"/> Year 1<br><input type="checkbox"/> Year 2<br><input type="checkbox"/> Year 3<br><input type="checkbox"/> Year 4 and 5                                                                                                                                                                                                                   | 10.6 MGal/Inch      79,288 \$/Inch<br>7.1 MGal/Inch      53,108 \$/Inch<br>4.1 MGal/Inch      30,668 \$/Inch<br>None      Not Applicable                                                                                          |                        |
| B4                                                                                                                                                                                                                           | Allowance for + 20% Variations in Total Drainable Pore Water<br>and in Rate of Dewatering.<br><br>Do you Plan to Quantify Drained Pore Water in Support of a<br>Request for Potential Supplemental Credit, if Applicable?<br><input type="checkbox"/> Yes (If Yes, Specify Proposed Method)<br><input checked="" type="checkbox"/> No                                                                                    | Lump                                                                                                                                                                                                                              | \$ 886,642             |

\* The price submitted in this section should be the total price for the category, based upon the prices submitted in the detailed subsections below.

| Item                           | Description                                                                                                                                                                                                                                                                                                                                                | Estimated Quantity                                           | Proposed Price (\$ )                                                                                                                                                       |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>C. CLOSURE CONSTRUCTION</b> |                                                                                                                                                                                                                                                                                                                                                            | Lump (See Note Below)                                        | <b>\$ 31,719,277 *</b>                                                                                                                                                     |
| C1                             | NGS-N, OGS-S and OGS-N <ul style="list-style-type: none"> <li>- Protective Soil Cover on Lined Slopes and Crest Roads</li> <li>- Grassing or Sodding</li> </ul>                                                                                                                                                                                            | Lump<br>Lump                                                 | <u>\$ 3,737,250</u><br><u>\$ 356,301</u>                                                                                                                                   |
| C2                             | NGS-S Compartment <ul style="list-style-type: none"> <li>- Earthwork (Gypsum), including sludge removal</li> <li>- 80-Mil HDPE Liner</li> <li>- 60-Mil HDPE Liner</li> <li>- 40 Mil HDPE Liner</li> <li>- Soil Cover</li> <li>- Grassing or Sodding</li> <li>- Outlet Structure(s)</li> <li>- Other (including surveying &amp; ancillary items)</li> </ul> | Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump | <u>\$ 2,998,380</u><br><u>\$ 2,157,760</u><br><u>\$ 621,940</u><br><u>\$ 225,885</u><br><u>\$ 2,963,400</u><br><u>\$ 380,239</u><br><u>\$ 110,663</u><br><u>\$ 539,371</u> |
| C3                             | Stack Slopes and Ditches <ul style="list-style-type: none"> <li>- Earthwork (Gypsum)</li> <li>- 80-Mil HDPE Liner</li> <li>- 60-Mil HDPE Liner</li> <li>- Drain Systems</li> <li>- Soil Cover</li> <li>- Gypsum Amendment &amp; Grassing or Sodding</li> <li>- Other (including surveying &amp; ancillary items)</li> </ul>                                | Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump         | <u>\$ 279,400</u><br><u>\$ 594,880</u><br><u>\$ 355,740</u><br><u>\$ 1,500,675</u><br><u>\$ 2,247,300</u><br><u>\$ 469,347</u><br><u>\$ 57,794</u>                         |
| C4                             | Cooling/Sludge Ponds and Ditches <ul style="list-style-type: none"> <li>- Earthwork (Soil)</li> <li>- 80-Mil HDPE Liner</li> <li>- 40-Mil HDPE Liner</li> <li>- Drain Systems</li> <li>- Soil Cover</li> <li>- Grassing or Sodding</li> <li>- Other (including surveying &amp; ancillary items)</li> </ul>                                                 | Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump<br>Lump         | <u>\$ 1,677,500</u><br><u>\$ 734,272</u><br><u>\$ 1,866,095</u><br><u>\$ 1,085,783</u><br><u>\$ 6,300,800</u><br><u>\$ 359,073</u><br><u>\$ 99,429</u>                     |
| <b>D. TOTAL PRICE (A+B+C)</b>  |                                                                                                                                                                                                                                                                                                                                                            | Lump                                                         | <b>\$ 61,434,174</b>                                                                                                                                                       |

|                                        |                                                                                                 |           |                            |
|----------------------------------------|-------------------------------------------------------------------------------------------------|-----------|----------------------------|
| <b>E. ALLOWANCES &amp; ALLOCATIONS</b> |                                                                                                 | Allowance | <b>\$ 1,650,000 *</b>      |
| E1                                     | Watershed Reduction/Clean Up from Designated Impacted Plant Area, as Directed by the Department | Allowance | <u>\$ to be negotiated</u> |
| E2                                     | Disposal of Plant Scale on Gypsum Stack, Pending Department Approval <sup>†</sup>               | Allowance | <u>\$ 1,650,000</u>        |
| E3                                     | Construction of Soil-Bentonite Cut-off Wall                                                     | Allowance | <u>\$ to be negotiated</u> |

<sup>†</sup>For purposes of estimating a cost for disposal of plant scale, the respondent shall assume a volume of plant scale to be disposed of 25,000 cubic yards. The total volume inclusive of plant scale and encapsulating gypsum is 100,000 cubic yards which respondents can calculate from drawings posted on the web site.

\* The price submitted in this section should be the total price for the category, based upon the prices submitted in the detailed subsections below.

| Item                    | Description                                                  | Estimated Quantity | Proposed Price (\$ )       |
|-------------------------|--------------------------------------------------------------|--------------------|----------------------------|
| <b>F. MISCELLANEOUS</b> |                                                              | Lump               | <b>\$ 1,647,848 *</b>      |
| F1                      | Safety Training (& Compliance)                               | Lump               | <b>\$ 282,499</b>          |
| F2                      | Liability Insurance Coverage (Including Pollution Liability) | Lump               | <b>\$ 420,758</b>          |
| F3                      | Stop-Loss or Cost-Cap Insurance Policy                       | Lump               | <b>\$ to be negotiated</b> |
| F4                      | Performance Bond, if Required                                | Lump               | <b>\$ to be negotiated</b> |
| F5                      | Florida Sales Taxes                                          | Lump               | <b>\$ 944,591</b>          |

**Note:**

The Department tentatively estimates the following closure construction quantities which are not inclusive of all materials (e.g., sluiced gypsum, filter fabric, reinforcing geotextile, geonet/geotextile composites, grave, pipe, etc.). Respondent is required to independently estimate all quantities listed below and perform an independent quantity take-off without relying in any way on Department's Estimate. Department's tentative estimates do not include any adjustment for bulking factor or shrinkage, additional fill needed to compensate for settlement, mudwaving of soft materials, liner overlaps, waste, liner buried in anchor trenches, increased areas due to sloping surfaces, etc.

| Activity                                        | Department's Tentative Estimate | Respondent's Independent Estimate |
|-------------------------------------------------|---------------------------------|-----------------------------------|
| NGS-N, OGS-S and OGS-N Compartments             |                                 |                                   |
| - Compacted Soil Fill for Cover, cyd            | 250,000                         | 250,000                           |
| - Grassing or Sodding, acres                    | 40                              | 40                                |
| NGS-S Compartment                               |                                 |                                   |
| - Sludge Excavation & Disposal, cyd             | 20,000                          | 20,000                            |
| - Compacted Gypsum Fill, cyd                    | 400,000                         | 400,000                           |
| - 80-Mil HDPE Liner, ft <sup>2</sup>            | 3,000,000                       | 3,065,000                         |
| - 60-Mil HDPE Liner, ft <sup>2</sup>            | 1,250,000                       | 1,285,000                         |
| - 40-Mil HDPE Liner, ft <sup>2</sup>            | 500,000                         | 555,000                           |
| - Compacted Soil Fill for Cover, cyd            | 200,000                         | 200,000                           |
| - Grassing or Sodding, acres                    | 50                              | 50                                |
| Stack Slopes and Ditches                        |                                 |                                   |
| - Gypsum Fill, cyd                              | 100,000                         | 100,000                           |
| - 80-Mil HDPE Liner, ft <sup>2</sup>            | 800,000                         | 845,000                           |
| - 60-Mil HDPE Liner, ft <sup>2</sup>            | 700,000                         | 735,000                           |
| - Drain System, lineal feet                     | 12,500                          | 12,750                            |
| - Compacted Soil Fill for Cover & Grading, cyd  | 150,000                         | 150,000                           |
| - Soil Grassing or Sodding, acres               | 35                              | 35                                |
| - Gypsum Amendment & Grassing or Sodding, acres | 55                              | 55                                |
| Cooling Sludge Ponds & Ditches                  |                                 |                                   |
| - In-Place Soil Fill, cyd                       | 250,000                         | 250,000                           |
| - 80-Mil HDPE Liner, ft <sup>2</sup>            | 1,000,000                       | 1,043,000                         |
| - 40-Mil HDPE Liner, ft <sup>2</sup>            | 4,500,000                       | 4,585,000                         |
| - Drain System, lineal feet                     | 9,000                           | 9,225                             |
| - Compacted Soil Fill for Cover, cyd            | 400,000                         | 400,000                           |
| - Grassing or Sodding, acres                    | 150                             | 150                               |

\* The price submitted in this section should be the total price for the category, based upon the prices submitted in the detailed subsections below.

**ATTACHMENT E  
CLIENT REFERENCE FORMS**

In the spaces provided below, the respondent shall list all names under which it has operated since July 1999.

Current Name: CDM Constructors Inc.

CDM Engineers & Constructors Inc.

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On the following pages, the respondent must list a minimum of three separate and verifiable projects for clients of the respondent (not intended subcontractors). Do not list projects completed for DEP (see next paragraph). Information on each project must be provided on this Attachment. Any information not submitted on this attachment shall not be considered. The projects listed shall be for services similar in nature to that described in this solicitation. Confidential clients shall not be included. Contracts that the respondent has completed for firms who are listed as subcontractors in their response to this solicitation may not be used as Past Performance references under this solicitation. The same client may not be listed for more than one (1) reference (for example, if the respondent has completed one project for the Florida Department of Transportation – District One and one project for the Florida Department of Transportation – District Two, only one (1) of the projects may be listed because the client, the Florida Department of Transportation, is the same). Any additional references listed, over the minimum of three required, will be considered in determining if the respondent has satisfied the requirements for the three references as set out herein.

The DEP will review its records to identify all contracts that the respondent has undertaken with the DEP, where the respondent was the prime contractor, during the last five (5) years (contracts in effect on or after July 1999) for use in the evaluation of Past DEP Performance, if applicable. The respondent shall not list any previous DEP projects on this form.

In the event that the respondent has had a name change since the time work was performed for a listed reference, the name under which the respondent operated at the time that the work was performed must be given, at the end of the project description for that reference.

**In the event that respondents submit a proposal as a joint venture, at least one (1) project must be listed for each member of the joint venture.** For example: ABC Corporation and XYZ Corporation joint venture – ABC Corporation supplies two (2) projects and XYZ Corporation supplies one (1) project for a total of three (3) projects. **However, the total minimum number of clients to be listed remains three (3).**

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**Client #1:****Name:** Universal City Property Management, III LLC**Address:** 9751 Universal Boulevard, Orlando, FL 32819**Contact Person:** Mr. Brad Goeb Phone Number: (407) 226-8832**Project Term:** 12/99 to 09/04 (Ongoing)

\*\*Dates should be in mm/yy format.\*\*

**Location of Project:** Orlando, Florida**Approximate Fee for Product/Services** \$17,000,000**Design-Build-Operate Remediation of UCPM South Campus, Orlando, Florida**

CDM is managing the design-build-operate (DBO) remediation of the Universal City Property Management III LLC (UCPM) South Campus in Orange County, Florida. UCPM is a subsidiary of Stan Thomas Enterprises, a national commercial and industrial development company. The UCPM Site is a 2,000-acre property formerly operated as a defense manufacturing and weapons systems development site. Following UCPM's 1998 purchase, a comprehensive corrective action program was initiated to remediate soil and groundwater contamination attributed to past industrial use. The objective of the corrective action is to meet regulatory requirements as a RCRA Interim Measures Corrective Action and prepare the property for development and sale.

CDM is integrating environmental remediation with land development construction, including landfill excavation, groundwater recovery and treatment, and stormwater design. To accelerate cleanup, CDM is working with UCPM to facilitate phased property development in accordance with economically driven build-out plans for the property. To date, a large portion of the site has been developed, sold, or is currently undergoing active remediation.

**Design/Build Approach Strategies****Landfill Excavation**

Numerous innovative assessment and construction methods have helped to sustain the dynamic and fast-track schedule. Development goals required excavation of four abandoned landfills containing varying amounts of electroplating sludge, waste solvents, and miscellaneous debris that have contaminated the soil and groundwater. To support work plan development for landfill excavation, the project team conducted test-pitting with an onsite geologist and survey team. Using the resulting data, CDM rapidly generated a digital, three-dimensional terrain model that served as the basis of design for landfill excavation and waste volume calculations. Since 1999, CDM has excavated, assessed, and disposed of more than 350,000 cubic yards of waste and debris from four landfills.

**Groundwater Remediation**

Long-term development and regulatory goals specified hydraulic containment and management of groundwater plumes associated with the former landfills or industrial areas. Preliminary assessment of the nature and extent of the plumes was done using direct-push technology with an onsite mobile gas chromatography/mass spectrometry (GC/MS) laboratory. This allowed CDM to accurately investigate large plume areas at varying subsurface depths in a relatively short time period. Once the preliminary plume assessment was complete, CDM placed monitoring wells in strategic locations to confirm results.

### **Design-Build-Operate Remediation of UCPM South Campus (Continued)**

Using existing and previously collected data, CDM designed and constructed a centralized groundwater treatment facility capable of processing groundwater from all contaminated areas at the site. The treatment system consists of two 500-gallon-per-minute tray air strippers, a one million gallon receiving pond and an effluent disposal sprayfield. The effluent disposal sprayfield distributes treated groundwater over 80 acres, reducing treated water disposal costs and recharging the regional aquifers.

Groundwater recovery systems were designed and installed at each contaminated site and then connected to the centralized groundwater treatment facility. Detailed modeling of groundwater flow, contaminant transport, and particle tracking was conducted to facilitate groundwater recovery system design. The groundwater recovery systems consist of over 4,000 linear feet of horizontal recovery wells and 9 vertical recovery wells. One of the horizontal well applications has been noted as a world record in terms of depth using a single one-pass trenching machine. To date over 52 million gallons of contaminated groundwater have been recovered, treated to drinking water standards, and then returned to the aquifer system. As development continues, UCPM and CDM will evaluate supplemental technologies that can further accelerate groundwater remediation.

### **Operation and Monitoring**

To monitor the efficiency of the recovery and treatment systems, CDM installed an extensive data collection network. Data is collected to evaluate remedial progress for regulatory reporting and to allow UCPM to refine and prioritize site development strategies. CDM is responsible for the continued performance monitoring as well as operation and maintenance of the recovery and treatment systems. Innovative instrumentation and controls designed by CDM allow for efficient operation and maintenance of the recovery and treatment systems.

### **Project Reporting and Regulatory Review**

Enhanced project delivery using the DBO approach has provided UCPM with expedited regulatory review and enhanced interactions with the multiple federal and state agencies overseeing the project. The multi-faceted project requires extensive documentation and reporting. Therefore, most documents are submitted electronically after extensive preliminary discussions with the regulators. This streamlined reporting procedure has accelerated redevelopment of prime property and return of capital investment to UCPM.

**Client #2****Name:** Sarasota County Government**Address:** 4000 Knights Trail Road, Nokomis, Florida 34275**Contact Person:** Mr. Gary Bennett **Phone Number:** (941) 486-2600**Project Term:** 10/98 to 04/00

\*\*Dates should be in mm/yy format.\*\*

**Location of Project:** Sarasota County, Florida**Approximate Fee for Product/Services:** \$6,816,346**Bee Ridge Landfill Closure, Sarasota County, Florida**

For Sarasota County, CDM provided the design, permitting, and construction for the closure of the 87-acre Bee Ridge Landfill. The project included designing and constructing the landfill cap and modifying and expanding the existing landfill gas piping system to achieve final closure of the site.

Because residents in a community neighboring the landfill were anxious for speedy closure of the site, the County opted for a design/build approach, which would expedite the schedule. While design was underway, CDM initiated the permitting process, began excavating fill material, and ordered long-lead equipment items.

The landfill cap is made of 6 inches of fill, a linear low-density polyethylene (LLDPE) liner, an additional 22 to 24 inches of fill over the liner, and a top layer of sod. Instead of hauling fill material in from a supplier approximately 10 miles away, which would have been both costly and time-consuming, CDM took an innovative approach to obtaining fill. First, the team was able to reuse material already onsite by re-grading select portions of the fill material available. CDM then bought a 40-acre piece of property within 2 miles of the site, tested the soil for compliance with fill material requirements, and excavated a large portion of the property. The excavation was designed with future land use in mind; the excavated area, once filled with water, will become a lake in the center of a residential community. CDM's approach both solved the County's need for less expensive fill material and enhanced the neighboring property for development.

While capping the landfill, CDM made improvements to the landfill gas system, replacing 30 existing wellheads and installing 17 new ones. The project team also installed a new blower/flare system, and related piping.

With the completion of the project, the County achieved final closure of the site. Under the control of the Sarasota County Parks and Recreation Department, a portion of the landfill was redeveloped into a first-class model airplane flight facility for the RC Flyers. CDM built taxiways, a runway, utilities, and parking areas for the airport, in addition to revegetating the site. Future redevelopment options may include a skateboard route, BMX track, jogging trail, wildlife/nature boardwalk, and/or an executive golf course.

As an alternative to traditional design-bid-build, the design/build approach to the County's project offered schedule savings of more than 12 months and cost savings of \$1 million. Further, the project demonstrated one of the exciting benefits of having design and construction personnel work together towards a common goal: innovative problem-solving.

**Client #3****Name:** Design, Construction, and Expansion of Secure Landfill, Massena, New York**Address:** Alcoa Inc., PO Box 500, Massena, NY 13662**Contact Person:** Mr. Rick Esterline, Remediation Manager **Phone Number:** (315) 764-1996**Project Term:** Design: 06/91 to 04/93; Construction: 05/93 to (Liners completed) 06/94; CAP Construction: 10/99 to 10/01

\*\*Dates should be in mm/yy format.\*\*

**Location of Project:** Massena, NY**Approximate Fee for Product/Services** \$20,000,000 (Cells 1 and 2)**Design, Construction, and Expansion of Secure Landfill, Massena, New York**

For Alcoa's aluminum manufacturing facility in Massena, New York, CDM directed a remediation program, which included cleanup of 18 waste sites and the design, construction, operation and closure of an onsite secure landfill. CDM completed the final design and permitting for the on-site landfill with a capacity of 540,000 cubic yards, built to RCRA and TSCA technical standards. Components of the landfill included a double composite liner with leachate collection and leak detection systems, a groundwater monitoring system, and an RCRA/TSCA-equivalent capping system. Construction of two cells with a design capacity of over 300,000 cubic yards was initiated in 1993. Cell No. 1 was filled and capped by the end of 1995. In 1998, CDM designed certain modifications to Cell No. 2 to significantly increase its disposal capacity as a cost-saving measure. During landfill operations, CDM responded to a wide variety of operational and regulatory landfill matters.

**Design and Permitting**

In accordance with the overall remediation of numerous individual sites at the facility, the onsite landfill was designed to accept a variety of waste materials and contaminated soils. The contaminants of concern included polychlorinated biphenyls (PCBs), metals, cyanide, fluoride, volatile organic compounds, and polynuclear aromatic hydrocarbons (PAHs). The landfill was designed and constructed to achieve both RCRA and TSCA approval for accepting waste, and to comply with other New York State Department of Environmental Conservation (NYSDEC) regulations. Design features included a double composite liner with leachate collection and leak detection systems, a groundwater monitoring system, an RCRA-TSCA-equivalent composite capping system, slope and seismic stability design maximizing use of onsite materials, and surface water and erosion controls. As part of the approval process, CDM worked closely with both NYSDEC and the Environmental Protection Agency (EPA).

The design was modified during landfill operation to maximize the growing quantities of waste scheduled for disposal as the remediation program evolved. Design modifications included increasing slopes of the bottom liner berms and increasing slope of the waste pile (and therefore of the final cap). The increased slopes required modifications to the liner and cap designs, including use of HDPE geogrid for earth reinforcement.

CDM also designed a vertical expansion of Cell No. 2, which filled the "valley" between the then-completed cap on Cell No. 1 and the mound of waste in Cell No. 2 with an additional 78,000 cubic yards of waste material. The portion of the Cell No. 1 cap scheduled to receive waste was converted to a double liner, meeting RCRA and TSCA technical standards, by

**Design, Construction, and Expansion of Secure Landfill, Massena, New York  
(continued)**

removing the soil cover and placing an HDPE drainage net, geosynthetic clay and an HDPE geomembrane on top of the existing geosynthetic clay-HDPE composite cap. The components of this new lining system were connected to the matching components of the Cell No. 2 liner and a supplementary leachate collection line was installed at the interface of the old and new primary liners. NYSDEC, the agency overseeing the remediation program, approved the design. Construction was completed in the fall of 1999 with CDM providing construction inspection services. Filling and capping of the entire landfill was completed in 2000.

**Construction Management and Quality Assurance**

CDM provided construction monitoring and quality assurance personnel for the project. Because of the aggressive remedial schedule established in the Record of Decision, CDM relied on two construction work shifts up to seven days per week to complete the cells on schedule. CDM provided construction inspection services during construction and operation (filling) of both cells (including the expansion) and the final capping of the completed landfill.

The entire remediation program was completed over a ten-year period by a team consisting of CDM, Alcoa, and the contractor (Morrison Knudsen Environmental). NYSDEC had a full-time on-site presence. Construction was done using a process that was very similar to a design-build process. CDM completed designs to a level of detail allowing review and approval by Alcoa and NYSDEC. Construction then proceeded and field changes were identified, resolved by CDM and the contractor, and documented to the satisfaction of NYSDEC. These changes were often resolved in real-time since the approving agency and client were on-site.

## Subject 11 Insurance Program

### Proposed Environmental Impairment Liability Insurance Coverage

Environmental Impairment Liability (EIL) and Remediation Stop Gap Liability (RSG) are two useful tools that should be considered to transfer the unknown environmental liabilities associated with the current site conditions as well as the proposed remedial effort. EIL and RSG are also a strategic risk-management mechanism, with coverage's that can help protect the State from environmental liabilities in business/regulatory transactions, such as those that occurred in the receivership of the site in question. EIL provides environmental coverage for losses due to on- or off-site pollution conditions, coverage for pollution conditions resulting from transportation and coverage for owned or non-owned disposal site-related environmental liabilities. Remediation Stop-Gap Coverage is an environmental insurance policy that can help the state quantify with certainty exposure to cost overruns associated with the large-scale environmental remediation project at Piney Point. Both coverages can be combined on a single insurance contract with the seamless transfer of various known and unknown environmental liabilities at the site can be bifurcated to provide separate limits of liabilities as well as owners and operators interest.

In addition, the State should consider the option of structuring an Alternative Risk Financing (ARF) solution that would wrap-up both the future financial obligations of the site as well as provide the long-term risk transfer of the site (also referred to in the insurance market place as finite insurance). This policy combines the risk transfer of the EIL policy with a funding mechanism of the known remediation costs. The insurance carrier writing the finite risk policy offers a premium that includes the risk transfer costs as well as the present value of the remediation. The funds to be used for remediation are then segregated in an interest bearing account from which all remediation expenses will be paid. In the simplest model, once the loss fund is depleted, the insurance will attach. The finite risk policy also typically allows that any funds remaining in the loss fund at the completion of the project will be returned (along with all earned interest) to the client (or their assignee). In this way, all parties to the contract are given incentive for the remediation project to be completed on time and on budget. The main goal of an ARF insurance program is to transfer known or projected liabilities and costs to an insurer with a significant savings to site owner or operator. Features available on such programs include the possibility of obtaining upwards of a 20 to 30 year risk transfer program as well as no deductible/self-insured retention on the RSG portion of the risk transfer program.

## Available Insurance Coverage Outline

| EIL Triggers of Coverage*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | RSG Triggers of Coverage*                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Available Coverage:</b></p> <ul style="list-style-type: none"> <li>• Coverage applies to sudden and gradual pollution conditions</li> <li>• First-Party coverage for on-site cleanup of pre-existing and new pollution conditions</li> <li>• Coverage for third-party claims for on-site and off-site clean-up resulting from pollution conditions</li> <li>• Coverage for third-party claims for on-site and off-site bodily injury and property damage</li> <li>• Coverage for liability associated with the disposal, transportation, treatment, disposal or destruction of waste streams (CERCLA)</li> <li>• First-Party coverage for business interruption</li> <li>• Defense coverage</li> <li>• Coverage for punitive damages, fines, penalties where allowable by law</li> <li>• Natural resource damages</li> <li>• Coverage for change in law/government re-openers</li> <li>• Diminution in property value</li> <li>• Coverage for underground storage tanks</li> <li>• Contractual liability</li> </ul> | <p><b>Available Coverage:</b></p> <ul style="list-style-type: none"> <li>• Coverage for cost overruns of known and quantified remediation expenses greater than expected for the following triggers:</li> <li>• Greater concentration of known contamination</li> <li>• Greater spread of contamination</li> <li>• Changes in regulatory remediation standards</li> <li>• Failure of remediation technology</li> <li>• Coverage for change in law/government re-openers</li> <li>• Costs associated with design negligence</li> </ul> |
| * Requires underwriting and reinsurance approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Proposed Insurance Coverage Outline

### Option 1

| Risk Transfer Solution**                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                           |                                      |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|--------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | EIL*                      | RSG*                                 |
| <b>Limits of Liability</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | \$25,000,000/\$25,000,000 | \$50,000,000/\$50,000,000            |
| <b>Aggregate Limit of Liability</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                            | \$75,000,000              |                                      |
| <b>Self Insured Retention</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | \$250,000 to \$500,000    | 15% to 28% of Expected Clean-up Cost |
| <b>Term of Contract</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Up to 10 Years            | Up to 10 Years or Term of Clean-up   |
| <p>* Contemplates aggregating of coverage and limits of insurance onto a single insurance contract</p> <p>** Assumes 5 year clean-up cycle</p> <ul style="list-style-type: none"> <li>Coverages can also be separated into two policies including a single aggregate of insurance or separate limits of liabilities</li> <li>Longer term risk transfer policies may be available</li> <li>Additional insurance limits are available from the primary insurer or as excess insurance</li> </ul> |                           |                                      |

### Option 2

| Alternative Risk Financing Solution                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                              |                  |                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|------------------|------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | EIL                          | RSG              | ARF              |
| <b>Limits of Liability</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | \$165,000,000/\$165,000,000* |                  |                  |
| <b>Self Insured Retention (EIL Coverage Only)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | \$250,000 to \$500,000       | None             | Not applicable   |
| <b>Term of Contract</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Up to 30 Years**             | Up to 30 Years** | Up to 30 Years** |
| <p>* Includes prefunding of known liabilities and risk transfer limits of coverage.</p> <p>** Includes long term monitoring and EIL and/or RSG coverage</p> <ul style="list-style-type: none"> <li>Payment structures are available for the prefunding of the known liabilities in example 1/3 due year 1, 1/3 due year 3 and 1/3 due year 6</li> </ul> <p><b>The \$165,000,000 limit is derived by the following =</b><br/> <b>[\$70,000,000 (prefunded known clean-up)] + [\$25,000,000 (EIL Risk Transfer Limit)] +</b><br/> <b>[\$70,000,000 (RSG Risk Transfer Limit)]</b></p> |                              |                  |                  |

### Additional Insurance Considerations for this Project

- Owner Controlled or Contractor Controlled Contractors Pollution Liability (CPL)
- Owners or Contractors Professional Liability



**AIG Environmental**  
175 Water Street, 12<sup>th</sup> Floor  
New York, NY 10038  
(212) 458-6209

September 8<sup>th</sup>, 2004

Mr. Dean Carter  
CDM Constructors  
2301 Maitland Center Parkway  
Suite 300  
Maitland, Florida 32751

**Re: CDM Constructors, Closure of Piney Point Phosphogypsum Stack System, Pollution Legal Liability Select and Clean-up Cost Cap Policy – DEP Solicitation No. 2005002C**

Dear Mr. Edger:

This letter may be used as evidence that American International Specialty Lines Insurance Company will insure CDM Constructors, Inc. (CDM) for the work to be performed under Solicitation No. 2005002C if your bid is successful. Coverage is designed to meet the requirements outlined in Section A.18 b. of DEP Solicitation No. 2005002C. As you know we have been providing CDM with a comprehensive insurance program for a number of years on a wide variety of projects of varying size, complexity, and duration. We enjoy an excellent working relationship with both CDM and your insurance broker, and have a high degree of confidence, based on experience, in your technical aptitude and ability to deliver on your contractual commitments.

AIG member companies have been underwriting pollution coverage since 1979, providing coverage for environmental exposures faced by engineering firms, facility owners and operators, lenders and contractors. Our industry-leading \$150 million of capacity and AM Best A++ XV (superior) rating uniquely positions us to address environmental challenges of any size or range of complexity.

The insurance coverage available to support CDM for this project includes:

- Clean up cost cap insurance for the fixed price contract which could cover: cost over runs due to additional quantity of contamination, discovery of unknown contaminants, and changes in environmental laws or standards.
- PLL insurance for third party claims of Bodily Injury, Property Damage and/or Clean-up Costs resulting from contamination originating at the site.
- CPL insurance for third party claims of Bodily Injury, Property Damage and/or Clean-up Costs resulting from contractors operations at the site.

All of these coverages can be written on behalf of the State or the contractor and can provide coverage to additional insureds. The Cost Cap coverage can be written on a risk transfer or finite basis; we can provide greater flexibility in term, limits and surety support if the coverage is written as a finite program.

AIG Environmental's commitment to this program is contingent upon completing full underwriting of the various coverage elements and nothing herein shall be deemed to constitute an indication or quote for coverage or in anyway bind coverage.

If you have any questions, please feel free to contact Andy Carney at 813-727-4588 or Richard Davies at 215-255-6180. We appreciate the opportunity and we look forward to working with CDM on this project.

Best regards,

A handwritten signature in black ink, appearing to read "Larry Stern", followed by a long horizontal flourish.

Larry Stern  
Senior Vice President  
AIG Environmental



215-640-4267 tel  
ACE Environmental Risk 215-640-5150 fax  
1601 Chestnut Street, 610-389-4944 cell  
TL32C  
Two Liberty Place jon.peeples@ace-ina.com  
Philadelphia, PA 19103 www.ace-ina.com  
USA

**Jon W. Peeples, ARM**  
Vice President

August 27, 2004

Mr. Aashish Chauhan  
Aon Environmental  
200 E. Randolph Street, 11<sup>th</sup> Floor  
Chicago, IL 60601

RE: ***ACE Underwriting for CDM Constructors, Inc.  
Performance Based Contract for Closure Services  
Piney Point Phosphates, Inc. – FDEP ITN No. 2005002C***

Dear Mr. Chauhan,

ACE USA (ACE) is pleased to confirm its intent to provide Remedial Cost Containment and Pollution Legal Liability/Environmental Impairment Liability insurance to CDM Constructors, Inc. (CDM) in accordance with the requirements of the above-referenced contract in the event that CDM is selected by the Florida Department of Environmental Protection and Manatee County Circuit Court.

ACE's \$49.5 billion in total assets and AM Best A XIII rating allows us to provide the limits of liability and financial security required under above referenced solicitation, subject to our \$10,000,000 Limit capacity for Remedial Cost Containment. Our relationship with and confidence in CDM is reflected in our continuing supporting of CDM's corporate insurance program.

ACE will require a full underwriting evaluation of the coverage elements for each task order and nothing herein shall be deemed to constitute an indication or quote for coverage. ACE Environmental looks forward to working with CDM on this program.

Regards,

Jon W. Peeples  
Vice President



**Quanta U.S. Holdings, Inc.  
10 Rockefeller Plaza, 3<sup>rd</sup> Floor  
New York, NY 10020**

August 26, 2004

Ashish "A.C." Chauhan  
Aon Environmental  
200 E. Randolph St, 11th Floor  
Chicago, IL 60601

RE: CDM Guaranteed Fixed Price Remediation  
Piney Point

Dear AC:

We are pleased to confirm subject to the provisions outlined in the final paragraph of this letter our intention to insure CDM for the design/build operate of the closure of the Piney Point Phosphogypsum Stack System, in the event that CDM is the selected contractor for the this remediation project.

Quanta U.S. Holdings, Inc. is one of several companies owned by Quanta Capital Holdings, LTD, (hereinafter collectively referred to as "Quanta") a Bermuda holding company formed in 2003 to provide specialty insurance, reinsurance, risk assessment and risk consulting products and services on a global basis.

We underwrite coverage for specialized and technically advanced classes of risk, and pride ourselves on delivering customized and innovative insurance solutions. Our team of experienced, technically qualified underwriters has extensive risk assessment resources and engineering expertise, which enables us to provide superior products and services to our clients.

Quanta writes U.S. sourced primary insurance via Quanta Specialty Lines Insurance Company (QSLIC) and Quanta Indemnity Company (QIC). Both QSLIC and QIC are rated A-(Excellent) by AM Best. This rating was achieved in recognition of the companies' strong capitalization; strong balance sheet unencumbered by debt and prior year reserve liabilities, and experienced management team.

It is our understanding that CDM is bidding on a design/build operate of the closure of the Piney Point Phosphogypsum Stack System. We further understand that the task order relating to this project requires CDM to procure Remediation Cost Cap ("RCC") and Environmental Site Protection insurance. Quanta can provide both these required coverages.

Quanta's RCC policy pays costs in excess of the Self Insured Retention ("SIR") for remediation of identified pollutants as set forth in an agreed-upon remediation plan. Cost overruns for identified pollutants may arise from causes such as changes in the cleanup standard applied to the pollutants, scope of work modifications required by the regulatory authority, underperformance or failure of remedial technologies, mischaracterization of identified pollutants, and natural disasters. The RCC policy also pays costs in excess of the SIR for remediation of pollutants first discovered while implementing the remediation plan (i.e. "unidentified pollutants").

Quanta's ESP policy helps protect against liability for bodily injury, property damage, and remediation cost claims arising from pollution incidents at or migrating from scheduled locations as well as first party remediation costs at such locations.<sup>1</sup> Supplemental coverages to address pollution incidents associated with non-owned locations such as disposal sites or transportation can also be provided.

Quanta has unique, unparalleled access to in-house support services that are not available to, or otherwise implemented by other insurance companies. For example, Quanta has:

- unfettered access to its subsidiary - Environmental Strategies Consulting, LLC ("ESC") - the company that pioneered the risk assessment procedures and technical approaches to underwriting and claims handling for the very first environmental impairment liability insurance program. This distinctive relationship gives Quanta Environmental the unique ability to more efficiently and effectively manage claims through its access to the largest in-house team of environmental engineers and scientists in the industry.
- developed a surveillance program that is fully integrated and complementary to its Environmental Claims department. The surveillance program is managed by a dedicated environmental engineer who has more than fifteen years of experience in environmental consulting, design and implementation in soil and groundwater remediation as well as private cost recovery and insurance cost recovery actions. Quanta's surveillance program assures that in the event of a remediation project, the costs are

---

<sup>1</sup> If purchased in connection with an RCC policy, the remediation costs covered by the RCC policy are excluded from the ESP policy.

) diligently monitored and that the work gets done in an efficient and cost effective manner – both within and above an insured's retention.

Quanta is confident it can provide the environmental insurance products CDM requires to full comply with the projects insurance requirements. Quanta's commitment is conditioned upon satisfactory underwriting of all coverages and nothing in this letter should be deemed to constitute an indication or quote for coverage or in anyway bind coverage. Should you have any questions please feel free to contact us. Thank you for considering Quanta for your insurance needs.

Very truly yours,

Selina A. Regan

Selina A. Regan  
Northeast Regional Manager-Environmental Division  
Quanta US Holdings, Inc.

August 18, 2004

Florida Department of Environmental Protection  
Procurement Section, Carr Building, Room 235  
3900 Commonwealth Boulevard, MS#93  
Tallahassee, Florida 32399-3000

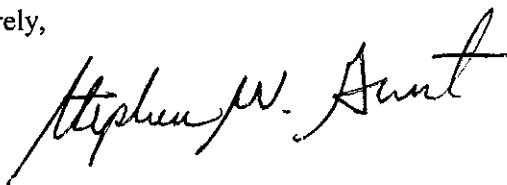
Re: CDM Constructors Inc.  
Contractor Prequalification

This letter will serve to confirm that CDM Constructors Inc. (CDM) is a highly regarded and valued client of Willis Corporation and United States Fire Insurance Company.

Willis has enjoyed the privilege of providing CDM with Performance and Payment bonds for many years. United States Fire Insurance Company has approved a surety program consisting of single project limits approaching \$75,000,000 with a corresponding aggregate bonding capacity of \$250,000,000 including current available backlog of approximately \$200,000,000. Therefore, CDM has the ability to obtain a 100% performance bond for \$60,000,000 as proposed for the Piney Point Project. As is customary within the surety industry, all bid and final bond approvals will be contingent upon a favorable underwriting review of project specifics, including the contract terms, conditions, bond forms and confirmation of complete project financing.

Should the Florida Department of Environmental Protection need additional assurance regarding the technical ability or bonding capacity of CDM, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in black ink, reading "Stephen W. Grant". The signature is fluid and cursive, with the first name "Stephen" and last name "Grant" clearly legible. The middle initial "W." is written in a smaller, more compact script.

Stephen W. Grant, Attorney-in-Fact

POWER OF ATTORNEY  
UNITED STATES FIRE INSURANCE COMPANY  
PRINCIPAL OFFICE, WILMINGTON, DELAWARE

210455

KNOW ALL MEN BY THESE PRESENTS: That the UNITED STATES FIRE INSURANCE COMPANY a Corporation duly organized and existing under the laws of the State of Delaware, and having its administrative offices in the Township of Morris, New Jersey, has made, constituted and appointed, and does by these presents make, constitute and appoint Michael S. Balboni, Stephen W. Grant, Jeannette Dominguez-Porrini, Eileen P. Sweeney, and Judith G. Misner, of Boston, Massachusetts, each

its true and lawful Agent(s) and Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, seal, acknowledge and deliver: Any and all bonds and undertakings-----

and to bind the Corporation thereby as fully and to the same extent as if such bonds had been duly executed and acknowledged by the regularly elected officers of the Corporation at its offices in Morris Township, New Jersey, in their own proper persons.

This Power of Attorney limits the act of those named therein to the bonds and undertakings specifically named therein, and they have no authority to bind the Company except in the manner and to the extent therein stated.

This Power of Attorney revokes all previous powers issued in behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the United States Fire Insurance Company has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 18<sup>th</sup> day of May, 2004.

Attest:



Assistant Secretary  
David Pesce

UNITED STATES FIRE INSURANCE COMPANY

Senior Vice President  
Peter J. Daly

STATE OF NEW JERSEY)

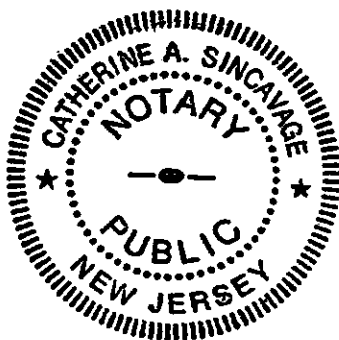
ss.:

COUNTY OF MORRIS )

On this 18<sup>th</sup> day of May, 2004, before the subscriber, a duly qualified Notary Public of the State of New Jersey, came the above-mentioned Vice President and Assistant Secretary of United States Fire Insurance Company, to me personally known to be the officers described in, and who executed the preceding instrument, and they acknowledged the execution of the same, and being by me duly sworn, depose and said, that they are the officers of said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and their signatures as officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Company.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my seal at the Township of Morris, the day and year first above written.

(Signed)  
(Seal)



Catherine A. Sincavage  
Notary Public

Catherine A Sincavage  
Notary Public of New Jersey  
My Commission Expires July 12, 2004

This Power of Attorney is granted pursuant to Article IV of the By-Laws of the UNITED STATES FIRE INSURANCE COMPANY as now in full force and effect.

**ARTICLE IV Execution of Instruments.** "The Chairman of the Board, Vice-Chairman of the Board, President, or any Vice-President, in conjunction with the Secretary, or any Secretary, if more than one shall be appointed by the Board, or an Assistant Secretary, shall have power on behalf of the Corporation:

(a) to execute, affix the corporate seal manually or by facsimile to, acknowledge, verify and deliver any contracts, obligations, instruments and documents whatsoever in connection with its business including, without limiting the foregoing, any bonds, guarantees, undertakings, recognizances, powers of attorney or revocations of any powers of attorney, stipulations, policies of insurance, deeds, leases, mortgages, releases, satisfactions and agency agreements;

(b) to appoint, in writing, one or more persons for any or all of the purposes mentioned in the preceding paragraph (a), including affixing the seal of the Corporation."

This Power of Attorney is signed and sealed under and by the authority of Article III, Section 9 of the By-Laws of the UNITED STATES FIRE INSURANCE COMPANY as now in full force and effect.

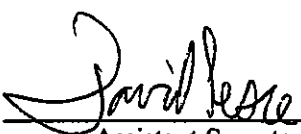
**ARTICLE III Section 9 Facsimile Signatures.** "The signature of any officer authorized by the Corporation to sign any bonds, guarantees, undertakings, recognizances, stipulations, powers of attorney or revocations of any powers of attorney and policies of insurance issued by the Corporation may be printed facsimile, lithographed, or otherwise produced . . . The Corporation may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Corporation, notwithstanding the fact that he may have ceased to be such at the time when such instruments shall be issued."

#### CERTIFICATE

State of New Jersey  
County of Morris

I, the undersigned, Assistant Secretary of UNITED STATES FIRE INSURANCE COMPANY, DO HEREBY CERTIFY that the foregoing POWER OF ATTORNEY remains in full force and effect and has not been revoked and furthermore that the above quoted abstracts of Article IV and Article III, Section 9 of the By-Laws of the Corporation are now in full force and effect.

In Testimony Whereof, I have hereunto subscribed my name and affixed the corporate seal of the said Company, this  
18<sup>th</sup> day of August, 2004.

By   
Assistant Secretary  
David Pesce

August 25, 2004

Florida Department of Environmental Protection  
Procurement Section, Carr Building, Room 235  
3900 Commonwealth Boulevard, MS#93  
Tallahassee, Florida 32399-3000

Re: CDM Constructors Inc.  
Contractor Prequalification – Piney Point  
Addendum to Bonding Capacity Letter

This addendum will serve to confirm that should CDM Constructors Inc. (CDM) be the selected respondent for the Piney Point Proposal, CDM and United States Fire Insurance Company would provide the required Performance Bond in an amount equal to one-hundred percent (100%) of the negotiated contract price prior to the execution of the resultant contract contingent upon a favorable underwriting review of project specifics, including the contract terms, conditions, bond forms and confirmation of complete project financing. Such Bond would be payable to the Department and issued by United States Fire Insurance Company, which is licensed to do business in the State of Florida. Moreover, in the event that the renewal option(s) of the contract are exercised, the bond shall also be renewed, contingent upon a favorable underwriting review of project specifics, including the contract terms, conditions, bond forms and confirmation of complete project financing.

In regard to CDM providing a Performance Bond in the amount of \$25 Million for a three-year duration, United States Fire Insurance Company would be capable of providing approval of such Bond contingent upon a favorable underwriting review of project specifics, including the contract terms, conditions, bond forms and confirmation of complete project financing.

Should the Florida Department of Environmental Protection need additional assurance regarding the technical ability or bonding capacity of CDM, please do not hesitate to contact this office.

Sincerely,

A handwritten signature in black ink, appearing to read "Stephen W. Grant". The signature is fluid and cursive, with the first name "Stephen" and last name "Grant" clearly distinguishable.

Stephen W. Grant, Attorney-in-Fact

POWER OF ATTORNEY  
UNITED STATES FIRE INSURANCE COMPANY  
PRINCIPAL OFFICE, WILMINGTON, DELAWARE

210456

NOW ALL MEN BY THESE PRESENTS: That the UNITED STATES FIRE INSURANCE COMPANY a Corporation duly organized and existing under the laws of the State of Delaware, and having its administrative offices in the Township of Morris, New Jersey, has made, constituted and appointed, and does by these presents make, constitute and appoint Michael S. Balboni, Stephen W. Grant, Jeannette Dominguez-Porrini, Eileen P. Sweeney, and Judith G. Misner, of Boston, Massachusetts, each

its true and lawful Agent(s) and Attorney(s)-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, seal, acknowledge and deliver: Any and all bonds and undertakings-----

and to bind the Corporation thereby as fully and to the same extent as if such bonds had been duly executed and acknowledged by the regularly elected officers of the Corporation at its offices in Morris Township, New Jersey, in their own proper persons.

This Power of Attorney limits the act of those named therein to the bonds and undertakings specifically named therein, and they have no authority to bind the Company except in the manner and to the extent therein stated.

This Power of Attorney revokes all previous powers issued in behalf of the attorney(s)-in-fact named above.

IN WITNESS WHEREOF the United States Fire Insurance Company has caused these presents to be signed and attested by its appropriate officers and its corporate seal hereunto affixed this 18<sup>th</sup> day of May, 2004.

Attest:



*David Pesce*  
Assistant Secretary  
David Pesce

UNITED STATES FIRE INSURANCE COMPANY

*Peter J. Daly*  
Senior Vice President  
Peter J. Daly

STATE OF NEW JERSEY)

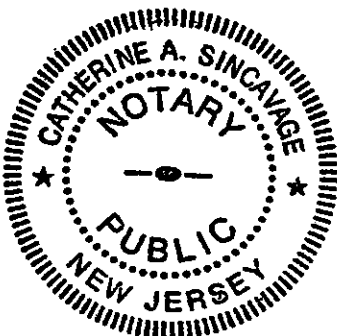
ss.:

COUNTY OF MORRIS )

On this 18<sup>th</sup> day of May, 2004, before the subscriber, a duly qualified Notary Public of the State of New Jersey, came the above-mentioned Vice President and Assistant Secretary of United States Fire Insurance Company, to me personally known to be the officers described in, and who executed the preceding instrument, and they acknowledged the execution of the same, and being by me duly sworn, deposed and said, that they are the officers of said Company aforesaid, and that the seal affixed to the preceding instrument is the Corporate Seal of said Company, and the said Corporate Seal and their signatures as officers were duly affixed and subscribed to the said instrument by the authority and direction of the said Company.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed my seal at the Township of Morris, the day and year first above written.

(Signed)  
(Seal)



*Catherine A. Sincavage*  
Notary Public

Catherine A Sincavage  
Notary Public of New Jersey  
My Commission Expires July 12, 2004

This Power of Attorney is granted pursuant to Article IV of the By-Laws of the UNITED STATES FIRE INSURANCE COMPANY as now in full force and effect.

**ARTICLE IV Execution of Instruments.** "The Chairman of the Board, Vice-Chairman of the Board, President, or any Vice-President, in conjunction with the Secretary, or any Secretary, if more than one shall be appointed by the Board, or an Assistant Secretary, shall have power on behalf of the Corporation:

(a) to execute, affix the corporate seal manually or by facsimile to, acknowledge, verify and deliver any contracts, obligations, instruments and documents whatsoever in connection with its business including, without limiting the foregoing, any bonds, guarantees, undertakings, recognizances, powers of attorney or revocations of any powers of attorney, stipulations, policies of insurance, deeds, leases, mortgages, releases, satisfactions and agency agreements;

(b) to appoint, in writing, one or more persons for any or all of the purposes mentioned in the preceding paragraph (a), including affixing the seal of the Corporation."

This Power of Attorney is signed and sealed under and by the authority of Article III, Section 9 of the By-Laws of the UNITED STATES FIRE INSURANCE COMPANY as now in full force and effect.

**ARTICLE III Section 9 Facsimile Signatures.** "The signature of any officer authorized by the Corporation to sign any bonds, guarantees, undertakings, recognizances, stipulations, powers of attorney or revocations of any powers of attorney and policies of insurance issued by the Corporation may be printed facsimile, lithographed, or otherwise produced . . . The Corporation may continue to use for the purposes herein stated the facsimile signature of any person or persons who shall have been such officer or officers of the Corporation, notwithstanding the fact that he may have ceased to be such at the time when such instruments shall be issued."

#### CERTIFICATE

State of New Jersey  
County of Morris

I, the undersigned, Assistant Secretary of UNITED STATES FIRE INSURANCE COMPANY, DO HEREBY CERTIFY that the foregoing POWER OF ATTORNEY remains in full force and effect and has not been revoked and furthermore that the above quoted abstracts of Article IV and Article III, Section 9 of the By-Laws of the Corporation are now in full force and effect.

In Testimony Whereof, I have hereunto subscribed my name and affixed the corporate seal of the said Company, this 25<sup>th</sup> day of August, 2004.

By   
Assistant Secretary  
David Pesce

# CDM Team Personnel Organizational Chart

## FDEP

Officer-in-Charge

Richard A. Slovarp

Technical Review / QA/QC

Donald M. Thompson, Ph.D., P.E.

Richard D. Moore, P.E., DEE

Lee P. Wiseman, P.E., DEE

Health & Safety

Stephen M. Robinson

CDM

John Bratford  
Team Leader

Dean Carter  
Project Manager

Operator

Paul Roberts

Facilities Project Manager

Michael A. Cruz

Assistant Project Manager

Wayne Winner

Project Superintendent

Water Treatment

Vaughn V. Astley, Ph.D.

Technology Leader

Van Nortwick Jr., Ph.D., P.E.

Regulatory Specialist

Kenneth Jardine

Senior Process Engineer

Liner

Tommy Topp

Project Manager

Joe Benz

Project Manager

Dragan Milosavljevic

Project Superintendent

Earthwork

Al Schuman

Senior Project Manager

Michael Panny

Project Manager

Paul Davis

Superintendent

Jason M. Mills, P.G.  
*Geologist*

Field Staff

Craig A. Kovach, P.G.  
*Regulatory Compliance  
& Operations Consultant*

Jerry Lister  
Supervisor

Dennis Michalski  
Senior Process Engineer

William N. Futch  
Operations Manager

Johnny M. Prewitt  
Gypsum Stacks Operation Manager

Todd Kirkman  
*Field Supervisor*

Stuart Taylor  
*Field Supervisor*

**Grassing**

Al Schuman  
*Senior Project Manager*

Michael Panny  
*Project Manager*

Paul Davis  
*Superintendent*

**HDPE & Drain**

Al Schuman  
*Senior Project Manager*

Michael Panny  
*Project Manager*

Paul Davis  
*Superintendent*

**Water Treatment**

John O'Connor  
*Process Project Engineering Manager*

Bob Herz  
*Process Project Manager*

Jim Pardee  
*Process Senior Project Manager*

Richard Hardy  
*Mechanical Engineer*

Richard Chruszez  
*Senior Electrical Engineer*

Steve Moody  
*Structural Engineering Manager*

Vince Margiotti  
*Process Chemical Engineer*

| ID | Task Name                                                 | Duration  | Start        | Finish       | 2005  |        |       |       |       |       |
|----|-----------------------------------------------------------|-----------|--------------|--------------|-------|--------|-------|-------|-------|-------|
|    |                                                           |           |              |              | Qtr 3 | Qtr 4  | Qtr 1 | Qtr 2 | Qtr 3 | Qtr 4 |
| 1  | Contract Award                                            | 0 days    | Mon 11/1/04  | Mon 11/1/04  |       | ◆ 11/1 |       |       |       |       |
| 2  | <b>Facility Maintenance and Operations</b>                | 1305 days | Mon 11/1/04  | Fri 10/30/09 |       |        |       |       |       |       |
| 3  | Site Safety Activities                                    | 1305 days | Mon 11/1/04  | Fri 10/30/09 |       |        |       |       |       |       |
| 4  | Develop and Update O&M Plan                               | 60 days   | Mon 11/1/04  | Fri 1/21/05  |       |        |       |       |       |       |
| 5  | Develop Contingency Plan                                  | 60 days   | Mon 11/1/04  | Fri 1/21/05  |       |        |       |       |       |       |
| 6  | Routine Maintenance and Operations Activities Activities  | 1305 days | Mon 11/1/04  | Fri 10/30/09 |       |        |       |       |       |       |
| 7  | Process Water Consumption                                 | 1305 days | Mon 11/1/04  | Fri 10/30/09 |       |        |       |       |       |       |
| 8  | <b>Top Gradient Closure (Phase I Construction)</b>        | 153 days  | Mon 11/1/04  | Wed 6/1/05   |       |        |       |       |       |       |
| 9  | Close Top Gradient of NGS-N                               | 40 days   | Mon 11/1/04  | Fri 12/24/04 |       |        |       |       |       |       |
| 10 | Close Remaining Top Gradient of OGS-N                     | 35 days   | Mon 12/27/04 | Fri 2/11/05  |       |        |       |       |       |       |
| 11 | Close Remaining Top Gradient of OGS-S                     | 35 days   | Mon 2/14/05  | Fri 4/1/05   |       |        |       |       |       |       |
| 12 | Construct Lined Pond at NGS-S                             | 153 days  | Mon 11/1/04  | Wed 6/1/05   |       |        |       |       |       |       |
| 13 | Construct NGS-S Cap                                       | 90 days   | Mon 1/24/05  | Fri 5/27/05  |       |        |       |       |       |       |
| 14 | Construct Outlet Structure                                | 30 days   | Mon 1/10/05  | Fri 2/18/05  |       |        |       |       |       |       |
| 15 | Construct OGS Cap                                         | 90 days   | Mon 12/27/04 | Fri 4/29/05  |       |        |       |       |       |       |
| 16 | Construct Two Outlet Structures                           | 60 days   | Mon 2/21/05  | Fri 5/13/05  |       |        |       |       |       |       |
| 17 | <b>NGS-N Relief Ditch (Phase I Construction)</b>          | 394 days  | Fri 4/1/05   | Wed 10/4/06  |       |        |       |       |       |       |
| 18 | Construct NGS-N Relief Ditch Stage 1                      | 43 days   | Fri 4/1/05   | Tue 5/31/05  |       |        |       |       |       |       |
| 19 | Construct Seepage Collection Drain                        | 43 days   | Fri 4/1/05   | Tue 5/31/05  |       |        |       |       |       |       |
| 20 | Construct Outlet Structure                                | 30 days   | Mon 4/11/05  | Fri 5/20/05  |       |        |       |       |       |       |
| 21 | Construct NGS-N Relief Ditch Stage 2                      | 90 days   | Thu 6/1/06   | Wed 10/4/06  |       |        |       |       |       |       |
| 22 | Place Plant Scale and Sludge on Liner                     | 60 days   | Mon 6/19/06  | Fri 9/8/06   |       |        |       |       |       |       |
| 23 | <b>Slope Closures (Phase I Construction)</b>              | 152 days  | Mon 11/1/04  | Tue 5/31/05  |       |        |       |       |       |       |
| 24 | Close NGS-N West Slope                                    | 55 days   | Mon 11/1/04  | Fri 1/14/05  |       |        |       |       |       |       |
| 25 | Close OGS South Slope                                     | 40 days   | Mon 1/17/05  | Fri 3/11/05  |       |        |       |       |       |       |
| 26 | Close OGS West Slope                                      | 55 days   | Fri 3/4/05   | Thu 5/19/05  |       |        |       |       |       |       |
| 27 | Construct Seepage Collection Drain Bordering OGS Area     | 120 days  | Wed 12/1/04  | Tue 5/17/05  |       |        |       |       |       |       |
| 28 | Construct Lined Drainage Channel Bordering OGS Area       | 130 days  | Wed 12/1/04  | Tue 5/31/05  |       |        |       |       |       |       |
| 29 | <b>Slope Closures (Phase II Construction)</b>             | 261 days  | Wed 6/1/05   | Wed 5/31/06  |       |        |       |       |       |       |
| 30 | Close NGS-N East Slope                                    | 200 days  | Wed 6/1/05   | Tue 3/7/06   |       |        |       |       |       |       |
| 31 | Close NGS North Slope                                     | 90 days   | Mon 8/8/05   | Fri 12/9/05  |       |        |       |       |       |       |
| 32 | Construct Lined Stormwater Pond                           | 90 days   | Mon 8/29/05  | Fri 12/30/05 |       |        |       |       |       |       |
| 33 | Construct Seepage Collection Drain Bordering NGS Area     | 243 days  | Mon 6/27/05  | Wed 5/31/06  |       |        |       |       |       |       |
| 34 | Construct Lined Stormwater Swale                          | 180 days  | Tue 8/9/05   | Mon 4/17/06  |       |        |       |       |       |       |
| 35 | Construct Inspection Road w/ Weir Sections                | 250 days  | Thu 6/16/05  | Wed 5/31/06  |       |        |       |       |       |       |
| 36 | Construct Outlet Structure                                | 30 days   | Wed 6/1/05   | Tue 7/12/05  |       |        |       |       |       |       |
| 37 | <b>South Cooling Pond Closure (Phase II Construction)</b> | 261 days  | Wed 6/1/05   | Wed 5/31/06  |       |        |       |       |       |       |
| 38 | Construct Lined Stormwater Transfer Pond                  | 90 days   | Wed 6/1/05   | Tue 10/4/05  |       |        |       |       |       |       |
| 39 | Construct Two Outlet Structures                           | 60 days   | Tue 7/5/05   | Mon 9/26/05  |       |        |       |       |       |       |
| 40 | Close South Cooling Pond                                  | 243 days  | Mon 6/27/05  | Wed 5/31/06  |       |        |       |       |       |       |
| 41 | Construct Two Outlet Structures                           | 60 days   | Mon 7/18/05  | Fri 10/7/05  |       |        |       |       |       |       |
| 42 | <b>Closure of Other Areas (Phase III Construction)</b>    | 180 days  | Thu 6/1/06   | Wed 2/7/07   |       |        |       |       |       |       |
| 43 | North Cooling Pond Closure                                | 180 days  | Thu 6/1/06   | Wed 2/7/07   |       |        |       |       |       |       |
| 44 | Construct Outlet Structure                                | 30 days   | Thu 6/1/06   | Wed 7/12/06  |       |        |       |       |       |       |
| 45 | Construct Seepage Collection Drain Bordering NCP Area     | 100 days  | Thu 7/13/06  | Wed 11/29/06 |       |        |       |       |       |       |
| 46 | Construct Lined Stormwater Ditch Bordering NCP Area       | 100 days  | Mon 8/7/06   | Fri 12/22/06 |       |        |       |       |       |       |
| 47 | Construct Outlet Structure                                | 30 days   | Mon 8/28/06  | Fri 10/6/06  |       |        |       |       |       |       |

Closure of Piney Point Phoshogypsum Stack System  
Wed 9/8/04

Task

Progress

Summary

External T

Split

Milestone

Project Summary

External M



# ATTACHMENT H RESPONDENT/SUBCONTRACTOR SUMMARY FORM

|           |                                                          |
|-----------|----------------------------------------------------------|
| Section A | TEAM IDENTIFICATION (To Be Completed By The Respondent.) |
|-----------|----------------------------------------------------------|

As Respondent to DEP Solicitation No. 2005002C, I/we intend to utilize the following team in connection with this project: [In the spaces provided below, list the name of the respondent, the name of each intended subcontractor, and indicate the business category of each one listed.]

**NOTE:** For each intended subcontractor listed below, a subcontractor Letter of Commitment must be submitted as specified in the solicitation, stating the subcontractor's intent to perform work or provide services for the Respondent in the order for the subcontractor to be considered by the Department of Environmental Protection for this solicitation. Failure to provide a Letter of Commitment from an intended subcontractor shall result in that intended subcontractor's qualifications not being considered by the evaluation committee.

| INDICATE THE ONE CATEGORY THAT BEST DESCRIBES EACH ORGANIZATION LISTED |  |                           |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
|------------------------------------------------------------------------|--|---------------------------|--|--|--|--|--|------------------|--|--|--|--|-------------------|--|--|--|--|---------------------------------------|--|--|--|
|                                                                        |  | BUSINESS CLASSIFICATION   |  |  |  |  |  | CERTIFIED MBE    |  |  |  |  | NON-CERTIFIED MBE |  |  |  |  | NON-PROFIT ORG.                       |  |  |  |
|                                                                        |  |                           |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
|                                                                        |  | P.R.I.D.E.                |  |  |  |  |  | AMERICAN WOMAN   |  |  |  |  | AMERICAN WOMAN    |  |  |  |  | OTHER NON-PROFIT                      |  |  |  |
|                                                                        |  | NON-PROFIT ORGANIZATION   |  |  |  |  |  | NATIVE AMERICAN  |  |  |  |  | NATIVE AMERICAN   |  |  |  |  | 51% OR MORE MINORITY COMMUNITY SERVED |  |  |  |
|                                                                        |  | GOVERNMENT AGENCY         |  |  |  |  |  | ASIAN/HAWAIIAN   |  |  |  |  | ASIAN/HAWAIIAN    |  |  |  |  | 51% OR MORE MINORITY OFFICERS         |  |  |  |
|                                                                        |  | SAML L BUSINESS (FEDERAL) |  |  |  |  |  | HISPANIC         |  |  |  |  | HISPANIC          |  |  |  |  | BOARD IS 51% OR MORE MINORITY         |  |  |  |
|                                                                        |  | SMALL BUSINESS (STATE)    |  |  |  |  |  | AFRICAN AMERICAN |  |  |  |  | AFRICAN AMERICAN  |  |  |  |  |                                       |  |  |  |
|                                                                        |  | NON-MINORITY              |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| LIST NAMES OR RESPONDENT(S) & ALL INTENDED SUBCONTRACTORS              |  | X                         |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| CDM Constructors Inc.                                                  |  |                           |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| QuietEarth Consultants, Inc.                                           |  |                           |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| IMC Global Inc.                                                        |  | X                         |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| PENN PRO, Inc,                                                         |  |                           |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| COMANCO Environmental Corp.                                            |  | X                         |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |
| Moretrench Environmental Services, Inc.                                |  | X                         |  |  |  |  |  |                  |  |  |  |  |                   |  |  |  |  |                                       |  |  |  |

| INDICATE THE ONE CATEGORY THAT BEST DESCRIBES EACH ORGANIZATION LISTED |                          |                  |                   |                  |                                       |                               |                               |
|------------------------------------------------------------------------|--------------------------|------------------|-------------------|------------------|---------------------------------------|-------------------------------|-------------------------------|
| LIST NAMES OR RESPONDENT(S) & ALL INTENDED SUBCONTRACTORS              | BUSINESS CLASSIFICATION  | CERTIFIED MBE    | NON-CERTIFIED MBE | NON-PROFIT ORG.  |                                       |                               |                               |
|                                                                        |                          |                  |                   | OTHER NON-PROFIT | 51% OR MORE MINORITY COMMUNITY SERVED | 51% OR MORE MINORITY OFFICERS | BOARD IS 51% OR MORE MINORITY |
|                                                                        |                          | AMERICAN WOMAN   |                   |                  |                                       |                               |                               |
|                                                                        |                          | NATIVE AMERICAN  |                   |                  |                                       |                               |                               |
|                                                                        |                          | ASIAN/HAWAIIAN   |                   |                  |                                       |                               |                               |
|                                                                        |                          | HISPANIC         |                   |                  |                                       |                               |                               |
|                                                                        |                          | AFRICAN AMERICAN |                   |                  |                                       |                               |                               |
|                                                                        |                          | AMERICAN WOMAN   |                   |                  |                                       |                               |                               |
|                                                                        |                          | NATIVE AMERICAN  |                   |                  |                                       |                               |                               |
|                                                                        |                          | ASIAN/HAWAIIAN   |                   |                  |                                       |                               |                               |
|                                                                        |                          | HISPANIC         |                   |                  |                                       |                               |                               |
|                                                                        |                          | AFRICAN AMERICAN |                   |                  |                                       |                               |                               |
|                                                                        | P.R.I.D.E.               |                  |                   |                  |                                       |                               |                               |
|                                                                        | NON-PROFIT ORGANIZATION  |                  |                   |                  |                                       |                               |                               |
|                                                                        | GOVERNMENT AGENCY        |                  |                   |                  |                                       |                               |                               |
|                                                                        | SAMLL BUSINESS (FEDERAL) |                  |                   |                  |                                       |                               |                               |
|                                                                        | SMALL BUSINESS (STATE)   |                  |                   |                  |                                       |                               |                               |
|                                                                        | NON-MINORITY             |                  |                   |                  |                                       |                               |                               |



P.O. Box 3147  
Riverview, Florida 33568  
813-677-5026 Fax 813-671-5593

August 19, 2004

Mr. Michael H. Edgar  
Associate  
CDM  
325 John Knox Road, Building M, Suite 100  
Tallahassee, Florida 32303

**RE: Florida Department of Environmental Protection Solicitation No. 2005002C  
Closure of the Piney Point Phosphates Phosphogypsum Stack System  
Subcontract Arrangement**

Dear Mr. Edgar:

This correspondence is to confirm that QuietEarth Consultants, Inc. (QECI) has entered into a subcontracting arrangement with CDM in response to the referenced Department Solicitation/Invitation to Negotiate (ITN). QECI, and in particular Mr. Craig Kovach, will be a member of the CDM team pursuing closure management of the Piney Point facility.

If you have any questions or need additional documentation, please contact me directly.

Sincerely,  
**QuietEarth Consultants, Inc.**

A handwritten signature in black ink, appearing to read "Craig A. Kovach", with a long horizontal flourish extending to the right.

Craig A. Kovach, P.G.  
President

Cc: Louise Kirkpatrick, CDM (Maitland)

**James W. Van Nortwick, Jr., Ph.D., P.E.**  
Director of Environmental Affairs



**IMC Global Operations Inc.**  
100 S. Saunders Road, Suite 300  
Lake Forest, Illinois 60045-2561  
847.739.1814  
847.739.1612 Fax

August 17, 2004

Florida Department of Environmental Protection  
Procurement Section, Carr Building, Room 235  
3900 Commonwealth Boulevard, MS#93  
Tallahassee, Florida 32399-3000

**RE: Subcontracting Commitment  
Department Solicitation Number 2005002C  
Closure of the Piney Point Phosphate Phosphogypsum Stack System**

To Whom It May Concern:

IMC Global Inc. has agreed to subcontract technical services to CDM for the subject project.

Sincerely,

A handwritten signature in black ink, appearing to read "James W. Van Nortwick, Jr.", written over a horizontal line.

James W. Van Nortwick, Jr., Ph.D., P.E.  
Director of Environmental Affairs



# **PENN PRO**

**Engineering & Technical Services**

August 23, 2004

Mr. Michael H. Edgar  
Camp Dresser & McKee Inc.  
325 John Knox Road  
Building M, Suite 100  
Tallahassee, FL 32303

Dear Mr. Edgar,

**Subject: Closure of Piney Point Phosphates Phosphogypsum Stack System,  
Department Solicitation Number 2005002C**

PENN PRO, Inc. is excited to be a part of the team led by CDM for the closure of the Phosphogypsum Stack for the Piney Point facility. Our Project Manager, Mr. John O'Connor is a civil engineer with over twenty-five years of experience with the management of Phosphogypsum Stack systems. Other staff engineers and technical experts will be available to support the team as needed.

Sincerely,

M. Wayne Pennewell  
President  
PENN PRO, Inc.

cc: JOC  
Louise Kirkpatrick



## ENVIRONMENTAL CORPORATION

August 20, 2004

Mr. Michael Edgar  
CDM  
325 John Knox Road  
Building M. Suite 100  
Tallahassee, FL 32303

**Re: Letter of Commitment to Subcontract  
Florida Department of Environmental Protection  
Solicitation Number 2005002C  
Closure of the Piney Point Phosphates Phosphogypsum Stack System  
Prime Contractor: CDM Engineering**

Dear Mr. Edgar:

In accordance with Attachment B, Paragraph A.26.E, of the above-referenced solicitation, this letter formally documents the commitment of COMANCO Environmental Corporation (CEC), to subcontract to CDM to provide the services and responsibilities as described in Section C.8 of CDM's proposal. The personnel who will be responsible for performing these duties have studied the Department's Solicitation, are familiar with the Piney Point site, and have successfully provided similar professional services. There exists a strong working relationship between CDM and (CEC), and I am confident that (CEC) can provide the requested subcontracted services on time, and on budget.

COMANCO Environmental Corporation appreciates the opportunity to be part of the CDM team. Should you have any questions, or require additional information, please do not hesitate to call us at (813)988-8829.

Sincerely,  
COMANCO Environmental Corporation

Artemas "Larry" Holmes III  
Vice President

# MORETRENCH

... since 1931.

[www.moretrench.com](http://www.moretrench.com)

8/24/2004

AUG 27 2004

Michael H. Edgar  
CDM  
325 John Knox Rd, Bldg M, S100  
Tallahassee, FL 32303

Dear Mr. Edgar:

Moretrench Environmental Services, Inc. looks forward to the opportunity to offer earthwork, piping, and grassing subcontract services in support of CDM's response to Florida DEP's ITN 2002002C, "Closure of the Piney Point Phosphates Phosphogypsum Stack System".

We understand this "letter of commitment" is not a sole source agreement binding Moretrench as a subcontractor to CDM alone. However, we do acknowledge Moretrench is a member of CDM's team for the purposes of this public solicitation.

If you have any questions regarding this letter of commitment, please feel free to call us.

Regards,



Al Schuman  
President  
Moretrench Environmental Services, Inc.