

# SEALED PROPOSAL • DO NOT OPEN

SEALED PROPOSAL NO.: 101-0120-CN (AM)

PROPOSAL TITLE : WASTE TO ENERGY  
CONSULTING SERVICES

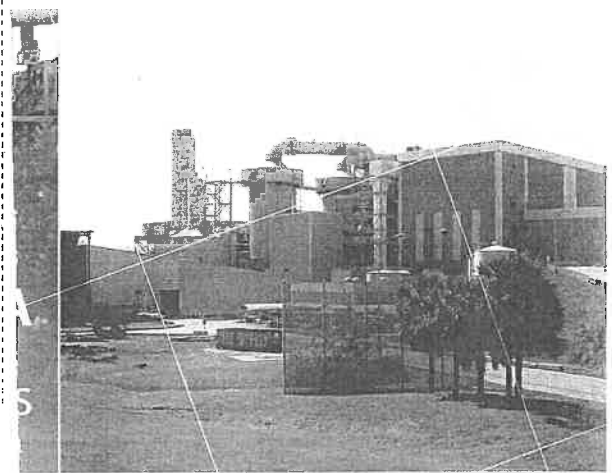
DUE DATE/TIME: February 25, 2011 @ 3:00 p.m.

SUBMITTED BY: **CDM**  
(Name of Company)

DELIVER

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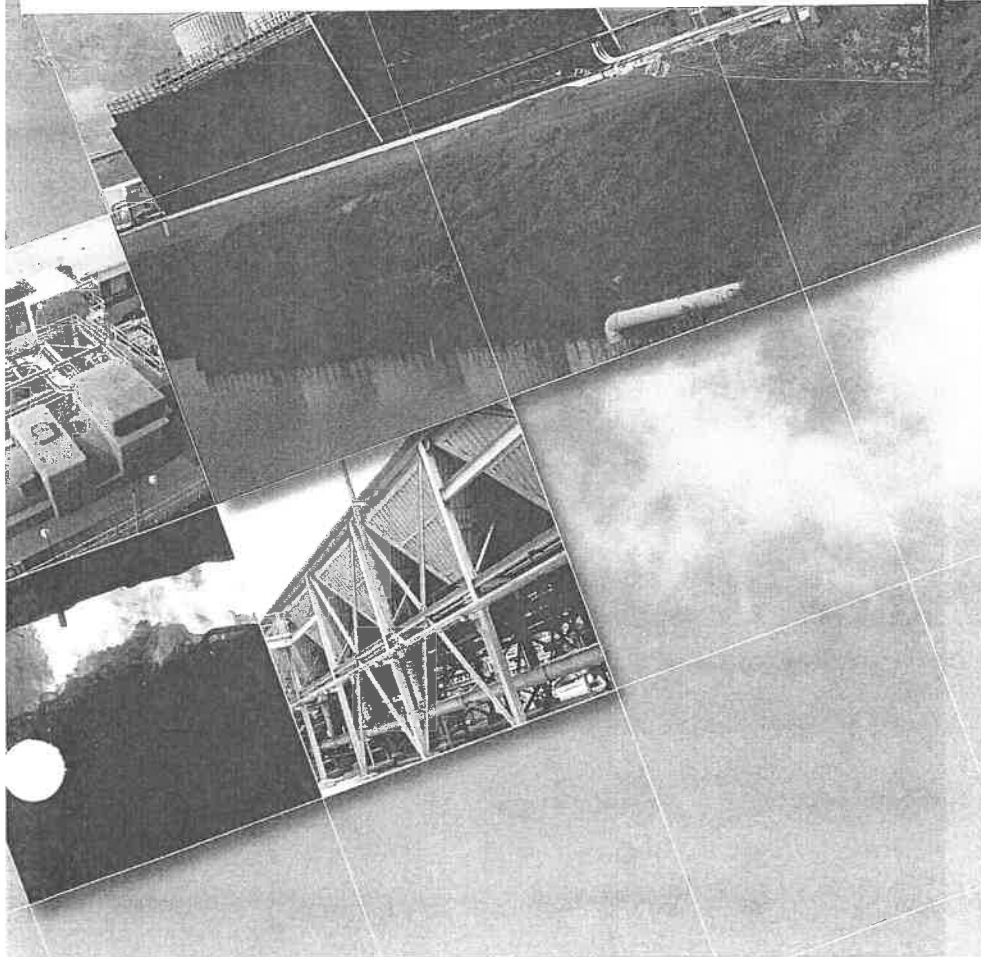
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PROPOSAL  
Proposal No. 101-0120-CN (AM)

February 2011

**CDM**



# REFUSE TO ENERGY PLANT

PINELLAS COUNTY SOLID WASTE SYSTEM

MANAGEMENT BY

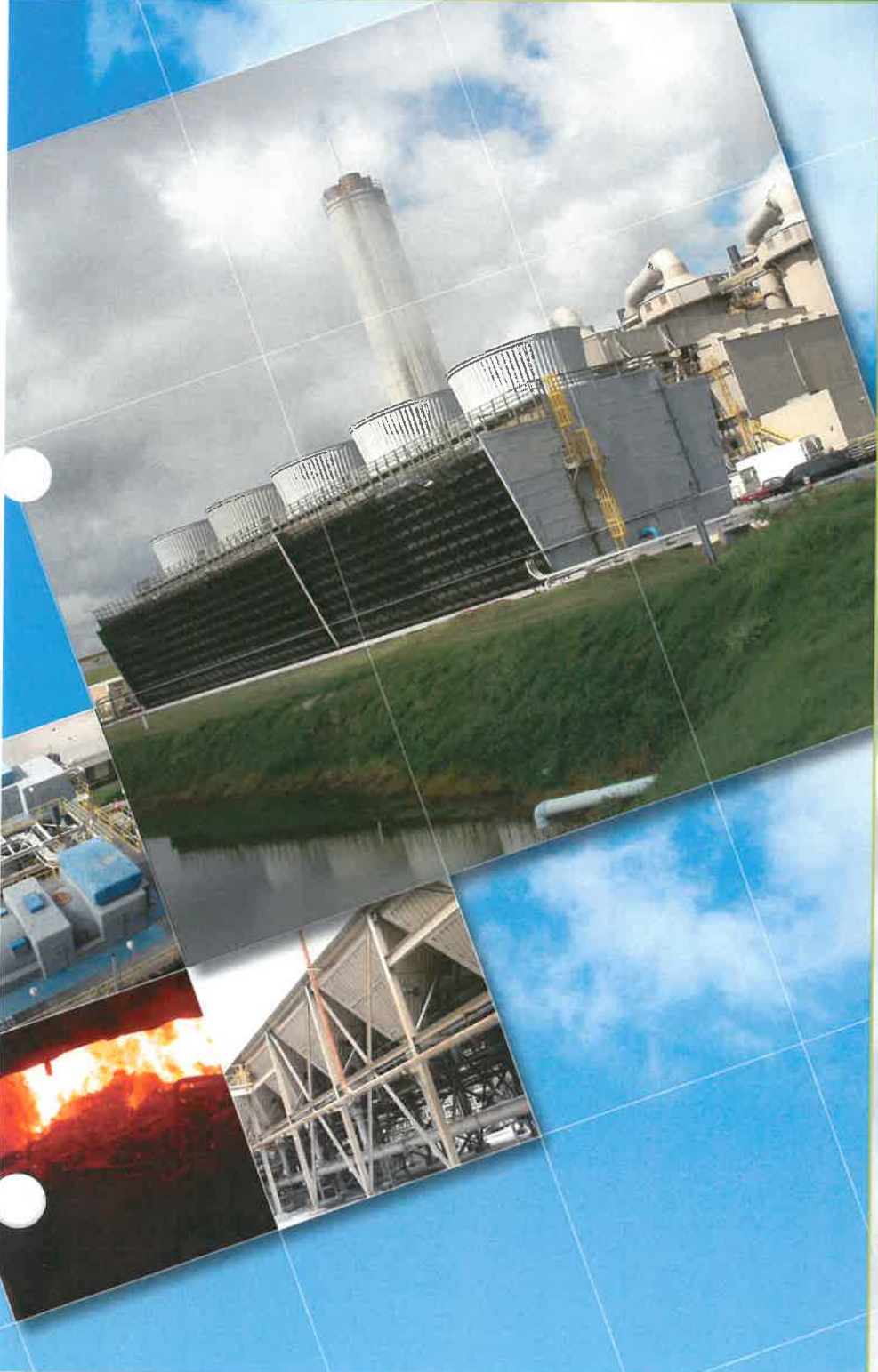
**PINELLAS COUNTY, FLORIDA**

Waste to Energy Consulting Services



## PROPOSAL

Proposal No. 101-0120-CN (AM)



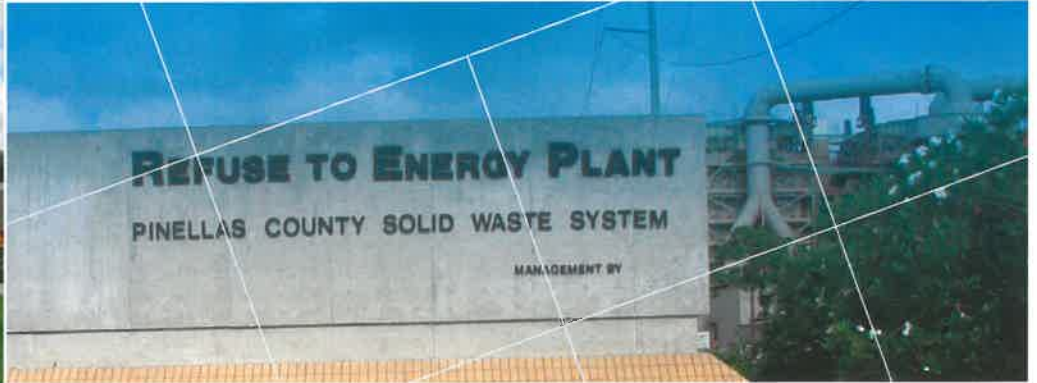
February 2011

**CDM**





## Introduction





1715 North Westshore Boulevard, Suite 875  
Tampa, Florida 33607  
tel: 813 281-2900  
fax: 813 288-8787

February 25, 2011

Pinellas County Board of County Commissioners  
Joseph Lauro, CPPO/CPPB, Director of Purchasing  
400 South Fort Harrison Avenue  
Annex Building – 6<sup>th</sup> Floor  
Clearwater, FL 33756

**Subject: Proposal Number 101-0120-CN (AM) Waste to Energy Consulting Services**

Dear Mr. Lauro:

Camp Dresser & McKee Inc. (CDM) is pleased to submit one (1) original and seven (7) copies of our proposal in response to the above referenced request for professional services. Our qualifications presented herein demonstrate CDM's experience with projects of similar size and scope and the ability of CDM and its proposed project team to efficiently and responsively perform all of the services required for this assignment. CDM has successfully performed the exact same services for Pinellas County on its waste-to-energy (WTE) facility since 2007.

We understand the unique and potentially difficult circumstances the County currently finds itself in with regard to its WTE program. The County has a contract facility operator that sold-off all of its other North American WTE facility operating contracts shortly after it took over operation of the Pinellas WTE facility. This leaves the company without a U.S. base of nationwide WTE resources with which to promptly support and address the operating and maintenance issues that commonly arise as evidenced by the recent outsourcing of maintenance mechanics and I&C technicians. The current operator faces a number of ongoing issues related to environmental compliance and performance and the County continues to experience lower than normal solid waste generation as a result of the economic downturn. The County needs an experienced consultant that knows both Pinellas County's situation and the Service Agreement in order to best advise the County on how to manage these issues and administer the Service Agreement such that the County's interests and assets are protected. CDM is uniquely qualified to provide the referenced services while meeting the challenges the County's WTE program faces.

The factors that set CDM apart from other firms include:

***CDM Has Substantial Local Professional Resources and Firm Wide Experience to Execute the Work***

CDM's project team will be led by two seasoned WTE veterans, Daniel E. Strobridge, QEP, our Officer-in-Charge/Project Director, and William R. Crellin, Jr., P.E., our Project Manager, both located in our Tampa office. Combined, these two individuals have over 50 years of experience in the procurement, permitting, construction, operations and maintenance, financing, and contract administration of WTE facilities and operating contracts. Both individuals have been involved continuously with the Pinellas County WTE facility since 2004 beginning with the operator re-procurement project in 2004 and since 2007 providing WTE independent consulting engineering services. Mr. Strobridge is well acquainted with the present Service Agreement, having had a lead role in its development, and Mr. Crellin is well acquainted with the mechanical elements and performance of the WTE facility itself. Mr. Crellin had a lead role in performing the initial facility assessment and has conducted regular monthly facility inspections, overseen maintenance of the ongoing punch list and reviewed monthly facility operating data since the current operator took over operation of the facility in May 2007.





February 25, 2011

Joseph Lauro, CPPO/CPPB, Director of Purchasing

Page 2

**CDM's Project Team is the Same Team That Has Furnished Pinellas County WTE Consulting Services over the Past Six Years**

The personnel proposed for all key services (see Project Org Chart in Standard Form 330 Page 2 of this proposal) are the same staff that has an intimate understanding of the conditions and issues associated with the County's WTE program. This knowledge can only be gained through immersion in the daily operations of the facility and the administration of the Service Agreement. Therefore, there is no learning curve required for the CDM staff. This is a clear and unique benefit to Pinellas County, given the program issues it is facing.

**CDM and Project Team Has Extensive Experience with Projects of Similar Size and Scope**

This same CDM core team of WTE professionals is currently or has previously provided similar consulting engineering service to more than 20 WTE facilities throughout North America. Seven of these facilities are located here in Florida and include Pinellas, Hillsborough, Bay, Pasco, and Lee Counties as well as the Cities of Key West and Tampa. It is noteworthy that our proposed project team has provided ongoing operations and maintenance monitoring and contract administration services on the Hillsborough and Pasco WTE facilities since they each began commercial operations 20+ years ago.

CDM is committed to maintaining strong local WTE resources in order to continue providing PCU-DSWO with the responsive, high quality professional services it has come to expect from us. Thank you for the opportunity to submit our proposal and we look forward to working with PCU-DSWO as it faces the challenges of an ever changing world and economy. As CDM's project management team leader for this project, I personally commit the resources necessary to provide services that exceed the County's expectations. I also give you my personal commitment to being responsive to your needs as they arise on any project issued under this contract. Should you have any questions, please contact me at 813.281.2900 or by email at [StrobridgeDE@cdm.com](mailto:StrobridgeDE@cdm.com).

Sincerely,

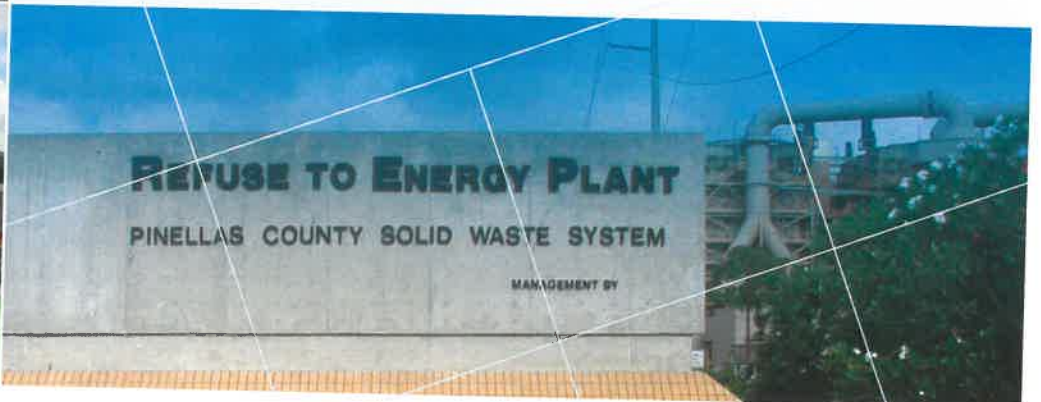
Daniel E. Strobridge, QEP  
Vice President  
Camp Dresser & McKee Inc.

In 2010, 86 plants operated in 24 states and CDM waste-to-energy professionals provided services at more than 20 of those facilities. In Florida CDM project team members have previously served at 7 of 11 WTE facilities - making us uniquely qualified to provide Pinellas County with outstanding WTE services.

	Daniel E. Strobridge, QEP	William R. Grollin, Jr., P.E.	Paul J. Stoller	Anthony M. LoRe, Jr., P.E., BCCE	Joseph P. Curro, P.E., BCCE	Valerie P. Going, P.E.	Wei-Ting Liu	Joseph N. Cascio	Jack C. McHugh	Nathan D. Schmaus	Tony R. St. Clair, BCCE, QEP REM	Cynthia Strong Hibbard	Cynthia L. Stellmack, P.E.	John S. Kontor, P.E.	Timothy A. Verwey, P.E.	John G. Ladner, P.E., BCCE	Aamod Sonawane, P.E., BCCE	Johnstone N. Reid, Jr., FAIA, CCS, LEED-AP	Diane C. Kemp
<b>Client</b>																			
Pinellas County Resource Recovery Facility St. Petersburg, FL	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓		✓	✓	✓	✓	✓	✓
Hillsborough County Resource Recovery Facility Hillsborough County, FL	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓	✓	✓	✓				✓	✓
Pasco County Resource Recovery Facility Spring Hill, FL	✓	✓	✓	✓	✓	✓	✓	✓			✓	✓	✓			✓	✓		✓
Bay County Resource Recovery Center Panama City, FL	✓	✓	✓	✓	✓	✓					✓	✓	✓						✓
McKay Bay Refuse-to-Energy Facility Tampa, FL	✓	✓	✓	✓	✓	✓					✓	✓	✓		✓				✓
City of Key West Key West, FL	✓			✓	✓						✓								✓
Lee County Waste-to-Energy Facility Lee County, FL	✓	✓	✓	✓								✓							



## Table of Contents





# Table of Contents

## Cover Letter

<b>Table of Contents .....</b>	<b><i>i</i></b>
<b>Introduction.....</b>	<b>2</b>
General Information.....	2
Overall Project Approach and Management of the Work.....	2
Technical Project Approach.....	3
<b>Tab 1 - Standard Form (SF) 330 - Part I &amp; II.....</b>	<b>15</b>
<b>Tab 2 - Statements and Documentation .....</b>	<b>64</b>
2.1 Proof of Licenses/Certifications.....	64
2.2 State of Florida Business Licensure and Professional Certifications and Registrations.....	64
2.3 Proof of Corporate Registration.....	64
2.4 Staff Licenses.....	65
2.6 Certificate of Florida Small and Minority Business.....	66
2.7 Office Located in Pinellas, Manatee, Hillsborough, or Pasco Counties .....	66
<b>Tab 3 - Certificate of Insurance .....</b>	<b>67</b>
<b>Tab 4 - Key Personnel Statement.....</b>	<b>68</b>
4.1 Commitment to the County.....	68
4.2 Project Organizational Chart .....	69
4.3 Project Team.....	69
<b>Tab 5 - Required Forms.....</b>	<b>75</b>
<b>Tab 6 - Additional Information .....</b>	<b>76</b>
6.1 Past Project Experience .....	76
6.2 Project Management/Controls .....	79
6.3 Quality Control.....	81
6.4 Comments on the Service Agreement .....	81





# Introduction

Per the Pinellas County (County) Public Announcement, CDM has provided our approach to the types of work that may be assigned under this contract. In this section, we provide information regarding CDM's unique capabilities to manage this Waste-to-Energy Consulting Services contract. Details of our staffing qualifications and relevant project experience can be found in Tab 4 and Sections E and F, respectively, of the SF 330. References who can attest to CDM's exceptional performance on projects for the County and/or other agencies can be found in Tab 5 of our proposal. General information about CDM's experience relevant to the County's project is included in this Approach.

## General Information

CDM is a global, full-service consulting, engineering, construction, and operations firm helping clients improve the environment and infrastructure. An employee-owned corporation with a multi-disciplinary staff of more than 4,500 in over 100 offices. CDM maintains the size, stability, and resources required to successfully undertake a diverse range of projects. CDM can manage assignments for the County ranging from small, short-term solutions to complex, ongoing environmental and infrastructure management programs.

### Location

CDM will manage assignments under all task orders from our Tampa office located at 1715 North Westshore Boulevard, Suite 875, Tampa, Florida 33607. Located just 15 miles from the County's offices, CDM is in a strong position to provide responsive assistance under this contract.

In addition to our Tampa office, CDM operates from nine other office locations in Florida: Orlando, Fort Myers, Jacksonville,

Tallahassee, Panama City, Vero Beach, West Palm Beach, Fort Lauderdale, and Miami.

Although the majority of the key team members for this contract are located in Tampa, CDM has over 450 engineers, scientists, and support personnel in Florida. This extensive pool of in-house resources can assure the County that we can successfully perform any task assignment that may be needed. We are prepared to commit the appropriate number of skilled professionals to meet the requirements of the County.

### Project Team

An Organizational Chart identifying key staff within each function group is shown in **Figure 4-1** in Tab 4 of this submittal. In addition to the function groups, the chart also shows CDM's Officer-in-Charge Daniel E. Strobidge, QEP; Project Manager William R. Crellin, Jr., P.E.; and Quality Management Officer, Paul J. Stoller (**Figure 1**). Detailed resumes for each team member can be found in SF 330, Section E of this submittal.

We have assigned individuals to this project who all fully understand the unique and potentially difficult circumstances that Pinellas County finds itself with its present WTE facility



Figure 1

operator. Because of our team's specialized areas of expertise, its familiarity with the ongoing issues and projects at the Facility, and its availability to take on assignments under this project, CDM is confident that our team is uniquely qualified and represents the best fit for the County on this Waste-to-Energy Consulting Services Agreement ("Project") in terms of ongoing knowledge of all project issues and conditions, experience, accessibility and continuity of service.

## Overall Project Approach and Management of the Work

CDM's approach to this project incorporates a management plan that is based upon the streamlined delivery of the right people to perform the assigned tasks in a manner that will fully meet the County's expectations and requirements. This approach assures the County that only professionals with the appropriate skill sets will be matched with each of their task assignments.

Streamlined delivery of services will be provided through one point of contact, CDM's project manager, William R. Crellin, Jr., P.E. He will serve as the principle point of contact (i.e., the "go-to" individual) between the County and CDM. His role will be to assign, coordinate, and oversee CDM staff activities, monitor and enforce schedules and budgets, and ensure the delivery of top quality services and work products. While our management structure is streamlined, it is also flexible and the County staff, as always, is encouraged to directly contact and communicate with the individual CDM team member charged with a particular assignment.

Streamlined delivery of services will be provided through one point of contact, CDM's project manager, **William R. Crellin, Jr., P.E.**

He will serve as the principle point of contact (i.e., the "go-to" individual) between the County and CDM.



Our project approach is a result of our extensive experience with providing exactly the type of services the County is seeking. CDM has provided resource recovery/waste-to-energy (WTE) services for more than 35 years. We are currently, or have been in the past, directly involved with more than a dozen operational resource recovery facilities with a combined total processing capacity of more than 13,000 tons per day. CDM possesses the diverse range of resources necessary to provide comprehensive WTE consulting services including contract administration and management, independent consulting engineering, general construction services and monitoring, environmental permitting (air, solid waste, and stormwater) and regulatory coordination, and engineering and other services as requested.

We have carefully reviewed the County's list of required WTE Consulting Services and have organized our project team into five functional groups, each responsible for several of the services identified in the County's SOQ. The five groups are identified below and each is discussed more fully in the subsequent section.

- Contract Administration and Management
- Independent Consulting Engineer
- Permitting and Regulatory Coordination
- Design Review & Construction Monitoring
- As Requested Design and Engineering Assistance.

## Technical Project Approach

In this section CDM presents its technical approach to each of the project services requested in the RFQ. CDM's technical approach implements the premise of our Management Plan, matching the right people with the right task. Pinellas County's Consulting Engineer requirements are broad and deep, requiring expertise in many disciplines. Our technical approach is based upon our current work as the County's Independent Consulting Engineer under our Waste-to-Energy Consulting Services contract and our extensive experience providing similar services at other operating WTE plants including those locally in Pasco and Hillsborough counties. The following summarizes our technical approach for each of the functional areas and services within them.

### Contract Administration

Services include:

- Assisting in the administration of the Service Agreement including disputes with the operator over ongoing Force Majeure claim and potential upcoming disputes.

CDM understands that the County faces a number of unique and challenging circumstances with its current Facility operator who finds itself with only one remaining WTE facility in the U.S. Also, the down-turn in the economy has resulted in lower waste quantities delivered to the facility which has exacerbated the unusual circumstances the County finds itself in. We understand these issues and that the Facility operator is attempting to find ways to modify the Service Agreement to provide it with a greater revenue stream and to make the sale of the Service Agreement to another WTE operator more attractive. Issues that may need to be addressed include the potential development of a termination agreement and end of term transition protocol to another WTE operator, modifications to the existing Service Agreement, other Service Agreement modifications relative to Force Majeure claims by Veolia, and an amendment that provides for the purchase of a new turbine generator steam path.

***If transition to a new operator occurs, it needs to be well executed. This execution can best be accomplished by the CDM project team members who were responsible for the transition of operations between Wheelabrator and Veolia in 2007.*** CDM's contract administration approach, as before, will be to set the stage immediately with the contractor and follow the letter, spirit and intent of the Service Agreement. It is important to establish the mode of contract administration immediately to set the precedent so that the carefully considered Service Agreement does not become "watered down" through lax and inconsistent administration. Setting the

stage early sends a clear message to the contractor that the County is serious about abiding by the terms and conditions of the Service Agreement and that the County expects the Contractor to be of the same mindset.

### Independent Consulting Engineer

Services include:

- Providing engineering consultations for WTE facility Operation and Maintenance (O&M) activities and issues; conduct facility inspections; review operations data and reports; and prepare reports relative to the facility's O&M and performance.
- Acting as the Consulting Engineer as defined in the Service Agreement for those responsibilities authorized by the County.
- Attending periodic meetings including operations meetings with the Facility operator and the County.
- Providing Project Management services.

CDM's approach to providing Independent Consulting Services is to perform a host of integrated activities designed to assist the County in maintaining the asset value of its WTE Facility through inspections, evaluations, and observations of the contractor's performance with regard to operating and maintaining the facility.

CDM provides engineers from many disciplines to perform facility inspections which are conducted during routine outages, allowing our staff to visually inspect the internals of the boilers and other major equipment.

CDM uses checklists organized by functional facility area. Examples of these functional areas included:

- Facility site
- Truck scales
- Process stack
- Grizzly scalper area
- Refuse receiving area and storage pit
- Refuse cranes
- Ash handling system
- Cooling water system and the cooling tower
- Turbine generators
- Dry scrubbers
- Bag houses
- Control room
- Building interiors
- Residue storage and processing building
- Feedwater treatment systems
- Combustion steam generators
- Miscellaneous.

A standard evaluation system is employed to assign ratings to the various systems and their components. These ratings include:

**Good** – Shows signs of only normal wear; functional; no major repairs required.

**Fair** – Abnormal or excessive wear or damage; not fully functional; in need of repair.

**Poor** – Worn or damaged to the point of requiring immediate repair, overhaul or replacement.

CDM maximizes the use of photographs to document equipment conditions.

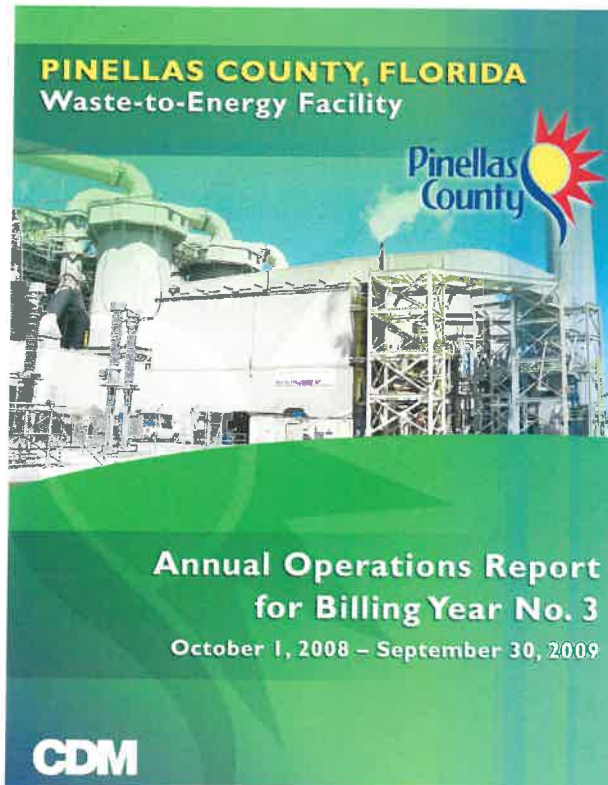
Facility inspections are always conducted in accordance with CDM's established health and safety guidelines and confined space entry procedures as well as the facility operator's plant safety requirements.

The results of these inspections are provided in the Ongoing Punchlist (OGPL). The OGPL is also summarized as part of the Annual Report. These activities are further discussed below.

Other activities that will be performed as the Independent Consulting Engineer include:

**Review of weekly and monthly operations and production data and development of annual report.** CDM has assured, through provisions in the Service Agreement that the data necessary to evaluate facility performance will be

routinely furnished by the Contractor. Our review of these data allows us to determine trends in facility performance and to identify and understand potential issues before serious degradation of the facility or production occurs. As part of this activity, CDM will prepare an Annual Report which summarizes Facility operations, Facility performance guarantees and the annual reconciliation, maintenance activities, regulatory compliance, punch list activities, capital project activities, discretionary services and projects and





provides our overall conclusions and a look ahead for the next billing year.

**Maintaining the Ongoing Punch List.** CDM will conduct routine monthly walk downs of the facility to identify maintenance items that require attention and to verify the status of previously identified OGPL items (i.e., completed or not). CDM has developed a unique coding system that allows for identification of the date that the OGPL item was first included on the list and the date that the item was removed from the list; providing a clear auditable trail for all OGPL items. The OGPL also includes photo documentation of the individual OGPL items, which assists the Facility operator to understand and correct the deficiency identified.

#### **Attendance at Operations and other Meetings as**

**Required.** Communications are critical to the success of most ventures and face-to-face communications are absolutely essential to the successful partnership of owner, operator and consulting engineer when it comes to WTE facility operations. Operations meetings allow all parties to review the operating data, discuss issues related to the facility and develop mutually agreeable courses of actions, as required, to resolve any issues. Since the majority of the CDM team members are based in our Tampa office, the County can be assured that we can be available on very short notice to meet and discuss any issues related to this contract.

**Project Management Services.** CDM has a proven record of success with Pinellas County in managing complex projects and completing them efficiently, on time, and within budget. Our ability to prepare quality engineering plans, specifications, and contract documents is testament to our project management skills. CDM has developed several computer programs to enhance our project managers' ability to monitor and control assignment schedules and budgets. Each assignment's schedule and budget is established through a Project Management Plan (PMP) at the time of enrollment. The PMP process establishes the initial tools for effective assignment and quality management. On a weekly basis, the

project manager is provided information to compare actual expense to the budget and develop S-curves (**Figure 2**).

The Project Information System was recently developed by CDM to improve project management with an integrated Oracle Project Accounting system for more efficient operation.

CDM is also familiar with and has used Plantrax (PSMJ software) used by Pinellas County Utilities for project tracking and management purposes.

#### **Permitting and Regulatory Coordination**

Services include:

- Preparing permit applications and perform permitting activities as requested.
- Reviewing environmental compliance documents prepared by Veolia prior to submittal to FDEP.

Our approach to environmental permitting and regulatory compliance includes maintaining our relationships with the various FDEP environmental permitting and compliance staff, functioning within a team environment, and participating actively on environmental rule-making committees. CDM also maintains an active involvement in professional solid waste organizations responsible in part for lobbying and regulatory development at both the State and Federal levels. These organizations include the Solid Waste Association of North America (SWANA), the Integrated Waste Management Association (IWSA), and the Air and Waste Management Association (AWMA).

CDM's professional staff includes experts in air emissions and solid waste permitting and regulations. Tony R. St. Clair, BCEE, QEP, REM will lead our permitting team. He is an environmental engineer with more than 31 years experience in air quality engineering, air quality modeling, continuous emissions monitoring systems, landfill gas emissions, groundwater monitoring plans, PSD & Title V permitting, bond engineering services, and resource recovery feasibility studies. Most recently, Mr. St. Clair participated in completing Title V air emission operating permit application for Pinellas County.

We understand that the Pinellas County Resource Recovery Facility is permitted under Florida's Power Plant Siting Act. In addition, we are aware that the current PSD and Title V permit conditions synthetically limit (i.e. the total annual emission loading is less than the sum of the specified block average emission rates) annual NO<sub>x</sub>, SO<sub>2</sub> and CO emissions from the Facility and that these annual limits will come into play in 2011. Thus far, the facility's

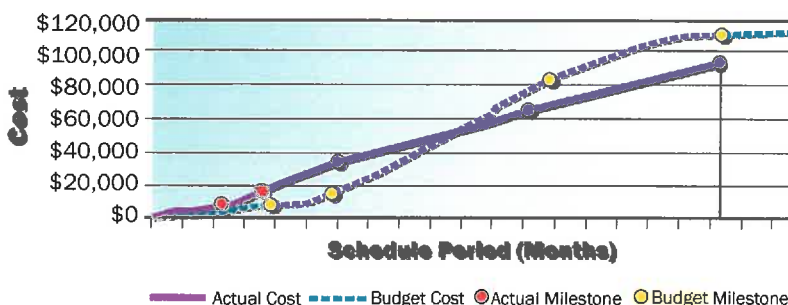


Figure 2: On a weekly basis, the project manager is provided information to compare actual expense to the budget and develop S-curves.

**Tony R. St. Clair, BCEE, QEP, REM**

will lead our permitting team. He is an environmental engineer with more than 31 years experience in air quality engineering, air quality modeling, continuous emissions monitoring systems, landfill gas emissions, groundwater monitoring plans, PSD & Title V permitting, bond engineering services, and resource recovery feasibility studies.



- Engineering design services.
- Engineering studies and reports
- Other services related to the County's WTE and solid waste management system.

CDM understands that Pinellas County needs to respond efficiently to any issue that may affect its ability to deliver daily solid waste disposal and recycling services. To do so, the County needs to be able to assign its professional engineering consultant tasks on an as-needed basis. Such tasks may include reviewing and

updating various plans, developing projections, conducting engineering evaluations or designs, and performing various studies. CDM's general approach includes identifying the specific project needs, maximizing the use of existing data, reviewing available reports, identifying alternative solutions, evaluating the alternatives, and making recommendations based upon the results of the evaluations.

Key to our approach is identifying the individual task needs. To do so, CDM must maintain close, careful communication with appropriate Pinellas County staff members in order to fully understand the goals, objectives and overall mission. Full understanding of these issues at the beginning of the task assignment allows for the development of realistic schedules and budgets and an efficient work plan for executing the work.

As a full service firm, CDM has the capability and resources to meet all of the County's project requirements and engineering disciplines. Our Consulting and Engineering Division (CED) is comprised of resources with specialized disciplines such as those listed below.

- Mechanical Engineers
- Civil Engineers
- Structural Engineers
- Chemical Engineers
- Electrical Engineers
- Environmental Engineers
- Geologists
- Industrial Engineers
- Economics/Finance/Accounting Personnel
- Biologists
- Hydrogeological Engineers
- Planners
- GIS Professionals.

**Quality Assurance/Quality Control**

As shown on the Organizational Chart in Figure 4-1 of our submittal, we have assigned Paul J. Stoller as the

emissions have not been able to demonstrate compliance with the annual emissions cap so as to not trigger PSD regulations. We are fully prepared to assist the County address this issue should the annual emissions cap become threatened in this current operating year. CDM has the resources and knowledge to carefully guide the County through the regulatory pitfalls presented by the current situation.

**Design Review and Construction Monitoring**

Services include:

- Design review
- Construction monitoring and inspections
- Review and approval of milestone pay requests
- Negotiating acceptance test protocols and witnessing acceptance tests
- Preparing any change orders that may be necessary
- Scheduling
- Contractor interface
- Quality control
- Project certifications to regulatory agencies.

CDM understands that the capital projects to extend the life of the Facility have been completed. However, there will be discretionary projects performed under the Service Agreement and that Pinellas County will require periodic design review and construction monitoring services. One such project that will be coming up in the near future is the purchase of a new steam path for turbine generator (TG) No. 1. CDM has the qualified resources to assist the County with this endeavor as our assistance with the replacement of the generator portion of TG No. 1 demonstrated. CDM has previously and will continue to provide a full suite of design review and construction services on an as-needed basis.

**As Requested Design and Engineering Assistance**

Services include:

Quality Management Officer for this contract. The Quality Management Officer has an active role in reviewing work product and service delivery. His job is to ensure CDM's high standards of quality and service are met and that our Quality Assurance/Quality Control (QA/QC) program is followed by all team members.

Quality has been the cornerstone of CDM's reputation since the firm's inception more than 60 years ago. From the smallest

We have assigned **Paul J. Stoller** as the Quality Management Officer for this contract. The Quality Management Officer has an active role in reviewing work product and service delivery. His job is to ensure CDM's high standards of quality and service are met and that our Quality Assurance/Quality Control (QA/QC) program is followed by all team members.



### Technical Review Committees

The project-specific Technical Review Committee (TRC) is at the heart of individual project quality management. The TRC is comprised of senior-level professionals with in-depth experience directly applicable to a particular project, but who are not directly involved in the day-to-day project activities. This committee is based on the specific areas of expertise needed to carry out assertive, independent and objective evaluations of each project deliverable. The TRC reviews key project concepts, evaluating the work for:

- Adequacy and soundness of conclusions
- Appropriate application of existing and new technology
- Use of sound, practical, and cost-effective engineering approaches to problem solving.

***The formal technical review process is CDM's internal value engineering of each project.***

study or environmental assessment to the most complex design and construction project, 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 up-front 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 or of the project-specific Quality Management Plan. Central to the success of this rigorous quality management program are standardization and independent technical reviews.

### Standardization

Standardization of drawings and specifications, graphics production, and cost estimating is another key component of CDM's quality management strategy. Our Engineering Center was established to furnish engineering support to project teams in order to provide quality assurance through technology transfer and standardization with client input.

### Summary

In summary, CDM presents the level of staff qualifications, all of the critical disciplines, firm experience, and project team organization necessary to provide the highly responsive services Pinellas County has requested for this project. Our proposed Officer-in-Charge and Project Manager have over 50 years of WTE experience, combined. We have successfully performed WTE consulting services for Pinellas County since 2007 and for other WTE clients in the Tampa Bay region continuously since 1987.



**The project-specific technical review committee is at the heart of individual project quality management.**



## Specific Professional Services to be Offered

CDM is a global, full-service consulting, engineering, construction, and operations firm helping public and private clients improve the environment and infrastructure. Founded in 1947 as a three person firm, we have grown and diversified into a multidisciplinary staff of over 4,500 worldwide. By listening carefully to each client's unique concerns—technical, financial, regulatory, community, construction, and operational—we deliver the right total solution for each client's needs. We offer expertise and flexibility, from initial concept through design, construction, commissioning, and operations. CDM's comprehensive services include:

- Solid and hazardous waste management
- Infrastructure/environmental management
- Water/wastewater management
- Transportation
- Construction, design-build, and operations
- Information management and technology
- Institutional management and consulting
- Facilities design and geotechnical engineering.

Technical specialists support projects across the country. Such support includes geographic information systems (GIS), environmental studies and impact assessments, laboratory and geotechnical analyses, CAD, and information systems.

### CDM Solid Waste Experience Overview

CDM is experienced in all aspects of solid waste management

and has long served the waste management needs of municipal and industrial clients.

As a full-service consulting, engineering, construction, and operations firm, we offer in-house expertise in energy recovery, landfill management, waste transfer stations, recycling, and composting. We also excel in landfill closure and redevelopment, converting closed landfills into parks, golf courses, and other community assets. CDM's solid waste professionals provide the unique mix of technical, legal, institutional, and financial disciplines needed to effectively serve solid waste clients.

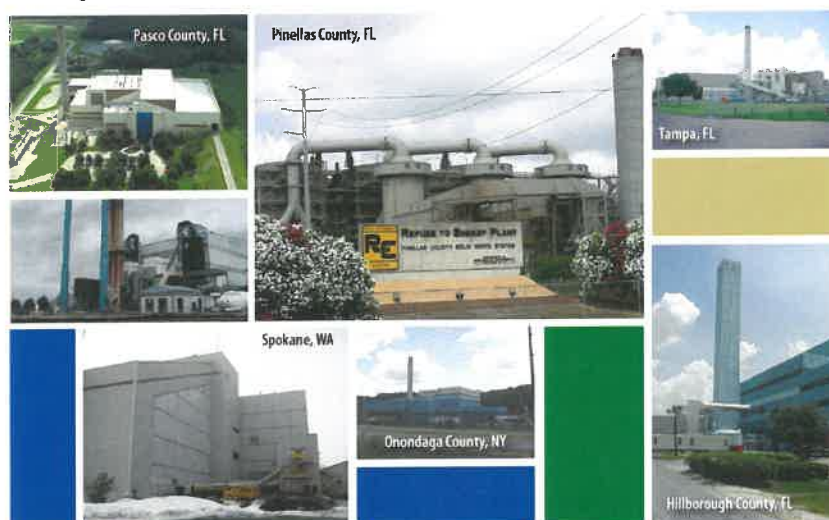
CDM's solid waste management capabilities include:

- WTE facility planning, design, construction, and operation
- Material recovery facility (MRF) planning, design, construction, and operation

- Transfer station permitting, design, construction, and operation
- Class I, Class III, and special waste management operations
- Waste generation and composition studies
- Rate studies, financial reports, and bond feasibility assessment
- Landfill site selection, permitting, and design
- Landfill closure planning and design
- Landfill end-use planning and design
- Recycling/promotional/educational
- Stormwater management
- Landfill gas recovery, monitoring and control
- Construction oversight and operations/maintenance
- Information management systems
- Leachate/utility systems
- Communication and control systems
- Design-build services.

### Demonstration of Waste-to-Energy Expertise

CDM offers Pinellas County over 50 years of solid waste experience, including comprehensive waste-to-energy WTE consulting services—ranging from feasibility studies to vendor procurement and contract negotiations, through permitting, construction management, testing and operations monitoring. This experience, coupled with our strong prior working knowledge of Pinellas County's WTE facility and service agreement, minimizes any learning curve and would be highly advantageous to this project. This section introduces CDM and demonstrates our qualifications and relevant project experience.



**The CDM core team of WTE professionals is currently or has previously provided similar consulting engineering service to more than 20 WTE facilities throughout North America. Seven of these facilities are located here in Florida and include Pinellas, Hillsborough, Bay, Pasco, and Lee Counties as well as the Cities of Key West and Tampa.**

CDM is a leader in the resource recovery/WTE field having provided a diverse range of services for more than 35 years. Members of CDM's proposed team lead the development efforts on several large scale WTE projects that were constructed in the late 1980s and early 1990s. During the 1990s and early 2000s, CDM assisted a number of communities with upgrading their WTE facilities' air pollution control (APC) equipment to comply with the Clean Air Act Amendments of the 1990s. From the current performance audit of the system to conducting the nation's first end-of-term, operator procurement for an operating publicly owned WTE facility (the 3,000 tpd Pinellas County, FL WTE facility), CDM has the expertise and resources to provide comprehensive WTE consulting services to clients throughout North America. These services include feasibility determinations, technology assessments, vendor procurement, contract negotiations, permitting, construction management, operations monitoring and environmental compliance.

### CDM's WTE Experience is Extensive

CDM is one of the nation's leading environmental consulting engineering firms, and our staff has evaluated, monitored,

designed, permitted and/or implemented projects at more than 50 WTE facilities throughout the United States and Canada (**Figure 3**). Because of our experience in siting, permitting, contract negotiations, and performance testing for WTE projects, CDM knows how important it is that facilities operate as expected. We know that environmentally sound facilities build community support. Our staff is experienced in the design, construction, performance testing, and operation of WTE plants, providing clients with the technical talent to monitor complicated operations and to verify compliance with performance specifications and permit requirements.

### WTE Operations Monitoring Experience

CDM has proven experience in full-service operations monitoring, and we have helped numerous clients with their solid waste challenges, including:

- Achieving maximum use of facility capacity
- Verifying compliance with permit and contract requirements
- Improving residue quality and minimizing residue quantity
- Evaluating residue landfill requirements
- Minimizing bypass waste volumes

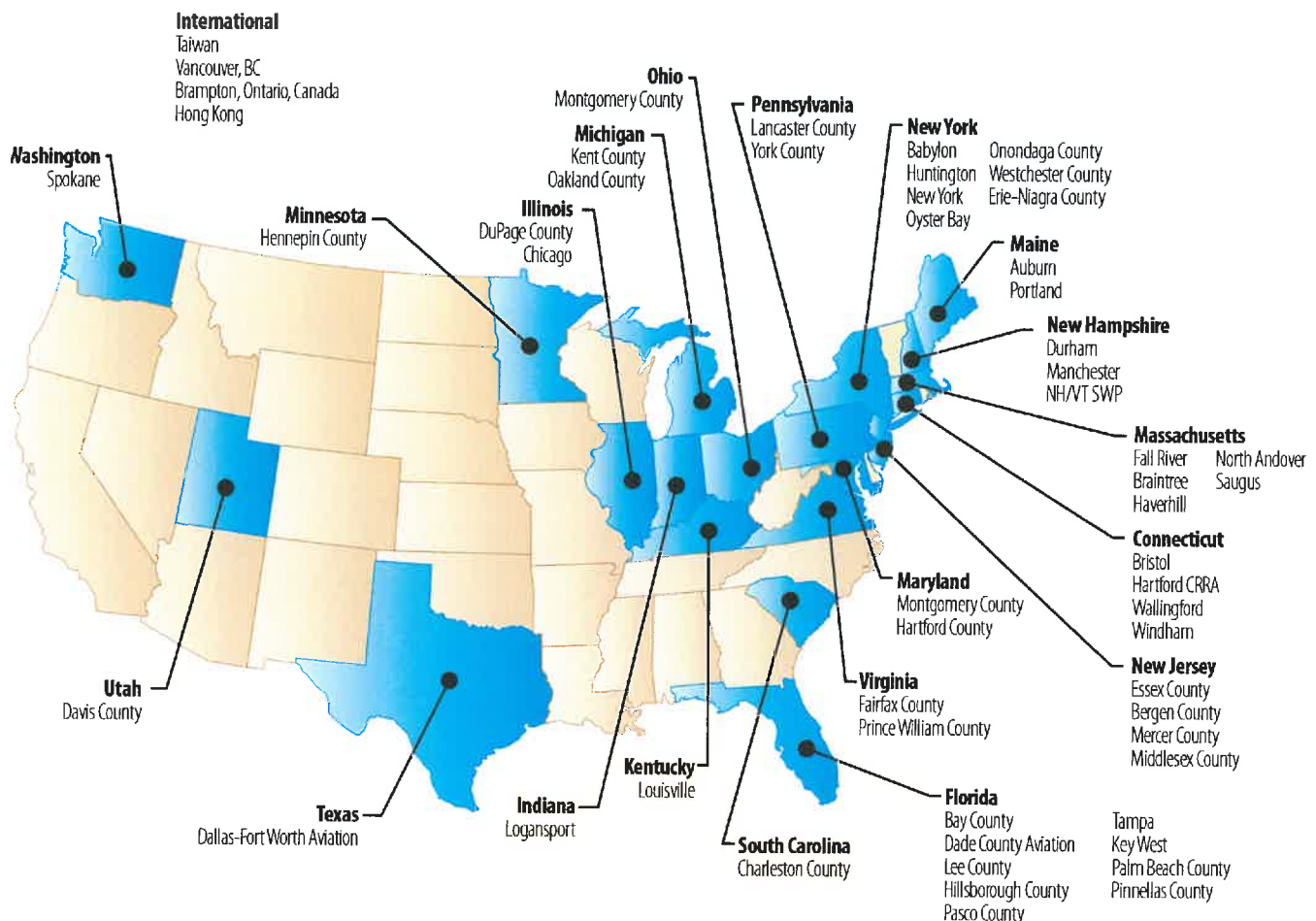


Figure 3: CDM has provided various other services on more than 50 WTE facilities across North America and Asia over the past 25 years.

- Achieving maximum power generation
- Evaluating the acceptability of "special" wastes
- Minimizing pass-through costs
- Reducing equipment downtime
- Assessing facility conditions
- Monitoring waste turnover in the refuse storage pit
- Witnessing air emission and ash residue testing.

CDM has the vantage point and skills to find and evaluate equipment and operational changes to improve cost-effectiveness and environmental performance and to identify and correct deficiencies. We have monitored facilities operated by all of the major WTE facility operators including Veolia ES Waste-to-Energy, Covanta Energy and Wheelabrator Technologies. This exceptional experience provides us with a strong basis on which to evaluate operating and maintenance practices and overall performance.

CDM has provided various engineering monitoring services to municipal clients on more than 20 waste-to-energy facilities in the United States and Canada, including the Pinellas County project. Our monitoring services have focused on environmental compliance, facility performance and facility upkeep, repair and capital upgrades. A listing of the WTE facilities for which CDM has provided engineering monitoring services is provided in **Table 1**.

### Operator Procurement

CDM provides clients with procurement services associated with the construction, expansion, operation and maintenance of WTE facilities. The specific procurement services offered by CDM are tailored to meet a client's specific needs. A competitive re-procurement process for an existing WTE facility typically includes the following services:

- Assist in developing and drafting the re-procurement process framework
- Identify re-procurement issues and policy decisions
- Evaluate existing O&M Contract to identify what provisions worked well, what provisions did not work well, and what issues arose that the existing contract did not address
- Evaluate WTE facility conditions and identify needed and/or desired capital repairs/upgrades
- Develop RFQ and RFP
- Develop new O&M contract
- Develop construction agreement and performance specifications, payment basis, acceptance criteria, etc. for capital projects
- Shortlist qualified firms based upon responses to RFQ on pass-fail basis
- Conduct simultaneous negotiations of RFP and contract(s) with qualified firms
- Issue final RFP and contract(s) for pricing
- Rank proposers based upon evaluation process contained in RFP
- Monitor activities during the transition period between the existing operator and replacement operator
- Monitor construction activity for capital projects (if required)
- Witness performance testing for capital projects (if required)
- Perform various economic analyses
- Make presentations to client staff, public officials and other stakeholder.

Most recently, CDM performed the above services for the Pinellas County, FL WTE facility. This facility, which commenced operation in 1983, is the first and only competitive re-procurement project to date for a publicly owned U.S. WTE facility. Operator re-procurement for publicly owned facilities is considerably different from renegotiating an extended agreement with an operator of a privately owned facility. For publicly owned facilities, the community's interest

**Table 1: CDM Engineering Monitoring Services**

Location	Size	Client	Operator	Basic Services
Onondaga County, NY	990-tpd	Onondaga County Resource Recovery Agency	Covanta Energy	Facility inspections; air emission test monitoring and report review; special services
North Andover, MA	1,500-tpd	North East Solid Waste Committee	Wheelabrator	APC retrofit; engineer's feasibility study; operations monitoring; air emissions test monitoring and report review; special services
Hillsborough County, FL	1,200-tpd	Hillsborough County	Covanta Energy	Annual reports; facility inspections; APC retrofit, facility expansion, stack test oversight
Pasco County, FL	1,050-tpd	Pasco County	Covanta Energy	Annual reports; facility inspections; APC retrofit, stack test oversight
Vancouver, BC, CN	750-tpd	Greater Vancouver Regional District	Montenay Bay LLC	Facility inspections; special services turbine generator retrofit.



**Table 1: CDM Engineering Monitoring Services**

Location	Size	Client	Operator	Basic Services
Bay County, FL	500-tpd	Bay County	Montenay Bay LLC	APC retrofit; facility inspections; special services
Charleston County, SC	644-tpd	Charleston County	Foster Wheeler	Monthly and annual reports; semiannual inspections; energy market analysis
Bristol, CT	650-tpd	Bristol Resource Recovery Facility Operating Committee	Covanta Energy	Facility inspections; air emission test monitoring and report review; special services, monthly reports
Lancaster County, PA	1,200-tpd	Lancaster County Solid Waste Management Agency	Covanta Energy	Facility inspections
Fairfax County, VA	3,000-tpd	Fairfax County	Covanta Energy	Facility inspections
Saugus, MA	1,500-tpd	Saugus RESCO Communities	Wheelabrator	APC retrofit; change-in-law reviews
Tampa, FL	1,000-tpd	City of Tampa Bay	Wheelabrator	Facility inspections; APC retrofit
Layton, UT	400-tpd	Banque Indosuez	Katy-Seghers	Facility inspections
Key West, FL	150-tpd	City of Key West	City of Key West	Boiler repair and upgrade
Portland, ME	550-tpd	Regional Waste Systems (21 Greater Portland Communities)	Regional Waste Systems	Strategic planning; facility inspections; operations review
Brampton, Ontario, CN	500-tpd	Algonquin Power	Algonquin Power	Facility inspections; operations review
Spokane, WA	800-tpd	City of Spokane	Wheelabrator	Facility inspection, performance audit
York County, PA	1,344-tpd	York County Solid Waste Authority	Montenay Bay LLC	Facility inspections, bond refinancing assistance
Hartford, MD	360-tpd	Northeast Maryland Waste Disposal Authority	Energy Recovery Operations	Facility inspection, APC system upgrade review
Pinellas County, FL	3,000-tpd	Pinellas County	Veolia ES Waste-to-Energy	Monthly and annual reports, facility inspections, stack test oversight

lays in asset preservation/renewal and waste processing capability. The Pinellas re-procurement process began in 2004 and culminated in selection of a replacement operator in January 2007. The replacement operator assumed operation of the facility in May 2007, when the existing service agreement expired.

### WTE Contract Experience

CDM also has extensive experience developing and administering both construction agreements used to develop WTE facilities and the companion service agreements which govern the operation and maintenance of these facilities. CDM

led the development of construction and service agreements for a large number of the current generation of WTE facilities including Hillsborough County, FL; Pasco County, FL; Lee County, FL; Bristol, CT; Lancaster, PA; and Kent County, MI. More recently, CDM assisted Hillsborough County negotiate a new construction agreement to expand their WTE facility and an extension to the existing service agreement. CDM also recently completed development of a new service agreement for the Pinellas County FL WTE facility which was competitively bid to three short listed operators and then negotiated. CDM is also routinely called upon to assist with the interpretation of contract provisions including issues related to

changes-in-law and the end of the service agreement. A listing of WTE facilities for which CDM has provided contract services is provided in **Table 2**.

CDM routinely performs condition assessments of WTE facilities to help owners monitor performance of their contract operator. These assessments typically include periodic inspection of the facility equipment, buildings and grounds to identify repair needs including capital improvements. Our inspections are typically coordinated with scheduled outages to allow for internal inspection of boilers and APC equipment to be performed. The following is a list of WTE facilities for which CDM has performed condition assessments. These facilities employ similar technologies to the County's WTE facility and include facilities operated by all of the major operating contractors (Covanta, Veolia, and Wheelabrator).

- Pinellas County, FL (3,000 tpd)
- Bay County, FL (490 tpd)
- Brampton, Ontario, Canada (500 tpd)
- Burnaby, British Columbia, Canada (750 tpd)
- Charleston, SC (600 tpd)
- Hillsborough County, FL (1,200 tpd)
- Onondaga County, NY (990 tpd)
- Pasco County, FL (1,050 tpd)
- Portland, ME (550 tpd)

- Spokane, WA (800 tpd).

### WTE Expansion and Refurbishment Experience

CDM has assisted a number of owners in evaluating expansion and/or refurbishment projects for existing WTE facilities as those facilities approached the end of their initial service agreement term. For expansion projects, our services have included: determining the required additional capacity, evaluating alternative combustion and APC technologies, developing layouts for new equipment and building structures, preparing preliminary capital cost estimates, determining permitting needs and preparing the permit applications, and preparing technical specifications, performance and testing specifications and the design/build agreement. For refurbishment projects, our services have included: performing detailed condition assessments, identifying capital needs to maintain facility reliability and/or improve performance, preparing capital cost estimates and implementation schedules, and developing technical specifications performance and testing specifications and the design-build agreement.

**Table 2: CDM's Contract Experience At Existing WTE Facilities**

Pinellas County, FL	Pinellas County	New service agreement and capital projects construction agreement for rebidding long term operations; general contract assistance
Hillsborough County, FL	Hillsborough County	Original construction & service agreements; changes-in-law; facility expansion construction agreement & service agreement extension; general contract assistance
Pasco County, FL	Pasco County	Original construction & service agreements; changes-in-law; service agreement extension; general contract assistance
Bay County, FL	Bay County	Assignment of existing service agreement to new operating contractor; service agreement extension; general contract assistance
Lee County, FL	Lee County	Original construction & service agreements
Onondaga County, NY	Onondaga County Resource Recovery Agency	General contract assistance
Lancaster County, PA	Lancaster County Solid Waste Management Authority	Original construction & service agreements
York County, PA Solid Waste	York County Authority	Facility expansion construction agreement and service agreement extension
Kent County, MI	Kent County	Original construction & service agreements
Bristol, CT	Bristol Resource Recovery Facility Operating Committee	Original construction & service agreements; general contract assistance
Vancouver, BC, CN	Greater Vancouver Regional District	New service agreement for rebidding long term operations; addition of turbine-generator; general contract assistance
North Andover, MA	North East Solid Waste Committee	Changes-in-law; new disposal agreements; general contract assistance
Saugus, MA	Saugus RESCO Communities	Changes-in-law
Rochester, MA	Cape Cod Commission	Service agreement extension proposal review

Over the past five years, CDM has successfully implemented one WTE facility expansion (Hillsborough County, FL) and one major refurbishment project (Pinellas County, FL). The Hillsborough County expansion involved the addition of a 600 tpd combustion unit to increase the facility capacity from 1,200 to 1,800 tpd. The Hillsborough County expansion has been in commercial operation since 2009. The Pinellas County refurbishment project consisted of \$90 million in capital upgrades to their 24-year-old WTE facility to ensure its long-term reliability and performance. The refurbishment projects ranged from overhaul of the stoker grate and replacement of sections of the boiler to construction of a new ash storage and processing building and spare parts warehouse. The refurbishment work was included as part of the rebid of the original service agreement for this facility. The new service agreement took effect in May 2007 and the refurbishment work, which was staggered to maintain electrical capacity commitments to the power purchaser, was completed in March 2010. **Table 3** includes a list of WTE projects where CDM has provided expansion and/or refurbishment services.

### WTE Permitting Experience

CDM has undertaken the permitting work on a number of WTE facilities over the past 25 years (**Table 3**). Most recently, CDM prepared the applications and successfully obtained the permits needed to construct the 600 tpd expansion of the Hillsborough County, FL WTE facility. This effort included obtaining the air permit which required extensive air dispersion modeling and a detailed best available control technology (BACT) analysis.

### Feasibility Studies

Traditionally, solid waste planning has been perceived primarily in terms of needs assessment, identification of alternatives to meet those needs with a defined level of service (LOS), and selection of the alternative that best meets those needs. The “best” criterion includes cost-effectiveness and frequently includes other factors, such as minimizing environmental and social impacts and community acceptability. Completion of solid waste planning has historically been viewed as yielding a mid-to-long-term capital improvement plan, identifying the timing and cost of capacity expansion, and upgrade, renewal, and replacement costs.

To implement the capital improvements recommended by planning efforts, the identified projects must be both financially feasible and fundable. Financial feasibility can be translated as affordable by the existing and future customers of the systems. Fundability is the wherewithal to obtain one or more sources of monies, whether grant, debt, equity, or some combination.

CDM has extensive expertise and experience in conducting feasibility studies and the engineering and construction aspects of solid waste planning and WTE facilities as represented in **Table 4**.

### Waste-to-Energy and Solid Waste

#### Financing Assistance

CDM has significant experience in the financial evaluation of WTE facilities and systems. For many master plans, CDM has prepared financial analyses for alternative solid waste management system configurations. We have prepared numerous engineers' feasibility reports for bond issues; cost analyses for the construction of solid waste systems; cost analyses of operation, maintenance, and closure for existing solid waste systems; evaluations of financing alternatives; rate studies; billing systems; and collection ordinances.

CDM has also helped numerous clients' complete grant and loan applications for facility funding. CDM personnel have conducted rate studies for solid waste clients where the objective has been to project revenue requirements, including O&M, debt service, repair and replacement, and capital improvements. They have identified and evaluated alternative financing sources (impact fees, user charges, additional debt, and municipal special taxing units), and have helped clients select the optimum balance of financing methods.



**Table 3: CDM's WTE Permitting Experience**

Facility	Air Permit	Health Risk Assessment	Solid Waste Permit	Other Permits
Lancaster County, PA	✓	✓	✓	✓
Hillsborough County, FL	✓		✓	✓
Hillsborough County, FL (Expansion)	✓		✓	✓
Kent County, MI	✓	✓	✓	
Pasco County, FL	✓		✓	
Lee County, FL	✓		✓	
Fairfax County, VA				
Tampa, FL				
Oakland City, MI	✓	✓	✓	

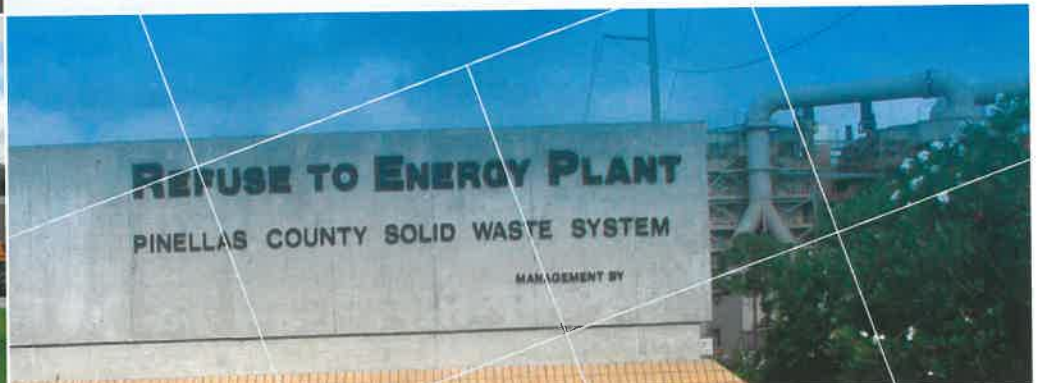
**Table 4: Representative CDM WTE Feasibility Study Experience**

Client/Location	Project
Auburn, ME	Energy recovery facility design review, and co-disposal feasibility analyses, including full-scale demonstration testing
Cabarrus County, NC	Energy recovery feasibility study
Dallas-Fort Worth International Airport, Texas	WTE feasibility study and economic analysis
East Central Michigan Planning and Development Region, Saginaw, MI	WTE feasibility study for seven county area, including energy market analysis and cost estimates for three resource recovery facilities
Greater New Bedford Regional Refuse Management District, New Bedford, MA	Energy recovery feasibility study
Green Bay Metropolitan Sewerage District, Green Bay, WI	Energy recovery feasibility study and environmental impact analysis
Hennepin County, MN	Energy recovery feasibility study
Hillsborough County, FL	Feasibility study, siting, permitting, procurement, financing, construction services, operations monitoring, and air pollution control (APC) retrofit services for 1,200-tpd facility
Jacksonville, FL	Comprehensive feasibility study, siting, and initial permitting of proposed 3,000-tpd facility
Lamprey Regional Solid Waste Cooperative, Durham, NH	Feasibility study, design, and construction services for 106-tpd regional energy recovery facility
Lee County, FL	Feasibility study, siting, permitting, and procurement services for regional energy recovery/solid waste management system
Mercer County Improvement Authority, New Jersey	Preparation of engineer's feasibility report for a \$214 million resource recovery facility, including a solid waste market analysis
Michigan Department of Commerce, Saginaw, MI	Study of industrial cogeneration alternatives, including alternative fuels study
Milwaukee Metropolitan Sewerage District, Milwaukee, WI	Evaluation of energy recovery technologies and energy market and environmental impact analyses for co-incineration of solid waste and wastewater sludge
New Hampshire and Vermont	Feasibility analysis and procurement planning for small-scale energy recovery facility to serve 26 municipalities in both states



## **Tab 1**

**Standard Form (SF) 330 - Part I & II**





# Tab 1

## Standard Form (SF) 330 - Part I & II

Included in the following pages is a completed SF 330 for CDM, which details a total of ten of CDM's projects similar to those that the County may request.

SF 330 Section E identifies key personnel who will be responsible for completing these projects to the County's satisfaction. The resumes include their major achievements, experience, competence, and location.

SF 330 Section F illustrates the projects that CDM has selected to best represent our work.



# ARCHITECT – ENGINEER QUALIFICATIONS

## PART I – CONTRACT-SPECIFIC QUALIFICATIONS

### A. CONTRACT INFORMATION

1. TITLE AND LOCATION *(City and State)*

**Waste-to-Energy Consulting Services, Pinellas County, FL**

2. PUBLIC NOTICE DATE

**January 28, 2011**

3. SOLICITATION OR PROJECT NUMBER

**RFP #101-0120-CN (AM)**

### B. ARCHITECT-ENGINEER POINT OF CONTACT

4. NAME AND TITLE

**Daniel E. Strobridge, QEP, Vice President**

5. NAME OF FIRM

**Camp Dresser & McKee Inc. (CDM)**

6. TELEPHONE NUMBER

**813.281.2900**

7. FAX NUMBER

**813.288.8787**

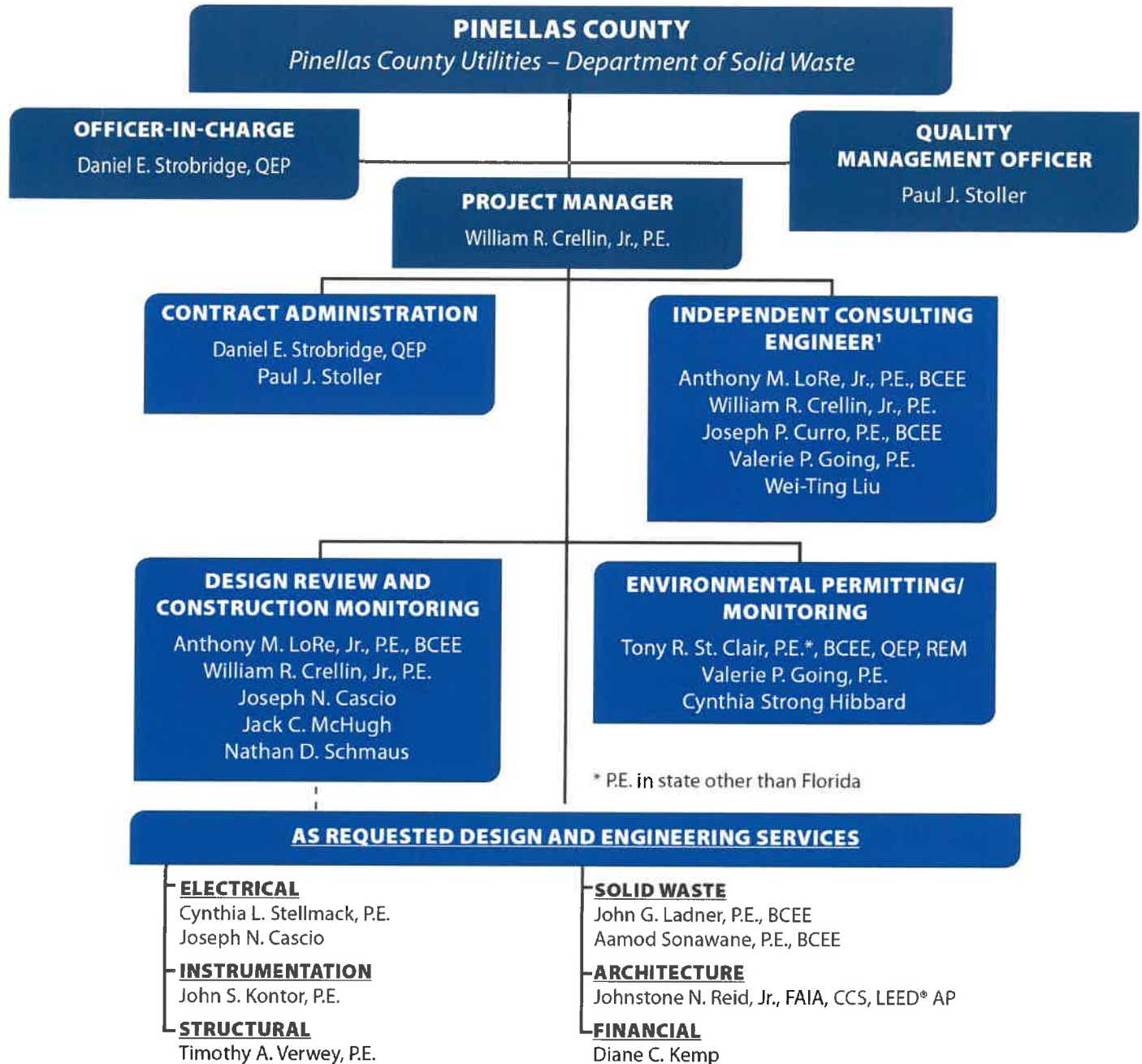
8. E-MAIL ADDRESS

**StrobridgeDE@cdm.com**

### C. PROPOSED TEAM

*(Complete this section for the prime contractor and all key subcontractors.)*

	(Check)			9. FIRM NAME	10. ADDRESS	11. ROLE IN THIS CONTRACT
	PRIME	JV PARTNER	SUBCONTRACTOR			
a.	X			<b>CDM – Tampa, FL</b> <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	<b>1715 North Westshore Boulevard, Suite 875</b> <b>Tampa, FL 33607</b>	<b>Prime</b>
b.	X			<b>CDM – Maitland (Orlando), FL</b> <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	<b>2301 Maitland Center Parkway, Suite 300</b> <b>Maitland, FL 32751</b>	<b>Engineering Services</b>
c.	X			<b>CDM – Cambridge, MA</b> <input type="checkbox"/> CHECK IF BRANCH OFFICE	<b>One Cambridge Place</b> <b>50 Hampshire Street</b> <b>Cambridge, MA 02139</b>	<b>Engineering Services</b>
d.	X			<b>CDM – Houston, TX</b> <input checked="" type="checkbox"/> CHECK IF BRANCH OFFICE	<b>3050 Post Oak Boulevard, Suite 300</b> <b>Houston, TX 77056</b>	<b>Engineering Services</b>



1. This includes performance of the following activities: engineering consultations for operation and maintenance activities/issues; engineering studies/reports; acting as the Consulting Engineer per the Service Agreement between Pinellas County and Vedia ES Pinellas, Inc.; periodic inspections; attendance at periodic meetings.

# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **William R. Crellin, Jr., P.E.** 13. Role in this contract **Project Manager; Independent Consulting Engineer; Design Review and Construction Monitoring**

14. Years Experience Total **34** With Firm **7** 15. Firm Name and Location **CDM – Tampa, FL**

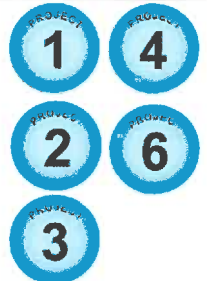
16. Education (Degree and Specialization) **B.S. – Mechanical Engineering** 17. Current Professional Registration (State and Discipline) **FL – Mechanical Engineer; FL – General Contractor; MI – Boiler Repair Contractor; MN – Piping Contractor**

18. Other Professional Qualifications (Publications, Organizations, Training, Awards, etc.)  
Solid Waste Association of North America

## 19. Relevant Projects

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☒

a. **Independent Consulting Engineer, Pinellas County, Pasco County and Hillsborough County Solid Waste Departments, Pasco and Hillsborough Counties, FL, Ongoing, Project Manager.** Mr. Crellin manages CDM's project teams serving as the Independent Consulting Engineer for Pinellas County, Pasco County, and Hillsborough County, Florida Solid Waste Departments for their Waste-to-Energy (WTE) projects. CDM monitors operations of the three WTE facilities, prepares applicable permit applications, reviews environmental compliance documents from the operating contractors, conducts boiler and major equipment inspections during scheduled maintenance periods, conducts periodic facility wide inspections, and maintains a punchlist of all observed deficiencies and their repair. CDM also prepares monthly and annual reports for the three counties documenting the condition of the three facilities and all equipment within; listing numerous operational statistics, following major maintenance activities, tracking contractual guarantees the contractors must meet, environmental compliance, and the general state of the three facilities and their operations.



Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☒

b. **Pinellas County Re-procurement Project, Pinellas County, FL, 2008, Project Manager.** Mr. Crellin served as the Project Manager as CDM assisted the County in procuring a new operating contractor for the Pinellas WTE Facility (Facility). CDM developed RFQs, developed a qualified bidder's list, a condition assessment of the Facility, an RFP, and prepared a bid evaluation that led to the selection of Veolia Environmental, Inc. as the chosen contractor. The Facility went into commercial operation in 1983, processes a nominal 3,000 tons per day of municipal solid waste, and generates 75 megawatts of electrical energy, which is sold to Florida Progress Energy. Veolia took over operations in May 2007. The term of the new contract will run from May 2007 to 2024. As part of the project, CDM developed a list of capital improvement projects and an engineer's estimate of cost. These capital improvements assured that the facility will run smoothly and efficiently through 2024. The bidders included pricing for implementation of these capital improvement projects in their proposals. Additionally punch lists of various smaller repairs to the Facility were developed and implemented by Veolia. Total costs for the capital improvements and punch list repairs were approximately \$100 million. CDM provided construction monitoring services throughout the implementation of the capital improvements and punch list repairs as well as a review of Veolia's invoices for this work.



Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☒

c. **WTE Facility Expansion, Hillsborough County, FL, 2010, Project Manager.** Mr. Crellin managed CDM's project team for the expansion of the Hillsborough County WTE Facility. The \$125 million project included the addition of a new 600 ton per day combustion train along with a new 17 megawatt turbine generator. CDM was responsible for the permit application through the state Power Plant Siting Act (PPSA), design review, construction monitoring, administration of acceptance testing, and invoice review and approval for all contractor and sub-contractors.



Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☐

d. **Various Waste-to-Energy Facilities, Various Locations, 1999-2004, Regional Maintenance Manager.** Mr. Crellin managed an in-house South East Regional Maintenance (SERM) team of 70 that performed all mechanical maintenance at six waste-to-energy facilities and provided construction services for modifications within the six facilities. SERM holds the ASME R-stamp to perform all code boiler repairs within the 15 boilers in the FL/MI region. As part of the regional staff, Mr. Crellin worked to develop improved combustion technology for the aggressive environment of waste-to-energy combustion units. Mr. Crellin managed the implementation of all modifications and additions to the six plants. He managed a \$7.6M budget and made P&L reports to senior management. He also directly supervised the regional CEMS coordinator, safety administrator, quality control manager, regional maintenance supervisor, accountant, and accounts payable clerk.



# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **William R. Crellin, Jr., P.E.**

13. Role in this contract

**Project Manager; Independent Consulting Engineer; Design Review and Construction Monitoring**

- |    | Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)  | Performed with CDM <input type="checkbox"/> |
|----|--|---|
| e. | <b>Waste-to-Energy Facilities, Various Locations, 1995, Covanta Energy, Regional Chief Engineer.</b> At Covanta Energy, Mr. Crellin provided oversight and guidance of combustion parameters and operating procedures for five waste-to-energy facilities. He managed all special projects and engineering modifications and assisted in the supervision of subcontractors while performing outage work. As environmental engineer, he prepared environmental reports to be submitted to the FDEP and administered the regional safety program and served on Covanta's in-house audit team. He participated in audits for facilities located in Bristol, Connecticut; Indianapolis, Indiana; and Fairfax County, Virginia. | <input type="checkbox"/>                    |
| f. | <b>Resource Recovery Facility, Lake County, FL, 1991, Resident Field Engineer.</b> Mr. Crellin supervised quality assurance and scheduling of contractors constructing the Lake County Resource Recovery Facility. He was the mechanical start-up engineer as the project progressed from construction to start-up.  | <input type="checkbox"/>                    |
| g. | <b>Combined Cycle Co-generation Facility, Walt Disney World's Reedy Creek Energy, Lake Buena Vista, FL, 1989, Field Engineer.</b> Mr. Crellin managed the installation and start-up of a gas turbine combined cycle co-generation facility for Reedy Creek Energy. His duties included letting of all subcontracts, monitoring those contracts, purchasing loose materials, scheduling, supervising craft labor, and interfacing with the client. The project consisted of a 35 MW gas turbine, heat recovery steam generators, and a 7.5 MW steam turbine.  | <input type="checkbox"/>                    |

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

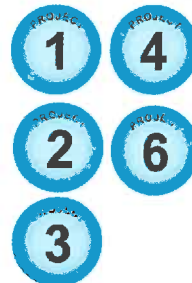
<p>12. Name <b>Daniel E. Strobridge, QEP</b></p> <p>14. Years Experience    Total    <b>35</b>    With Firm    <b>25</b></p> <p>16. Education (<i>Degree and Specialization</i>)  <b>B.S. – Environmental Sciences</b></p> <p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)          Member, Municipal Waste Management Association; National Solid Waste Management Association; Member, Solid Waste Association of North America</p>	<p>13. Role in this contract  <b>Officer-in-Charge/Project Director; Contract Administration</b></p> <p>15. Firm Name and Location    <b>CDM – Tampa, FL</b></p> <p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>Qualified Environmental Professional,          Institute of Professional Environmental Practice</b></p>
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19. Relevant Projects

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

**Independent Consulting Engineer, Pinellas County, Pasco County and Hillsborough County Solid Waste Departments, Pasco and Hillsborough Counties, FL, Ongoing, Client Service Manager.**

Mr. Strobridge oversees CDM's project teams serving as the Independent Consulting Engineer for Pinellas County, Pasco County, and Hillsborough County, FL Solid Waste Departments for their WTE projects. CDM monitors operations of the three WTE facilities, prepares applicable permit applications, reviews environmental compliance documents from the operating contractors, conducts boiler and major equipment inspections during scheduled maintenance periods, conducts periodic facility wide inspections, and maintains a punch list of all observed deficiencies and their repair. CDM also prepares monthly and annual reports for the three counties documenting the condition of the three facilities and all equipment within; listing numerous operational statistics, following major maintenance activities, tracking contractual guarantees the contractors must meet, environmental compliance, and the general state of the three facilities and their operations.



Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

**Consulting Engineering Services for Operator Re-Procurement Assistance, Pinellas County, FL, 2008, Client Service Manager.**

CDM was tasked to develop RFQs, develop a qualified bidder's list, and an RFP for the procurement of the new Operator of the Pinellas County Waste-to-Energy Facility. The facility went into commercial operation in 1983, processes 3,000 tpd of municipal solid waste, and generates 75 megawatts of electrical energy, which is sold to Florida Progress Energy. The current operations and maintenance contract expired in May 2007. The new contract will run from May 2007 to 2024. As part of the RFP, CDM has also been tasked to develop a list of capital improvement projects that will assure that the facility will run smoothly and efficiently through 2024. The bidders will include pricing for implementation of these capital improvement projects in their proposals. CDM has developed an engineer's estimate for these capital improvement projects.



Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

**Air Pollution Control Retrofit, 1,050-tpd Waste-to-Energy Plant, Pasco County, FL, 2000, Program Manager.**

Mr. Strobridge managed the contract negotiations, construction administration, and permitting for this project that involved retrofitting the existing continuous emissions monitoring system and installing a NOx reduction system. This \$90 million project included the replacement of furnaces, boilers, and APC systems. Mr. Strobridge managed the permitting, environmental compliance, and construction monitoring work performed by CDM on this project.



Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

**Solid Waste Master Plan Update, Pasco County, FL, 2003, Officer-in-Charge.** Mr. Strobridge served as officer-in-charge for the updated of Pasco County's solid waste master plan. The scope of work included developing waste quantity projections, identifying facility capacity needs, identifying permit requirements, investigating technologies, assessing energy markets, and developing WTE alternatives.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

**Waste-to-Energy Facility Expansion Construction, Hillsborough County, FL, 2009, Client Service Manager.**

After assisting the county with negotiations for the construction of a 600 tons per day (tpd) expansion and 20-year extension of the service agreement, CDM was selected to provide construction monitoring services for the plant expansion, which consisted of adding a 600-tpd mass burn combustion train, a 17-MW turbine generator, and ancillary equipment.



## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **Daniel E. Strobridge, QEP**

13. Role in this contract

**Officer-in-Charge/Project  
Director; Contract Administration**

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- f. **Air Pollution Control Retrofit 1,200-tpd Waste-to-Energy Plant, Hillsborough County, FL, 2000, Program Manager.** This \$36M project included the replacement of the facility's three electrostatic precipitators (ESPs) with spray dryer absorber/fabric filter (SDA/FF), carbon and aqueous ammonia injection systems, and a new continuous emissions monitoring system. He managed the contract negotiations, construction administration, and permitting for this project.



Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- g. **McKay Bay Refuse-to-Energy Facility, Tampa, FL, 2002, Technical Director.** Mr. Strobridge provided services to the City of Tampa to assist in the development of a procurement approach for retrofit of the McKay Bay refuse-to-energy facility and to prepare architectural, foundation, and civil/site evaluations. Previously operated as a municipal solid waste incinerator, the facility was retrofitted with waste-to-energy and air pollution control technology in 1984 to become one of the area's first energy recovery facilities. The McKay Bay refuse-to-energy facility processes 1,000 tpd of solid waste.

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- h. **Solid to Waste Recovery Project, Hillsborough County, FL, 2006, Contract Administration.** For the Hillsborough County, Florida solid waste energy recovery project, Mr. Strobridge managed contract administration during construction of the 1,200-tpd facility, including progress tracking and reporting, and coordination of the performance acceptance test.



Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- i. **1,050-tpd Waste-to-Energy Plant, Pasco County, FL, 1991, Construction Manager.** Mr. Strobridge managed facility siting, permitting, and construction administration for a 1,050-tpd (ton per day), Waste-to-Energy plant. He conducted vendor contract negotiations and prepared the engineer's feasibility report for project financing.

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- j. **Energy Recovery Facility Planning and Implementation Project, Hillsborough County, FL, 1987, Contract Administration.** For the solid waste energy recovery project, Mr. Strobridge managed contract administration during construction of the 1,200-tpd facility including progress tracking and reporting, and coordination of the performance acceptance test.

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)








Performed with CDM ☒

- k. **Regional Solid Waste Disposal Program, Lee County, FL, 1991, Technical Director.** Mr. Strobridge served as technical director for the Lee County, Florida, regional solid waste disposal program. In this capacity, he directed the development of an integrated solid waste management system to serve Lee and Hendry counties that included the siting and permitting of a 1,200-tpd energy recovery facility, a sanitary landfill for bypass wastes, an ashfill for incinerator ash, a Class III landfill for construction/demolition debris, sludge treatment and composting facilities, and a materials recovery facility. Mr. Strobridge developed the Waste-to-Energy Request for Proposals, conducted vendor contract negotiations, and authored the engineer's feasibility report for project financing.








## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name <b>Paul J. Stoller</b></p>	<p>13. Role in this contract <b>Quality Management Officer; Contract Administration</b></p>
<p>14. Years Experience    Total    <b>40</b>    With Firm    <b>30</b></p>	<p>15. Firm Name and Location <b>CDM – Cambridge, MA</b></p>
<p>16. Education (<i>Degree and Specialization</i>)  <b>M.S. – Urban Science and Engineering</b>  <b>B.E.E. – Electrical Engineering</b></p>	<p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>N/A</b></p>
<p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  Honors/Awards: Solid Waste Association of North America 2004 Life Member Award; Member, Solid Waste Association of North America; Member, American Society of Civil Engineers; Member, Institute of Electrical and Electronics Engineers</p>	
<p>19. Relevant Projects</p>	

	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
a.	<p><b>Waste-to-Energy Consulting Services, Pinellas County, FL, Ongoing, Technical Director.</b> Mr. Stoller assisted the county during the transition to the new operator and is currently assisting the county with monitoring the operation and maintenance of the facility by the new operator.</p>	
b.	<p><b>Waste-to-Energy Operator Re-procurement, Pinellas County, FL, 2008, Technical Director.</b> Mr. Stoller directed the request for qualifications/request for proposals process for the procurement of an operator for the existing 3,000 tpd WTE facility in Pinellas County, Florida, he is assisted the county during the transition to the new operator and is currently assisting the county with monitoring the operation and maintenance of the facility by the new operator.</p>	
c.	<p><b>Waste-to-Energy Facility Contract Assistance, Hillsborough County, FL, 2005, Technical Advisor.</b> Mr. Stoller assisted in the negotiation for the expansion of the Hillsborough County, Florida, WTE facility along with a revised service agreement for another 20 years of operation and maintenance by the existing service provider. He also developed the basis of design, performance specifications, permit application, and construction agreement for a 600 tpd expansion to the WTE facility.</p>	
d.	<p><b>Various Waste-to-Energy Facility Services, Hillsborough County, FL, 2010, Project Manager.</b> Mr. Stoller was the project manager for various activities that included operations monitoring services and annual inspections and reporting services for the WTE facility continuously since 1987 when the facility opened, and various additional tasks included service agreement extension negotiations, improvements and upgrades to the facility including extensive air pollution control equipment retrofits, and overseeing construction during expansion.</p>	
e.	<p><b>Services During Construction, Onondaga County, NY, 1995, Project Director.</b> Mr. Stoller directed services during construction for a 900-tpd WTE facility being constructed by a full-service contractor under contract to the Onondaga County, New York Resource Recovery Agency. He provided direction and oversight on the Engineer's Feasibility Report for the refinancing of the WTE facility located in North Andover, Massachusetts as well.</p>	
f.	<p><b>WTE Facility, Hillsborough County, FL, 1984, Project Manager.</b> Mr. Stoller was project manager for the Hillsborough County, Florida energy recovery facility planning and implementation project, a 1,200-tpd mass-fired electric generating energy recovery facility. Mr. Stoller was involved in site selection, Request for Proposal (RFP) preparation, proposal evaluation and contract negotiations with the selected contractor and preparing the engineer's feasibility report which was included in the official statement for the \$144 million revenue bond issue which financed the project. The facility became operational in the summer of 1987.</p>	
g.	<p><b>Refinancing and Contract Negotiation Assistance for a Waste-to-Energy Facility, North Andover, MA, 2005, Technical Advisor.</b> In 2005 CDM helped the NESWC refinance the \$160 million in outstanding bonds originally issued to construct the waste-to-energy facility located in North Andover, Mass. The refinancing resulted in a net present value savings in debt service of \$32 million. CDM prepared a Feasibility Report, which was included in the Official Statement issued in conjunction with the issuance of \$189.4 million of refunding bonds. He provided direction and oversight on the Engineer's Feasibility Report for the refinancing of the WTE facility.</p>	

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT











12. Name	Paul J. Stoller	13. Role in this contract	Quality Management Officer; Contract Administration	
		Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)		Performed with CDM <input checked="" type="checkbox"/>
		<b>Independent Consulting Engineering Services, Operations Monitoring and Solid Waste Consulting Services, Pasco County, FL, Ongoing, Task Advisor.</b> Mr. Stoller assists as a technical advisor to CDM's project team serving as the Independent Consulting Engineer for the Pasco County WTE projects. CDM monitors operations of the WTE facility, prepares applicable permit applications, reviews environmental compliance documents from the operating contractors, conducts boiler and major equipment inspections during scheduled maintenance periods, conducts periodic facility wide inspections, and maintains a punch list of all observed deficiencies and their repair. CDM also prepares monthly and annual reports for the County documenting the condition of the three facilities and all equipment within; listing numerous operational statistics, following major maintenance activities, tracking contractual guarantees the contractors must meet, environmental compliance, and the general state of the three facilities and their operations.		 
h.				
		<b>Various WTE Facility Services, Lancaster County, PA, 1984-1990, Task Leader.</b> Mr. Stoller prepared the RFP and negotiated the contracts for a 1,200-tpd mass burn energy recovery facility which is owned by the Lancaster County Solid Waste Management Authority. The facility sells electricity to the local electric company. He directed the preparation of the engineer's feasibility report included in the official statement for the \$135 million bond issue that financed the project.		Performed with CDM <input checked="" type="checkbox"/>
		Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)		Performed with CDM <input checked="" type="checkbox"/>
		<b>WTE Services – Budget Reviews, Assistance in Refinancing, Assistance in Negotiating an Expansion, York County, PA, 2009, Project Director/Senior Advisor.</b> Mr. Stoller assisted the York County Solid Waste and Refuse Authority negotiate a 600 tpd expansion to the Authority's existing 1,344 tpd WTE facility. Based upon CDM's involvement in the expansion of the Hillsborough County, Florida WTE facility and CDM's role in developing new O&M contracts for both the Hillsborough County and Pinellas County WTE facilities, CDM was retained by the Authority to assist in negotiating an expansion of the facility in order to increase the facility's combustion capacity and to extend the service agreement between the Authority and the existing operator.		
j.				
		Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)		Performed with CDM <input checked="" type="checkbox"/>
		<b>Planning, Design and Construction Supervision for Waste-to-Energy Facilities, City of Keelung, Tainan and Ping-Tung Counties, Taiwan, 2007, Task Advisor.</b> Mr. Stoller has significant experience working as the privatization expert on international projects, where his work has included providing quality assurance and quality control for the procurement of three design-build waste-to-energy facilities in Taiwan. The facilities included the Taiwan EPA's two 900 tpd and one 600 tpd waste-to-energy incineration projects in Ping-Tung, Tainan and Keelung and Counties in Taiwan. The project included the planning, siting, design, tender document preparation and construction of three waste-to-energy facilities, transfer stations and landfills for the disposal of ash and bypassed waste.		
k.				
		Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)		Performed with CDM <input checked="" type="checkbox"/>
		<b>Waste-to-Energy Facility Services and Operator Procurement, Vancouver, Canada, 2003, Task Advisor.</b> Mr. Stoller assisted in design review services and assisted in the development of changes to the operating agreement related to the addition of a steam turbine/electric generator to the project.		
l.				
		Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)		Performed with CDM <input checked="" type="checkbox"/>
		<b>Performance Audit of the Spokane Regional Solid Waste System, Including the Waste-to-Energy Facility, Spokane, WA, 2009, Task Advisor.</b> As a task advisor Mr. Stoller helped CDM evaluate the technical performance of the Spokane Regional Solid Waste System (system) WTE facility and transfer stations, as well as the organizational performance, and flow of information at the System as a whole.		
m.				

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name <b>Anthony M. LoRe, Jr., P.E., BCEE</b></p>	<p>13. Role in this contract <b>Independent Consulting Engineer; Design Review and Construction Monitoring</b></p>
<p>14. Years Experience    Total    <b>26</b>    With Firm    <b>26</b></p>	<p>15. Firm Name and Location    <b>CDM – Cambridge, MA</b></p>
<p>16. Education (<i>Degree and Specialization</i>) <b>B.S. – Chemical Engineering</b></p>	<p>17. Current Professional Registration (<i>State and Discipline</i>) <b>MA, CT, FL – Chemical Engineer</b></p>
<p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>) Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers</p>	






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19. Relevant Projects

<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p>a. <b>Waste-to-Energy Operator Re-procurement, Pinellas County, FL, 2008, Technical Support.</b> Mr. LoRe provided various technical support during the preparation of a RFQ and RFP to procure a contract operator to operate the Pinellas County WTE facility upon expiration of the existing service agreement in May 2007, becoming the second WTE facility owner in North America to rebid its original O&amp;M agreement. Mr. LoRe was responsible for performing facility inspections and assessments, developing scopes of work for various upgrade projects, providing technical input to the service and construction agreements and performing technical review and analysis of the submitted proposals.</p>	
<p>b. <b>Air Pollution Control Retrofit Review and Operations Monitoring Assistance, North Andover, MA, 2005, Project Manager.</b> For the 1,500-tpd WTE facility in North Andover, Massachusetts, Mr. LoRe evaluated alternative technologies and prepared construction and operating cost estimates. The evaluation considered a number of different technologies including dry lime injection systems, spray dry absorbers, fabric filters and upgraded electrostatic precipitators.</p>	 
<p>c. <b>Independent Consulting Engineering Services, Operations Monitoring and Solid Waste Consulting Services, Pasco County, FL, 2000, Project Engineer.</b> He completed evaluations of alternative approaches to retrofitting the 1,050-tpd WTE facility in Pasco County, Florida.</p>	
<p>d. <b>Waste-to-Energy Service Agreement Re-procurement Projects, Metro Vancouver, 2000, Project Engineer.</b> Mr. LoRe assisted Metro Vancouver rebid their WTE operating and maintenance (O&amp;M) contract prior to expiration of the initial term in 2000. This work involved development and negotiation of a memorandum of understanding (MOU) with their existing WTE contract operator that contained the terms for rebidding the O&amp;M agreement and preparation of the RFP. This was the first publically owned WTE facility in North America to rebid its initial O&amp;M agreement.</p>	  
<p>e. <b>Waste-to-Energy Facility Design and Construction, Pinellas and Hillsborough Counties, FL, Various Dates, Project Engineer.</b> Mr. LoRe contributed to the successful development and implementation of seven large-scale WTE facilities with capacities ranging from 600- to 3,000-tpd. His responsibilities have included conceptual design and planning, vendor procurement through competitive Request for Qualifications (RFQ) and Request for Proposals (RFP) processes, design review, construction oversight and performance testing. He recently provided design review services for expansion of the Hillsborough County, Florida WTE facility from 1,200 tpd to 1,600 tpd and \$90 million in capital upgrades to the Pinellas County, Florida WTE facility.</p>	  



# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name	Anthony M. LoRe, Jr., P.E., BCEE	13. Role in this contract	Independent Consulting Engineer; Design Review and Construction Monitoring
Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)			Performed with CDM <input checked="" type="checkbox"/>
f.		<b>Operations Monitoring for Waste-to-Energy Facilities, Various Dates, Project Manager.</b> Mr. LoRe provides ongoing independent monitoring services at a number of WTE facilities including <b>Vancouver, British Columbia (750 tpd)</b> , Brampton, Ontario (500 tpd), <b>Pinellas County, Florida (3,000 tpd)</b> ; <b>Hillsborough County, Florida (1,200 tpd)</b> ; <b>Pasco County, Florida (1,050 tpd)</b> ; <b>York County, PA, and Onondaga County, New York (990 tpd)</b> . He has also provided various operations related services at WTE facilities in North Andover, Massachusetts (1,500 tpd), Bay County, Florida (510 tpd), Layton, Utah (400 tpd); Fairfax County, Virginia (3,000 tpd); Bristol, Connecticut (650 tpd); Charleston County, South Carolina (644 tpd); Tampa, Florida (1,000 tpd); and Portland, Maine (550 tpd). Mr. LoRe's operations experience includes conducting detailed plant inspections, monitoring plant performance and verifying environmental compliance. He has also assisted in the review of process and operational changes as a means of improving operations and/or reducing air emission levels.	
			
			
			
g.		<b>Planning, Design and Construction Supervision for Waste-to-Energy Facilities, City of Keelung, Tainan and Ping-Tung Counties, Taiwan, 2007, Technical Support.</b> Mr. LoRe provided technical support for the Taiwan EPA's two 900 tpd and one 600 tpd waste-to-energy incineration projects in Ping-Tung, Tainan and Keelung and Counties in Taiwan. The project included the planning, siting, design, tender document preparation and construction of three waste-to-energy facilities, transfer stations and landfills for the disposal of ash and bypassed waste.	
			
h.		<b>Performance Audit of the Spokane Regional Solid Waste System, Including the Waste-to-Energy Facility, Spokane, WA, 2009, Project Engineer.</b> CDM evaluated the technical performance of the Spokane Regional Solid Waste System (system) WTE facility and transfer stations, as well as the organizational performance, and flow of information at the System as a whole. The principal facilities of the System include the 800-ton-per-day mass-burn WTE facility, the Northside Regional Landfill, two solid waste transfer stations, three recycling centers and household hazardous waste facilities, the use of non-system landfills to dispose of by-pass waste and non-processable waste, and the use of a private contractor for composting certain yard and garden debris. Mr. LoRe assisted in the review of the system's maintenance and operations at its major facilities, a comparison of the system's performance to the goals and objectives, and review and assessment of the overall regional program and administrative services and performance provided by the system compared to similar solid waste systems.	
			

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name <b>Joseph P. Curro, P.E., BCEE</b></p> <p>14. Years Experience    Total    <b>36</b>    With Firm    <b>32</b></p> <p>16. Education (<i>Degree and Specialization</i>)  <b>B.S. – Civil Engineering</b></p> <p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  Board Certified Environmental Engineer (BCEE) (Solid Waste), American Academy of Environmental Engineers; Solid Waste Association of North America (SWANA); Landfill Gas Management Division, Bioreactor Committee, Extraction and Control Committee; Solid Waste Advisory Committee, Town of Belmont, Massachusetts; Construction &amp; Demolition Materials Recycling Advisor, WGBH-TV, Boston, Massachusetts; Conservation Commission, Town of Belmont, Massachusetts; Noise Ordinance Advisory Committee, Town of Belmont, Massachusetts</p>	<p>13. Role in this contract    <b>Independent Consulting Engineer</b></p> <p>15. Firm Name and Location    <b>CDM – Cambridge, MA</b></p> <p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>FL, RI, MA – Civil Engineer</b></p>
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### 19. Relevant Projects

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

- a. **Consulting Engineering Services for Operator Procurement Assistance, Pinellas County, FL, 2009, Lead Design Engineer.** Pinellas County has entered into a five-year contract with CDM for independent consulting engineering services associated with regulatory assistance and operation of Pinellas County's municipal solid waste landfills and related programs. Mr. Curro assisted in the development of the RFP.



Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

- b. **Waste-To-Energy Facility Operation and Maintenance and Facility Expansion, Hillsborough County, FL, 2008, Lead Design Engineer.** CDM assisted the County with Operation and Maintenance (O&M) monitoring, and annual inspections and reporting. Under an Operations and Management Agreement, Covanta Hillsborough (Covanta) manages the 1,200-tpd Hillsborough County Solid Waste resource recovery facility for the County. Mr. Curro also assisted the County in its efforts to expand the Facility. He was part of the team that identified and evaluated alternative procurement approaches, and assisted the County with sole source negotiations with Covanta. This work included developing the design basis for the expansion; development of equipment and subcontractor specifications and contracts, soliciting pricing for all equipment and subcontractors evaluating those bids, negotiating a construction agreement for the expansion with Covanta and negotiating a 20-year extension to the O&M agreement.



Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

- c. **Material Recovery Facility, DuPage County, IL, 2000, Process Design Engineer.** Mr. Curro served as process design engineer for a 200-tpd material recovery facility for DuPage County, Illinois. This facility uses both mechanical and manual processes to extract marketable materials from commingled recyclables, baling the various products in the suite of recycled materials markets.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

- d. **Design, Construction, and Start-up of Specialized Combustion Systems, Afterburners, and Fume Incinerators, Various Locations, Various Dates, Senior Project Engineer.** Mr. Curro's work in specialized combustion systems includes a senior role in the design, construction, and start-up of numerous on-site special waste incinerators for industry, hospitals (infectious and pathological waste), and applications of afterburners and fume incinerators. He has played a major part in preparing specifications, bid evaluation, inspections during construction, and other aspects of implementation of CDM's resource recovery facilities in Windham, Connecticut; Durham, New Hampshire; Bristol, Connecticut; Hillsborough County, FL; and Lancaster County, PA. He has also drawn on his broad applied combustion and furnace-related experience in supporting numerous CDM projects involving troubleshooting of a combustion system, start-up and operations assistance, and operator training.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

- e. **North County Resource Recovery Facility Master Phasing Plan, Solid Waste Authority of Palm Beach County, Palm Beach County, FL, 2008, Project Engineer.** Mr. Curro assisted in an update to the North County Resource Recovery Facility master phasing plan report, which includes stormwater management system modeling, site access evaluation, landfill capacity calculation update, re-evaluation of the landfill phasing plan and schedule, and planning and conceptual design of the permanent landfill access road.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*)    Performed with CDM ☒

- f. **Waste-to-Energy Facility Operation and Maintenance and Clean Air Act Retrofit Assistance, Hillsborough County, FL, 2000, Project Engineer.** Mr. Curro worked with the project team to assist the County in achieving compliance with the Emission Guidelines of the Clean Air Act. Hillsborough County retained CDM to provide construction monitoring during the air pollution control retrofit of their waste-to-energy (WTE) facility.

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **Joseph P. Curro, P.E., BCEE** 13. Role in this contract **Independent Consulting Engineer**

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☒

**Municipal Solid Waste Baling Facility, St. Lucie County, FL, 2007, Senior Process/Mechanical Design Engineer.**

- g. Mr. Curro served as senior process/mechanical design engineer for a 600-tpd municipal solid waste baling facility for St. Lucie County, Florida. The facility bales mixed municipal waste in two balers, which are fed by dual metering conveyers. The project was undertaken simultaneously with the design of a new balefill and a landfill gas recovery project on the same site.

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☒

**Planning, Design and Construction Supervision for Waste-to-Energy Facilities, City of Keelung, Tainan and Ping-Tung Counties, Taiwan, 2007, Senior Project Engineer.**

- h. Mr. Curro provided engineering assistance for the Taiwan EPA's two 900 tpd and one 600 tpd waste-to-energy incineration projects in Ping-Tung, Tainan and Keelung and Counties in Taiwan. The project included the planning, siting, design, tender document preparation and construction of three waste-to-energy facilities, transfer stations and landfills for the disposal of ash and bypassed waste.












## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name <b>Valerie P. Going, P.E.</b></p>	<p>13. Role in this contract <b>Independent Consulting Engineer; Environmental Permitting/Monitoring</b></p>
<p>14. Years Experience    Total    <b>14</b>    With Firm    <b>12</b></p>	<p>15. Firm Name and Location    <b>CDM – Tampa, FL</b></p>
<p>16. Education (<i>Degree and Specialization</i>) <b>M.B.A.</b> <b>M.E. – Civil Engineering</b></p>	<p>17. Current Professional Registration (<i>State and Discipline</i>) <b>FL – Civil Engineer</b></p>
<p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>) American Society of Civil Engineers; American Water Works Association; Water Environment Federation; Chi Epsilon National Civil Engineering Honor Society</p>	

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19. Relevant Projects

<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p>a. <b>Waste-to-Energy Facility Monitoring, Pinellas County, FL, Ongoing, Project Engineer.</b> Ms. Going is part of CDM's project team serving as the Independent Consulting Engineer for the Pinellas County Solid Waste Department. Her tasks include site inspection, boiler and equipment inspections, maintenance of the facility ongoing punch list, and attendance at monthly operations meetings.</p>	
<p>b. <b>WTE Facility Capital Projects Construction, Pinellas County, FL, Ongoing, Project Engineer.</b> Ms. Going is part of CDM's project team for the construction improvements at the Pinellas County Waste-to-Energy Facility. Her tasks include construction oversight monitoring, review of the design documents, evaluation of requests for information (RFIs), resolution of design issues, attendance at weekly construction meetings, and review of Application for Payments (AFPs) to ensure compliance with the Construction Agreement.</p>	
<p>c. <b>WTE Facility Permitting and Expansion, Hillsborough County, FL, Ongoing, Project Engineer.</b> Ms. Going is part of CDM's project team for the expansion of the waste-to-energy facility from 1,200 to 1,800 tpd. She performs resident engineer tasks and construction oversight monitoring of the construction activities.</p>	
<p>d. <b>WTE Expansion Project, Pasco County, FL, 2007, Project Engineer.</b> Ms. Going developed a model and performed an alternatives analysis comparing several options for the solid waste department. The alternatives analysis compared expanding the waste-to-energy facility, expanding in-County landfiling, implementing out-of-County landfiling, and various combinations of each to determine the best option for the County to pursue in order to meet future solid waste disposal needs.</p>	
<p>e. <b>WTE Facility Re-procurement, Pinellas County, FL, 2007, Project Engineer.</b> Ms. Going assisted in developing the Request for Proposals for the O&amp;M contract at the Pinellas County Waste-to-Energy Facility. She also assisted in the spare parts inventory and associated statistical analyses. In addition, she performed conditional assessments of the facility and developed initial punch lists.</p>	
<p>f. <b>Solid Waste Management Model, Pinellas County, FL, 2005 Project Manager.</b> Ms. Going prepared a management model for the Pinellas County solid waste system to perform financial analyses and modeling of solid waste rates. The model includes system pro forma projections over a 25-year planning horizon and projects rates through 2030. The model also provides projections for each individual program in the solid waste system and provides landfill capacity projections over the planning period.</p>	
<p>g. <b>WTE Facility Ash Sampling, Pinellas County, FL, 2006 Project Engineer.</b> Ms. Going performed a seven-day sampling of the waste-to-energy facility's ash to characterize the residue as hazardous or non-hazardous without addition of the phosphoric acid in place at the time. An ash sampling protocol following regulatory procedures and a safety plan were prepared. Also, she performed the statistical analyses of the testing results.</p>	

# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT







12. Name **Wei-Ting Liu** 13. Role in this contract **Independent Consulting Engineer**

14. Years Experience Total **4** With Firm **4** 15. Firm Name and Location **CDM – Tampa, FL**

16. Education (Degree and Specialization) **B.S. – Environmental Engineering** 17. Current Professional Registration (State and Discipline) **N/A**

18. Other Professional Qualifications (Publications, Organizations, Training, Awards, etc.)  
40-hour OSHA Health and Safety Training; Confined-Space Entry Training

## 19. Relevant Projects






Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)		Performed with CDM <input checked="" type="checkbox"/>
a.	<b>Miscellaneous Solid Waste Projects, Pinellas, Pasco and Hillsborough Counties, FL, Ongoing, Project Engineer.</b> Ms. Liu inspected various solid waste facilities in Pinellas, Pasco, and Hillsborough Counties, including waste-to-energy (WTE) landfills and transfer stations. She prepared the draft versions of annual inspection reports.	  
b.	<b>Hillsborough County Resource Recovery Facility Expansion Startup, Hillsborough County, FL, 2009, Project Engineer.</b> Ms. Liu was a member of the start-up test team for the \$138M expansion of the Hillsborough County Resource Recovery Expansion, Unit 4. Her duties included reviewing the start-up test plan, monitoring steam flow, monitoring ash testing, and reviewing the final report.	
c.	<b>Solid Waste Operation Permit Renewal, Various Locations, 2008, Project Engineer.</b> Ms. Liu participated in full-service permit renewal for solid waste management systems. Her tasks included regulatory review, data gathering, report development, and calculation support.	Performed with CDM <input checked="" type="checkbox"/>
d.	<b>Cell A-4, Pasco County, FL, 2010, Project Engineer.</b> Ms. Liu participated in the permitting, design and construction phase of a 20-acre ash mono-cell landfill. Her responsibilities included responding to the FDEP's comments, running the Hydrologic Evaluation of Landfill Performance (HELP) model, sizing the stormwater system, and reviewing the adherence of liner test results to construction quality assurance.	
e.	<b>Phase II Site Assessment, Tampa, FL, Ongoing, Field Assistant.</b> Ms. Liu conducted several Phase II environmental audits and data gap investigations of properties within an acquisition area in Tampa. Her duties included historical and regulatory database reviews, conducting field site investigations, and sampling activities.	Performed with CDM <input checked="" type="checkbox"/>
f.	<b>Resource Recovery Facility Title V Permit Assistance, Hillsborough County, FL, Ongoing, Project Engineer.</b> Ms. Liu prepared and reviewed reports for Title V compliance. Her responsibilities included preparation of the Electronic Annual Operating Report (EAOR,) the Title V Fee, Statement of Compliance and comprehensive review of the semi-annual compliance report, annual compliance report and stack tests.	Performed with CDM <input checked="" type="checkbox"/>
g.	<b>Resource Recovery Facility Title V Permit Assistance, Pasco County, FL, Ongoing, Project Engineer.</b> Ms. Liu prepared and reviewed reports for Title V compliance. Her responsibilities included preparation of the Electronic Annual Operating Report (EAOR,) the Title V Fee, Statement of Compliance and comprehensive review of the semi-annual compliance report, annual compliance report and stack tests. In addition, she prepares the Title V permit renewal.	

# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name	<b>Joseph N. Cascio, P.E.</b>			13. Role in this contract	<b>Design Review and Construction Monitoring; Electrical</b>
14. Years Experience	Total	<b>37</b>	With Firm	<b>4</b>	15. Firm Name and Location <b>CDM – Tampa, FL</b>
16. Education (Degree and Specialization)	<b>B.S. – Engineering</b>			17. Current Professional Registration (State and Discipline)	<b>N/A</b>
18. Other Professional Qualifications (Publications, Organizations, Training, Awards, etc.) Institute of Electrical and Electronic Engineers; Association of Energy Engineers, National Management Association					

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19. Relevant Projects

	Title and Location (City & State) * Year Completed (Eng./Const.) * Role * Brief Description (Scope, Size, Cost, etc.)	Performed with CDM <input checked="" type="checkbox"/>
a.	<b>Waste-to-Energy Plant Generator Replacement Project, Pinellas County, FL, 2007, Technical Advisor.</b> Project team member to locate a suitable replacement 50MW electric generator. The project included locating a generator of appropriate dimensions, capacity, configuration, and condition to replace the original 50MW generator which experienced a catastrophic in service failure. Additional responsibilities included oversight of the generator stator and field rewinds, installation, start up, and checkout. Project was 6 months in duration.	
b.	<b>Waste-to-Energy Plant Expansion Project, Hillsborough County, FL, 2009, Technical Advisor.</b> Project team member to oversee the addition of a new 17MW electric generator. The project included witnessing, providing feedback to contractors and project manager, and reporting of the installation, checkout, startup and performance testing. Additional responsibilities included electrical drawing review and feedback during the design phase of the expansion project.	
c.	<b>Waste-to-Energy Plant, Pinellas County, FL, 2010, Technical Advisor.</b> Mr. Cascio reviewed Plant's Standard Operating Procedures and Preventative Maintenance work orders and provided feedback on quality, completeness, effectiveness, and compliance with the original equipment manufacturers' recommendations. Substantial improvements in plant and equipment availability has resulted from the administration of the aforementioned two programs.	
d.	<b>Waste-to-Energy Plant, Hillsborough County, FL, 2010, Technical Advisor.</b> Mr. Cascio reviewed transmission line and interconnect maintenance agreement with regional investor owned electric utility. Inspected the relevant assets for condition assessments and provided an alternate proposal for inspections and maintenance which would substantially reduce or eliminate the County's monthly maintenance fees.	
e.	<b>Waste-to-Energy Plant, Pasco County, FL, 2010, Technical Advisor.</b> Mr. Cascio provided primary and secondary support to the plant in assuring compliance with NERC Reliability Standards and FRCC requirements. Responsibilities included performing Spot Check Audits, verification of compliance with specific reliability standards, development and dissemination of required reports, settlement meeting support, development of Pasco's Internal Compliance Program document and attendance at regional FRCC workshops.	





## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name      <b>Jack C. McHugh</b></p>	<p>13. Role in this contract      <b>Design Review and Construction Monitoring</b></p>
<p>14. Years Experience    Total      <b>19</b>      With Firm      <b>15</b></p>	<p>15. Firm Name and Location      <b>CDM – Tampa, FL</b></p>
<p>16. Education (<i>Degree and Specialization</i>)  <b>A.A.S. – Construction Management and Contracting</b></p>	<p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>NICET Level 2, HDPE, VLDPE, GeoGrids, Claymat and Appurtenances; Hazardous Waste Operator, Material Training; EPA Refrigerant Transition and Recovery Program, Types I and II</b></p>
<p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  <b>N/A</b></p>	

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19. Relevant Projects

<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>a. Landfill Design and Construction Services for Cell Expansion, Pasco County, FL, 2000, Construction Management.</b> Mr. McHugh provided day to day construction oversight of the project, including earth work, backfill and grading, geomembrane and geosynthetic material installation, and leak location survey. He prepared daily reports and CQA forms, and the final certification package to FDEP.</p>	
<p><b>b. Hillsborough County Resource Recovery Facility Expansion Startup, Hillsborough County, FL, 2009, Construction.</b> Ms. Liu was a member of the start-up test team for the \$138M expansion of the Hillsborough County Resource Recovery Expansion, Unit 4. Her duties included reviewing the start-up test plan, monitoring steam flow, monitoring ash testing, and reviewing the final report.</p>	
<p><b>c. Class I Landfill Expansion: Cells 11 and 12, North County Resource Recovery Facility, Palm Beach County, FL, 2007, Liner Inspector.</b> Mr. McHugh provided day to day construction oversight of the project, including earth work, backfill and grading, geomembrane and geosynthetic material installation, and leak location survey. He prepared daily reports and CQA forms, and the final certification package to FDEP.</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>d. Class I Landfill: Cells 1-6 Closure, North County Resource Recovery Facility, Palm Beach County, FL, 2007, Resident Project Representative and Liner Quality Assurance Inspector.</b> Mr. McHugh provided daily reports, pre-liner meeting, liner documentation, and preparation of permit package to FDEP.</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>e. Palm City II Landfill-Cell 2 Closure and Gas Collection System Services During Construction, Martin County, FL, 2006, Resident Project Representative and Liner Quality Assurance Inspector.</b> Mr. McHugh provided daily reports, pre-liner meeting, liner documentation, and preparation of permit package to FDEP.</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>f. West Pasco Landfill Ash Cell 4, Pasco County, FL, 2010, Liner Inspector/Resident Inspector.</b> Mr. McHugh was responsible for the pre-liner meeting, site inspection, and reviewing the final liner documentation.</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name      <b>Nathan D. Schmaus</b></p>	<p>13. Role in this contract      <b>Design Review and Construction Monitoring</b></p>
<p>14. Years Experience      Total      <b>3.5</b>      With Firm      <b>3.5</b></p>	<p>15. Firm Name and Location      <b>CDM – Tampa, FL</b></p>
<p>16. Education (<i>Degree and Specialization</i>)  <b>B.S. – Civil &amp; Environmental Engineering</b></p>	<p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>WA – Engineer-in-Training  NASSCO PACP</b></p>
<p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  Solid Waste Association of North America; American Society of Civil Engineers; American Water Works Association; Water Environment Federation</p>	
<p>19. Relevant Projects</p>	




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	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
a.	<p><b>Pinellas County Resource Recovery Facility Capital Project, Pinellas County FL, 2010, Resident Project Representative.</b> Mr. Schmaus served as the resident project representative for the capital improvements at the Pinellas County waste-to-energy facility. This project included the replacement of the waterwalls, feed chutes, ash extractors, feed tables, grates, sifting hoppers, and other related components. As the resident project representative, Mr. Schmaus observes and documents the contractor's job site activities. He generates detailed daily reports of activities, equipment, and personnel used to the client and CDM project team.</p>	
b.	<p><b>Performance Testing for Hillsborough County Waste-to-Energy Facility, Tampa, FL, 2009, Project Engineer.</b> Mr. Schmaus was on the CDM project team tasked to observe the performance testing for newly constructed Boiler #4, including ash sampling, performance parameter monitoring, and utility usage.</p>	
c.	<p><b>Transfer Station Facility Annual Inspection Report, Hillsborough County, Tampa, FL, 2009, Project Engineer.</b> Mr. Schmaus inspected two transfer stations, the Northwest Transfer Station and South County Transfer Station, and prepared the annual facility inspection report. This report is used by the county to identify improvements to be made for the following year.</p>	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)      Performed with CDM <input checked="" type="checkbox"/></p>
d.	<p><b>Water Quality Monitoring Plan Evaluation Report, East Pasco Landfill, Pasco County, FL, 2009, Project Engineer.</b> Mr. Schmaus prepared the biennial Water Quality Monitoring Report for the East Pasco Landfill. Tasks included analyzing the data provided by the water quality testing laboratories, preparing trend graphs, and applying the analysis to possible causes.</p>	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)      Performed with CDM <input checked="" type="checkbox"/></p>
e.	<p><b>Tampa International Airport Reclaimed Water Main, Tampa, FL, 2009, Project Engineer.</b> Mr. Schmaus worked on this pipeline design project by assisting the design engineers by locating existing utilities on atlas drawings and coordinating with CAD to develop the initial drawings. He made numerous field visits to determine design constraints and find solutions. He also assisted with permitting.</p>	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)      Performed with CDM <input checked="" type="checkbox"/></p>
f.	<p><b>Water Quality Monitoring Plan Evaluation Report, Toytown Landfill, St. Petersburg, FL, 2009, Project Engineer.</b> Mr. Schmaus prepared the biennial Water Quality Monitoring Report for the Toytown Landfill. Tasks included analyzing the data provided by the water quality testing laboratories, preparing trend graphs, and applying the analysis to possible causes.</p>	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)      Performed with CDM <input checked="" type="checkbox"/></p>
g.	<p><b>Bridgeway Acres Permit Renewal Application, St. Petersburg, FL, 2009, Project Engineer.</b> Mr. Schmaus assisted the CDM project team in developing the extensive permit renewal application. His responsibilities included researching past applications, gathering data, preparing figures, coordinating with GIS, and calculations.</p>	<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)      Performed with CDM <input checked="" type="checkbox"/></p>

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name <b>Tony R. St. Clair, P.E., BCEE, QEP, REM</b></p> <p>14. Years Experience    Total    <b>31</b>    With Firm    <b>6</b></p> <p>16. Education (<i>Degree and Specialization</i>)  <b>B.S. – Chemical Engineering</b></p> <p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  N/A</p>	<p>13. Role in this contract    <b>Environmental Permitting/Monitoring</b></p> <p>15. Firm Name and Location    <b>CDM – Houston, TX</b></p> <p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>TX – Chemical Engineer</b></p>
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### 19. Relevant Projects

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|    | <p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>  | <p>Performed with CDM <input checked="" type="checkbox"/></p>                         |
| a. | <p><b>Waste-to-Energy, Pinellas County, FL, Ongoing, Air Quality Task Manager.</b> Mr. St. Clair currently provides independent consultation engineering services to the waste-to-energy facility. For this client he provides review and advice on regulatory issues facing the WTE industry and provides oversight on regulatory reporting such as Title V, greenhouse gas, new source review (NSR) permitting, emissions inventories, landfill emissions estimates and compliance test programs.</p>  |    |
| b. | <p><b>Waste-to-Energy, Hillsborough County, FL, Ongoing, Air Quality Task Manager.</b> Mr. St. Clair currently provides independent consultation engineering services to the waste-to-energy facility. For this client he provides review and advice on regulatory issues facing the WTE industry and provides oversight on regulatory reporting such as Title V, greenhouse gas, new source review (NSR) permitting, emissions inventories, landfill emissions estimates and compliance test programs.</p>  |    |
| c. | <p><b>Waste-to-Energy, Pasco County, FL, Ongoing, Air Quality Task Manager.</b> Mr. St. Clair currently provides independent consultation engineering services to the waste-to-energy facility. For this client he provides review and advice on regulatory issues facing the WTE industry and provides oversight on regulatory reporting such as Title V, greenhouse gas, new source review (NSR) permitting, emissions inventories, landfill emissions estimates and compliance test programs.</p>   |   |
| d. | <p><b>Consulting Engineering Services for Operator Procurement Assistance, Pinellas County, FL, 2009, Task Manager.</b> Pinellas County has entered into a 5 year contract with CDM for independent consulting engineering services associated with regulatory assistance and operation of Pinellas County's municipal solid waste landfills and related programs. Mr. St. Clair assisted with regulatory issues.</p>  |  |
| e. | <p><b>On-Call Air Compliance Consulting Services, Houston, TX, 2007, Air Quality Task Manager.</b> Mr. St. Clair was part of the team that provided as-needed on-call air compliance consulting services for Rice University. This effort involved providing Rice with consulting and compliance services under the Clean Air Act and the rigid and complex Houston Galveston SIP. As part of the first assignment, CDM reviewed the potentially-applicable requirements at the University as they may relate to paint booths and degreasers on campus. The purpose of this review was to identify whether the University's equipment would be subject to these requirements and, if so, recommend how such equipment might be best represented in the Title V permit. Additionally, CDM conducted a general review of the University's draft Title V permit and offered recommendations for refinements that might benefit the University in the area of recordkeeping. CDM reviewed its findings verbally with the University prior to delivering a written letter report of the findings. CDM also prepared the permitting strategy and conducted the new source review and Title V air quality permitting for installation of a new 40,000-lb/hr steam boiler at Rice. The permit was successfully obtained.</p> | <p>Performed with CDM <input checked="" type="checkbox"/></p>                         |



# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name	<b>Cynthia Strong Hibbard</b>	13. Role in this contract	<b>Environmental Permitting/Monitoring</b>
14. Years Experience	Total <b>29</b> With Firm <b>21.5</b>	15. Firm Name and Location	<b>CDM – Cambridge, MA</b>
16. Education ( <i>Degree and Specialization</i> )	<b>M.S. – Environmental Engineering</b>	17. Current Professional Registration ( <i>State and Discipline</i> )	<b>N/A</b>
18. Other Professional Qualifications ( <i>Publications, Organizations, Training, Awards, etc.</i> ) Air & Waste Management Association; American Association of Airport Executives – Air Quality Subcommittee			
19. Relevant Projects			
Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )			Performed with CDM <input checked="" type="checkbox"/>
a.	<b>Consulting Engineering Services for Operator Procurement Assistance, Pinellas County, FL, 2009, Task Manager.</b> Pinellas County has entered into a 5 year contract with CDM for independent consulting engineering services associated with regulatory assistance and operation of Pinellas County's municipal solid waste landfills and related programs. Ms. Hibbard assisted with air permit applications.		
Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )			Performed with CDM <input checked="" type="checkbox"/>
b.	<b>Northeast Solid Waste Committee (MESWC) Waste-to-Energy Facility, North Andover, MA, 2004, Technical Expert.</b> Ms. Hibbard provided regulatory compliance oversight for the consortium of 23 communities that contract with Wheelabrator to dispose of their trash at the NESWC Resource Recovery Facility in North Andover. This included air compliance testing oversight and review of Wheelabrator air regulatory submittals. Ms. Hibbard provided expert testimony at a public hearing on the compliance history and health risks (from air emissions) of the existing NESWC facility, as part of the communities' consideration of renegotiating their contract with the facility.		
Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )			Performed with CDM <input checked="" type="checkbox"/>
c.	<b>Prevention of Significant Deterioration Air Permit Modification Applications, Hillsborough County, FL, 2006, Task Manager.</b> Ms. Hibbard prepared the PSD air permit applications and successfully negotiated permits for two separate facility improvements at the Hillsborough County WTE Facility. Ms. Hibbard also was part of the team that obtained approved modifications to the facility's Florida Power Plant Site Certification for these two projects. The first upgraded air pollution control equipment to comply with the New Source Performance Standards and Emissions Guidelines for Municipal Waste Combustors. The second project was for the construction of a new 600-tpd boiler, which would be the facility's new Unit 4. For both of these PSD Air Permit Applications, Ms. Hibbard performed all of the emissions modeling and was task manager for the dispersion modeling, regulatory compliance demonstrations, and air permit application preparation. She also coordinated the control technology assessments, and served as liaison with the FDEP to negotiate permit conditions.		
Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )			Performed with CDM <input checked="" type="checkbox"/>
d.	<b>Waste-to-Energy Facility Air Permit Applications, Tampa and Hillsborough County, FL, 2006, Task Manager.</b> Ms. Hibbard prepared the PSD air permit applications, and successfully negotiated permits for two WTE facilities: the Tampa McKay Bay Resource Recovery Facility, and the Hillsborough County, Florida, Resource Recovery Facility. Both are existing plants that upgraded their air pollution control equipment to comply with the New Source Performance Standards and Emissions Guidelines for Municipal Waste Combustors. Ms. Hibbard performed all of the emissions modeling, and served as Task Manager for the dispersion modeling, regulatory compliance demonstrations, and air permit application preparation. Ms. Hibbard also coordinated the control technology assessments.		
Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )			Performed with CDM <input checked="" type="checkbox"/>
e.	<b>Bellefield Boiler Plant Air Regulatory Compliance, Pittsburgh, PA, 2007, Project and Task Manager.</b> The Bellefield Boiler Plant (BBP) retained CDM to conduct a NOx Reasonably Available Control Technology (RACT) analysis for the plant's seven coal- and natural-gas-fired boilers on a very tight Enforcement Order schedule. Ms. Hibbard arranged for facility stack testing for NOx emissions within three weeks of the NTP, and completed the NOx RACT analysis for submittal to the Allegheny County Health Department Division of Air Quality Control within six weeks of the NTP, meeting ACHD's deadline. Hibbard has prepared or managed BBP's annual emissions inventory reports for the past 12 years. She has also assisted with BBP's Title V deviation and compliance certification reporting. CDM has arranged for and reviewed biannual compliance stack testing for the Boiler Plant.		
Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )			Performed with CDM <input checked="" type="checkbox"/>
f.	<b>Palm City II Landfill – Cell 2 Closure and Gas Collection System Services During Construction, Martin County, FL, 2006, Task Manager.</b> Ms. Hibbard assisted with annual routine permitting for this project, including flare downtime resolution and the preparation of Title V reports.		

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name <b>Cynthia L. Stellmack, P.E.</b>	13. Role in this contract <b>Electrical</b>
14. Years Experience    Total <b>28</b> With Firm <b>6</b>	15. Firm Name and Location <b>CDM – Maitland (Orlando), FL</b>
16. Education ( <i>Degree and Specialization</i> ) <b>B.S. – Electrical Engineering</b>	17. Current Professional Registration ( <i>State and Discipline</i> ) <b>FL – Electrical Engineer</b>
18. Other Professional Qualifications ( <i>Publications, Organizations, Training, Awards, etc.</i> ) Institute of Electrical and Electronics Engineers; IEEE Industry Applications Society	

### 19. Relevant Projects

Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )		Performed with CDM <input checked="" type="checkbox"/>
a.	<b>Waste-to-Energy Plant Improvements, Pinellas County, FL, 2007, Electrical Engineer.</b> Ms. Stellmack provided the electrical design criteria for the new Solids Resource Recovery Building and is currently providing third party technical review of design plans of several capital improvement projects.	 
b.	<b>Waste-to-Energy Plant Expansion, Hillsborough County, FL, 2008, Electrical Review Engineer.</b> Expansion included a new 18MW generator, additions to 69kV switchyard, 13.8kV switchgear, 4.16kV motor control and high resistance grounded 480V distribution. Ms. Stellmack is providing third party technical review of plans, specifications and pre-purchase equipment submittals.	
c.	<b>Waste-to-Energy Plant Assessment, Pinellas County, FL, 2005 Electrical Engineer.</b> Ms. Stellmack provided an assessment of the electrical distribution system and areas based on visual inspection. Assessment was used to provide contractual requirements for plant operator and capital budget input.	
d.	<b>Solid Waste Baling and Recycling Facility Expansion, St. Lucie County, FL, 2006, Electrical Design Engineer.</b> Ms. Stellmack designed an additional 480V service and electric room to accommodate a third baler located under new canopy attached to the existing building. The project was later cancelled by the county after award to proceed in another technical direction.	<input checked="" type="checkbox"/>
e.	<b>Eastern Water Reclamation Facility Phase IVC Improvements, Orange County, FL, Ongoing, Electrical Design Engineer.</b> This plant expansion adds new biological basin 7, clarifier 10 and consolidates centrifugal air blowers. The existing plant was at electrical capacity with not all systems backed up with standby generation. Electrical design upgraded and replaced existing 4160V radial system to new 12.47kV open loop system with new 12.47 switchgear and generators co-located with blowers in new 11,660 sq. ft. building. Electrical system sized for future expansion loads. Ms. Stellmack provided the electrical section for the basis of design report in addition to the electrical design.	<input checked="" type="checkbox"/>
f.	<b>Marco Island Wastewater Treatment Plant (WWTP) Phase II Improvements, Marco Island, FL, 2009, Electrical Design Engineer.</b> This project provides a main electric building for new main and generator paralleling switchgear, new motor control centers (MCCs), and space for future motor control centers when the existing MCCs need replacement. Mechanical improvements include additional equipment at headworks, new influent pump station, new membrane bioreactor skid and air compressor, new MLE process tank and a bridge crane. Design challenges include an aggressive schedule, a congested site, and detailed construction phasing in order to keep the plant operational. In 2007 she provided the electrical section of the Master Plan to expand the plant.	<input checked="" type="checkbox"/>
g.	<b>Eastern Water Reclamation Facility Phase IVD Expansion Basis of Design Report, Orange County, FL, 2007, Electrical Engineer.</b> Ms. Stellmack provided the electrical section of the report. The next phase in the plant expansion adds a new preliminary treatment structure, new clarifier and associated pumping station and modifications to the filter, disinfection and effluent pumping systems. Major electrical loads are added and recommendations include a new electrical building with new switchgear, motor control centers and variable frequency drives.	<input checked="" type="checkbox"/>

# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **John S. Kontor, P.E.** 13. Role in this contract **Instrumentation**

14. Years Experience Total **40** With Firm **34** 15. Firm Name and Location **CDM – Maitland (Orlando), FL**

16. Education (*Degree and Specialization*) **B.S. – Mechanical Engineering** 17. Current Professional Registration (*State and Discipline*) **FL – Mechanical Engineer**

18. Other Professional Qualifications (*Publications, Organizations, Training, Awards, etc.*)  
N/A

## 19. Relevant Projects

- Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒
- a. **Arbennie Pritchett Water Reclamation Facility, Okaloosa County, FL, 2009, Senior Technical Reviewer.** Mr. Kontor oversaw the design and implementation of the Allen-Bradley based Supervisory Control and Data Acquisition (SCADA) system and Computerized Maintenance Management System (CMMS) for the award-winning Arbennie Pritchett Water Reclamation Facility (WRF) in Okaloosa County. CDM was selected to design, construct, outfit, start up, performance test, and obtain permits for the new WWTP. It was designed to initially treat 10 mgd, with flexibility for future expansion. CDM developed various design concepts that addressed concerns expressed by OCWS. The plant's control system provides fully automatic operation of the facility and transfers run-time and operational information to the CMMS. CDM also implemented several cost-saving features, including a biosolids management system of concentric circular tanks and an elevated centrifuge design to eliminate the need for conveyors. The site layout reduces influent pumping costs by lowering the pretreatment process and provides for future expandability. The three channel pretreatment process design allows for a simple, low-cost expansion to 15 mgd in the future.
- b. Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒
- Graham Hill Water Treatment Plant Electrical Improvements, Santa Cruz, CA, 2010, Project Manager.** Mr. Kontor was managing the Electrical Improvements design project at the Graham Hill Water Treatment Plant for the City of Santa Cruz. The project provides a new electrical building, new 21kV service, power distribution throughout the plant, and new emergency generator to support current and future electrical power needs at the plant.
- c. Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒
- Large-Scale Wastewater Treatment Plant Control System Design and Implementation, Milwaukee Metropolitan Sewer District, Milwaukee, WI, 1998-2000 and 2003-2007, Project Manager.** Mr. Kontor was the project manager for the final design and implementation of instrumentation and control (I&C) upgrades at the MMSD's Jones Island and South Shore wastewater treatment plants (WWTPs). Previously, he was the program manager for the preliminary design for the plants I&C system and the conveyance system SCADA project. He assisted the District with the critically-timed Y2K improvements and in developing the "open system" philosophy to replace the existing Bailey system.
- d. Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒
- WWTP I&C Improvements, Columbus, OH, 1995-2000, Project Manager.** Mr. Kontor was the project manager of the City of Columbus Division of Sewerage and Drainage's (DOSD) planning and design services for I&C system improvements at their two wastewater treatment plants (WWTPs). In this capacity, he helped to: (1) optimize process control to reduce labor costs; (2) optimize data acquisition of treatment process information to conform to applicable laws, regulations, and permits governing DOSD's wastewater treatment operations; (3) optimize energy consumption and maintenance management to reduce process operation costs; (4) enhance safety of treatment operations; and (5) reconfigure work force by revising maintenance operation and staffing, and enhancing operator skills in the use of the new I&C system. To minimize the impacts of I&C system improvements, a modular design and implementation approach will provide a continuous influx of new technology throughout construction. A design that allows for this influx will be the city's best assurance of an I&C system that remains state-of-the-art.
- e. Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒
- Ultraviolet Disinfection Facility, Metro-Vancouver, British Columbia, Canada, Ongoing, Instrumentation Technical Lead.** Mr. Kontor is leading the instrumentation and control system design effort for Metro-Vancouver's new 1200 ML/D average flow, ultraviolet (UV) disinfection facility at the Coquitlam Water Treatment Plant (WTP). The project includes upgrading of the plant's existing control system to an Emerson DeltaV distributed control system with Foundation Fieldbus (FFb) based instrumentation and fully automatic controls for eight trains of UV disinfection reactors and chemical make-up and feed systems.



# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **Timothy A. Verwey, P.E.** 13. Role in this contract **Structural**

14. Years Experience Total **23** With Firm **18** 15. Firm Name and Location **CDM – Maitland (Orlando), FL**

16. Education (*Degree and Specialization*) **B.S. – Civil Engineering** 17. Current Professional Registration (*State and Discipline*) **FL, GA, KY, MS, NC, TN, TX, VA – Civil/Structural Engineer**

18. Other Professional Qualifications (*Publications, Organizations, Training, Awards, etc.*)  
American Society of Civil Engineers; American Concrete Institute; Florida Engineering Society; American Institute of Steel Construction






## 19. Relevant Projects

- |    | Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )   | Performed with CDM <input checked="" type="checkbox"/> |
|----|--|--|
| a. | <b>Arbennie Pritchett Water Reclamation Facility Design-Build, Okaloosa County, FL, 2009, Project Structural Engineer.</b> CDM was selected to design, construct, outfit, startup, performance test, and obtain permits for the new Arbennie Pritchett Water Reclamation Facility, which has been designed to initially treat 10 mgd with flexibility for future expansion. Mr. Verwey served as the project structural engineer for this \$49M DB project. His services included design of cast-in-place concrete structures, as well as several concrete masonry unit buildings.   |  |
| b. | <b>Regional Surface WTP Expansion, Tampa Bay Water, Tampa, FL, 2010, Project Structural Engineer.</b> Mr. Verwey provided structural engineering design for the 72 mgd to 120-mgd finished water capacity plant expansion. The expansion included two new 33-mgd ACTIVFLO™ units, two new 33-mgd ozone contact chambers, a new 2,000-ppd ozone generation system with LOX feed gas, additional filters to accommodate an additional 48-mgd of net filtered water, chemical feed and storage facility expansion, and expansion of the residuals handling system.  |  |
| c. | <b>Anastasia Island Wastewater Treatment Plant Expansion, St. Johns County, FL, Ongoing, Engineer-of-Record.</b> For this WWTP expansion project, Mr. Verwey served as the engineer-of-record. Project components included modifications to existing structures (influent pump station, chlorine contact tank, and clarifier head house), headworks structure, aeration basins, secondary clarifiers, new chlorine contact basins, masonry buildings (blower/electrical/generator, dewatering), splitter boxes, and chemical containment structures.   |  |
| d. | <b>Wastewater Treatment Plant Expansion, Ormond Beach, FL, 2008, Project Structural Engineer.</b> Mr. Verwey was the project structural engineer for this wastewater treatment plant expansion. The first stage of this project consisted of priority improvement modifications to the failing influent pump station and centrifuges. The second stage expanded the plant from 6 to 8 mgd and included an additional clarifier and filter unit along with replacement of pumps in four plant pump stations, installation of a diffused aeration system, and replacement of aging equipment at the facility's headworks, 5-stage Bardenpho™ tanks, clarifiers, and filters. |  |
| e. | <b>Microfiltration Plant, Port St. Joe, FL, 2008, Project Structural Engineer.</b> In 2004, CDM was hired by Preble-Rish, Inc. (PRI), the prime consultant, to perform the membrane and raw water pump station design for a 2.5-mgd surface WTP. CDM completed the design, the project was bid, and construction began in late August 2006. In 2006, PRI hired CDM to design an expansion of the plant to 6.0-mgd capacity. The expansion was planned for in the original design. For this project, Mr. Verwey served as project structural engineer.  |  |
| f. | <b>Allanton Peninsula Water and Wastewater Extension, Callaway, FL, 2009, Structural Engineer.</b> Mr. Verwey provided structural analysis and design for a 12' diameter reinforced concrete wastewater wetwell. He also provided structural analysis and design of a cast in place, reinforced concrete meter vault.  |  |

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT






<p>12. Name     <b>John G. Ladner, P.E., BCEE</b></p> <p>14. Years Experience     Total     <b>24</b>     With Firm     <b>22</b></p> <p>16. Education (<i>Degree and Specialization</i>)  <b>B.S. – Civil Engineering</b></p> <p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  Board Certified Environmental Engineer (BCEE), American Academy of Environmental Engineers; Solid Waste Association of North America</p>	<p>13. Role in this contract     <b>Solid Waste</b></p> <p>15. Firm Name and Location     <b>CDM – Maitland (Orlando), FL</b></p> <p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>FL – Civil Engineer</b></p>
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19. Relevant Projects

- |    |   |   |
|----|---|---|
|    | <p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>   | <p>Performed with CDM <input checked="" type="checkbox"/></p>                         |
| a. | <p><b>Consulting Engineering Services for Operator Procurement Assistance, Pinellas County, FL, 2008, Lead Solid Waste Practitioner and Senior Environmental Engineer.</b> Pinellas County entered into a five-year contract with CDM for independent consulting engineering services associated with regulatory assistance and operation of Pinellas County's municipal solid waste landfills and related programs. Mr. Ladner served as senior environmental engineer and lead solid waste practitioner for this contract.</p>  |    |
| b. | <p><b>Solid Waste Permitting, Pasco County and Pinellas County, FL, Ongoing, Senior Technical Engineer.</b> Mr. Ladner is providing quality assurance (QA) for solid waste permitting activities for Pasco County and Pinellas County. These activities include QA review of annual financial assurance documentation, assistance with the FDEP solid waste permitting for new Ash and Class I cells, and assistance with the design of new Class I cells.</p>  |    |
| c. | <p><b>Bridgeway Acres Landfill Operations Sequence Drawings, Pinellas County, FL, 2010, Senior Technical Engineer.</b> CDM assisted the Pinellas County Utilities, Department of Solid Waste Operations with the renewal of the Bridgeway Acres (BWA) Landfill FDEP Operating permit. The Florida Administrative Code requires that, as part of the landfill operating permit application, the sequence of filling the landfill be demonstrated with drawings of each phase of the landfill. CDM, under the direction of Mr. Ladner, prepared operational sequence drawings of the filling sequence for the BWA Landfill for submittal to the FDEP.</p>   |    |
| d. | <p><b>Northern Expansion Property Conceptual ERP Permitting Services, Indian River County, FL, 2006, Project Manager.</b> The project consisted of an evaluation of the most effective way to expand the IRC landfill to the north to maximize the airspace and the life of the landfill. This was a planning evaluation which considered the best landfill configuration in which the most additional airspace could be obtained without significant impacts to existing wetlands, T&amp;E species, the existing Indian River Farms District stormwater system while maintaining buffer from Oslo Road—a local through street. Wetlands jurisdictions were performed for both FDEP and ACE wetlands. A conceptual stormwater plan was developed which minimized impacts and continued to project drainage critical to the IR Farms District.</p> |  |
| e. | <p><b>Baling and Recycling Facility – Design, Permitting, Bidding, and Construction Services for the Class I Landfill, Phase IIIA and Phase IIIB, St. Lucie County, FL, 2007, Project Engineer.</b> Mr. Ladner assisted the project manager and the project design team in the development of the construction drawings. He was also responsible for performing technical QA reviews of the permit application and solid waste permit calculations for the FDEP solid waste permit application, construction drawings, and the specifications. He was present at the technical review meetings and other meetings with the client in which project issues were discussed.</p>   |  |

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

<p>12. Name <b>Aamod Sonawane, P.E., BCEE</b></p>	<p>13. Role in this contract <b>Solid Waste</b></p>
<p>14. Years Experience    Total    <b>11.5</b>    With Firm    <b>9.5</b></p>	<p>15. Firm Name and Location    <b>CDM – Tampa, FL</b></p>
<p>16. Education (<i>Degree and Specialization</i>)  <b>M.S. – Environmental Engineering</b>  <b>M.E. – Environmental Engineering</b>  <b>B.S. – Civil Engineering</b></p>	<p>17. Current Professional Registration (<i>State and Discipline</i>)  <b>FL – Civil Engineer</b></p>
<p>18. Other Professional Qualifications (<i>Publications, Organizations, Training, Awards, etc.</i>)  Solid Waste Association of North America; Chair, Awards Committee – Landfill Technical Division (SWANA); Bioreactor Landfill Committee – Landfill Technical Division (SWANA)</p>	
<p>19. Relevant Projects</p>	

<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>Independent Consulting Services for Solid Waste Landfill and Landfill Related Activities, Pinellas County, FL, Ongoing, Project Manager.</b> Pinellas County has entered into a five-year contract with CDM for Independent Consulting Engineering Services associated with regulatory assistance and operation of Pinellas County's municipal solid waste landfills and related programs. Mr. Sonawane's responsibilities include preparing monthly invoices, status reports, and schedule updates; preparing drawings and specifications; securing permits; conducting monthly project coordination meetings; coordination meetings with the FDEP; resource management; and day-to-day project management activities. Mr. Sonawane's specific duties include preparation of FDEP's Operations Permit Renewal Application for the Bridgeway Acres (BWA) Class I Landfill, reviewing biennial water quality monitoring plan evaluation reports for the BWA and Toytown Landfills, and preparation of Cell 5 certification of construction completion (dewatering plan and fill sequence plan), revised grading plan, and operations drawings for BWA Landfill.</p>	
<p>a.</p>	
<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>Solid Waste Projects, Pasco County, FL, Ongoing, Project Manager.</b> Mr. Sonawane is managing solid waste projects for Pasco County, which include WTE operation and maintenance, groundwater and leachate monitoring, leachate treatment plant equipment bidding, and other miscellaneous, as-needed tasks. His duties also include preparation of annual inspection reports for the County's WTE facilities, transfer station inspections and reports, annual emissions, and Title V fee determination for WTE facilities.</p>	
<p>b.</p>	
<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>Ash Cell A-4 (Class I) Landfill Expansion Project, Pasco County, FL, 2010, Project Manager.</b> Mr. Sonawane's duties for this ash landfill expansion project included the design of the landfill expansion, bottom grading, liner design, leachate collection system design, leachate pumping station design, HELP model runs for leachate volume generation, stormwater collection system design, drainage/grading plans, drawing and specification development, preparation of bid documents, answering technical questions from the potential bidders, and day-to-day project management activities. His duties also include periodic meetings with the FDEP to secure the construction approval. As a construction manager, Mr. Sonawane's duties included overseeing construction of the cell expansion, conducting monthly progress meetings, reviewing shop drawings and pay requests, answering RFIs, and reviewing conformance test results.</p>	
<p>c.</p>	
<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>East Pasco Infill Area Closure, Pasco County, FL, Ongoing, Project Manager.</b> Mr. Sonawane's duties for this closure design project include the design of the landfill grading, closure cap, gas management system, stormwater management system, drawing and specifications development, and preparation of the permit documents.</p>	
<p>d.</p>	
<p>Title and Location (<i>City &amp; State</i>) * Year Completed (<i>Eng./Const.</i>) * Role * Brief Description (<i>Scope, Size, Cost, etc.</i>)</p>	<p>Performed with CDM <input checked="" type="checkbox"/></p>
<p><b>Site Assessment – East Pasco Class I Landfill, Pasco County, FL, 2010, Project Engineer.</b> At the East Pasco Landfill, CDM is provided professional engineering services in support of a site assessment report for groundwater contamination. Mr. Sonawane assisted with the water quality monitoring plan, as well as leachate monitoring reports.</p>	
<p>e.</p>	



# E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **Aamod Sonawane, P.E., BCEE**

13. Role in this contract

**Solid Waste**

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.) Performed with CDM ☒

- f. **Town of Belleair Wastewater Acquisition Project, Pinellas County, FL, 2008, Project Engineer.** Mr. Sonawane assisted in a wastewater pipeline and pump station project for Pinellas County. His responsibilities included assistance with the preliminary engineering report, pump selection, pump station design, cost estimates, permitting, field visits for pipeline route selection, and drawing and specification development. His duties also included conforming drawings and specifications, assisting in the bidding process, reviewing shop drawings, conducting construction progress meetings, and providing technical support during construction.

## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **Johnstone N. Reid, Jr., FAIA, CCS, LEED® AP** 13. Role in this contract **Architecture**

14. Years Experience Total **32** With Firm **10** 15. Firm Name and Location **CDM – Maitland (Orlando), FL**

16. Education (*Degree and Specialization*) **B.S. – Architecture** 17. Current Professional Registration (*State and Discipline*) **FL, NY, GA, KY, LA, MD, NC, OH, SC, TN, VA – Registered Architect**

18. Other Professional Qualifications (*Publications, Organizations, Training, Awards, etc.*)

*Certification:* National Council of Architectural Registration Boards (NCARB); Certified Construction Specifier, Construction Specifications Institute; Leadership in Energy and Environmental Design (LEED®) Accredited Professional  
*Honors/Awards:* The American Institute of Architects National Government Affairs Award for Individual Achievement; AIA New York State, James William Kideney Gold Medal for Lifetime Contributions in Advancing the Profession and Practice of Architecture; AIA Orlando Outstanding Member Award in recognition of his leadership, exemplary service, and dedication; AIA Buffalo/Western New York Professional Service Award for Lifetime contribution to the Chapter and Community

19. Relevant Projects

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒

- a. **Design and Construction Services for the Palm City II Transfer Station and Administration Building, Martin County, FL, 2004, Principal Architect/Architect-of-Record.** Mr. Reid was the lead architect and architect-of-record for the programming and design of a new solid waste transfer station and administration building at the Palm City II Landfill site for Martin County. The facility design features include a two-story transfer station building with two drop chutes, an adjacent two-story administration building, an emergency power supply system, and an isolated residential customer waste disposal area.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒

- b. **Solid Waste Authority of Palm Beach County Operations Building, Palm Beach County, FL, 2010, Principal Architect/Architect-of-Record.** Mr. Reid was the principal architect and architect-of-record for the Solid Waste Authority of Palm Beach County (SWA) operations building and was responsible for coordinating the architectural design with the design efforts of the engineering disciplines to achieve a holistic, integrated design. The 6,000 square foot operations building was designed with the offices, conference rooms, and training center around the perimeter of the building to take advantage of natural light and views, while the showers/lockers/toilet facilities, mechanical, electrical, and storage areas occupy a central core, consolidating piping and ductwork.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒

- c. **Solid Waste Management Facility, Berkeley, SC, 2003, Project Architect/Architect-of-Record.** Mr. Reid was the project architect and architect-of-record for the redesign of the administration building at the Berkeley County Solid Waste Management Facility. The design included a 5,000 square-foot split face cmu, a shingle roof facility to house offices, conference rooms, lockers, and toilet facilities for the solid waste management staff. His responsibilities included design, code compliance, senior review and interdiscipline checking, and coordination of related disciplines.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒

- d. **Bay County Waste-to-Energy Facility Ash Management Building, Bay County, FL, 2002, Project Manager.** Mr. Reid was the project manager and architect-of-record for a 7,000 square foot ash management building located at the Bay County Waste-to-Energy Facility in Panama City. Mr. Reid developed the program by facilitating a one-day design charrette of all stakeholders and supervised the design development and construction document production. The building was designed to store four days of accumulated ash and to allow for the indoor storage and loading of dump truck vehicles. The building construction was phased so as not to disturb the day-to-day operations of the facility during construction and to allow for the continued loading and transportation of the ash material.

Title and Location (*City & State*) \* Year Completed (*Eng./Const.*) \* Role \* Brief Description (*Scope, Size, Cost, etc.*) Performed with CDM ☒

- e. **Network Operations Control Center, Melbourne, FL, 2002, Project Manager and Architect-of-Record.** Mr. Reid was the project manager and architect-of-record for the design of a 6,500 square foot operations control center build-out for the Harris Corporation. Since the center is required to be fully operational 24/7/365, it was designed with Uninterruptible Power Supplies (UPS) and an emergency generator for backup. Wet sprinklers were replaced with a Clean Agent Fire Suppression System in critical support areas. The build-out was in an occupied building, so the work was phased so as to not disrupt existing daily operations. The project design was completed in a total of 16 weeks from start to finish.

# **E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT**





12. Name **Diane C. Kemp** 13. Role in this contract **Financial**

14. Years Experience Total **29** With Firm **23** 15. Firm Name and Location **CDM – Tampa, FL**

16. Education (*Degree and Specialization*) **B.A. – Economics and Accounting** 17. Current Professional Registration (*State and Discipline*) **N/A**

18. Other Professional Qualifications (*Publications, Organizations, Training, Awards, etc.*) **N/A**

## 19. Relevant Projects

- |    |   |   |
|----|---|---|
|    | Title and Location ( <i>City &amp; State</i> ) * Year Completed ( <i>Eng./Const.</i> ) * Role * Brief Description ( <i>Scope, Size, Cost, etc.</i> )  | Performed with CDM <input checked="" type="checkbox"/>                                |
| a. | <b>Independent Consulting Engineering Services for Solid Waste Disposal and Resource Recovery Systems, Hillsborough County, FL, 2009, Financial Services.</b> Hillsborough County entered into a five-year agreement with CDM to provide Independent Consulting Engineer services for its solid waste management system. For this project, Ms. Kemp reviewed and assisted the County in evaluating the financial ability of the system to meet bond covenants.  |    |
| b. | <b>Solid Waste Management Plan, Pinellas County, FL, 2008, Financial Specialist.</b> The Pinellas County Solid Waste Department requested that CDM prepare a solid waste management model to include financial analyses, modeling of solid waste rates, reserve fund requirements, and program impacts. Ms. Kemp employed Microsoft Excel software to develop the PC-based management model.  |    |
| c. | <b>Solid Waste System Solid Waste and Resource Recovery Revenue Bond Series 2006A and 2006B, Hillsborough County, FL, 2001, Financial Specialist.</b> Ms. Kemp prepared financial operational performance for a 5-year historical basis and a 10-year projection. The operating revenue was developed with the residential assessment units and rates, commercial and municipal tonnage and fees and energy revenue information presented in both detail and summary format.  |    |
| d. | <b>Solid Waste Business and Financial Plan, Bay County, FL, 2006, Financial Specialist.</b> Ms. Kemp prepared a business and financial plan intended to maximize the existing revenue sources, analyze the flow of solid waste in Bay County, and analyze the alternative disposal sites that are competitive with Bay County.  | Performed with CDM <input checked="" type="checkbox"/>                                |
| e. | <b>Solid Waste Master Plan Update, Pasco County, FL, 2003, Financial Specialist.</b> As part of the master plan update for the County, Ms. Kemp assisted in developing WTE alternatives, including layouts, facility capital and operating costs and pro forma annual cost and revenue projections over the 20-year planning period.  |  |
| f. | <b>Rate Studies, Various Clients, Various Dates, Financial Specialist.</b> Ms. Kemp has performed a number of rate studies, ranging from conventional rate updates to those involving conservation policy, rate restructuring, cost-of-service study, model preparation, and impact fee analysis.   | Performed with CDM <input checked="" type="checkbox"/>                                |
| g. | <b>Financial Feasibility Analysis, Bond Financing Assistance, Various Clients, Various Dates, Financial Specialist.</b> Ms. Kemp has been responsible for the preparation of financial analysis, which consists of presenting both historical and projected customer and financial data. The ability of the utility to provide for water, wastewater, and solid waste services is projected for at least a five-year period. Pro-forma financial projections are made, with the ability of the utility to provide both for cash requirements and bond covenant coverage presented. The impact of the proposed and future bond issues is considered. Ms. Kemp has assisted in the preparation of bond reports for more than \$1 billion in bond issues since 1987. Clients have included City of Cape Coral, FL (water, wastewater, reclaimed water); Lee County, FL (water and wastewater); the City of Venice, FL (water and wastewater); the City of Sarasota, FL (water and wastewater); Hillsborough County, FL (solid waste); Sarasota County, FL (solid waste); Manatee County, FL (solid waste, water, wastewater, stormwater); the City of Tampa, FL (water); St. Johns County, FL (water and wastewater); Augusta County Service Authority, VA (water and wastewater); and Prince William County Service Authority, VA (water and wastewater). | Performed with CDM <input checked="" type="checkbox"/>                                |



## E. RESUMES OF KEY PERSONNEL PROPOSED FOR THIS CONTRACT

12. Name **Diane C. Kemp**

13. Role in this contract

**Financial**

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- h. **State Revolving Funds, Various Clients, Various Dates, Financial Specialist.** In addition to bond financing, Ms. Kemp also has been a leader in the field of State Revolving Fund (SRF) financing, both in Florida and Louisiana. She has supplied SRF assistance to 16 clients, with a total of more than \$400M. She also assisted in the original State of Florida rule drafting process, as well as subsequent updates.

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- i. **Conventional Rate Updates, Various Clients, Various Dates, Financial Specialist.** For the City of Cape Coral, FL (water and wastewater); the City of Venice, FL (water and wastewater); the City of Clearwater, FL (solid waste); Lee County, FL (water and wastewater); City of Largo, FL (wastewater), Herndon, VA (water and wastewater); DuPage County, IL (water and wastewater); and Monroe, LA (water), Ms. Kemp has been involved in conventional rate update projects.

Title and Location (City & State) \* Year Completed (Eng./Const.) \* Role \* Brief Description (Scope, Size, Cost, etc.)

Performed with CDM ☒

- j. **Impact Fee Analysis, Various Clients, Various Dates, Financial Specialist.** Ms. Kemp has performed impact fee analysis for the City of Cape Coral, FL (water and wastewater); Lee County, FL (water and wastewater); the City of Fort Worth, TX (water and wastewater); Prince William County Service Authority, VA (water and wastewater); St. Johns County, FL (water and wastewater); and Bossier City, LA (water and wastewater).

## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	1	21. Title and Location (City and State) <b>Waste-to-Energy Consulting Services, Pinellas County, FL</b>	22. Year Completed  Professional Services <b>Ongoing</b> Construction (if Applicable) <b>2010</b>
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Total Project Cost: **Contract: \$4.6M; Capital Construction: \$90M; Annual Operator Fees: \$19.9M**

### 23. Project Owner's Information

a. Project Owner	<b>Pinellas County Utilities Department of Solid Waste Operations</b>
b. Point of Contact Name	<b>Robert Hauser, Jr., Director</b>
c. Point of Contact Telephone Number	<b>727.464.7541</b>

### 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

Between 2004 and January 2007, Pinellas County, with CDM's assistance conducted a re-procurement process for an operator for its Waste-to-Energy (WTE) facility. A new WTE facility operator was hired in January and scheduled to assume operations responsibility in May 2007 when the term of the existing service agreement expired. Pinellas County selected CDM to provide ongoing WTE consulting services in March 2007. The scope of those services included the following:

- Assistance with operator transition and transition to the new Service Agreement – This work included providing interpretations of the new Service and Construction agreements, coordination between the existing and new facility operators and operating procedures required under the new service agreement, resolution of spare parts and miscellaneous small equipment ownership and transfer issues, and monitoring operations and maintenance of the facility during the transition period.
- Operations and Monitoring Assistance – This task included periodic inspections of the facility, review, evaluation and trending of facility operations data, attendance at monthly operations meetings, preparation of monthly and annual operating reports, establishing and maintaining the status of the ongoing punch list and monitoring the facility operator's progress in curing the punch list items.
- Contract Administration Support – Included assistance with administering the new Service Agreement and Construction Agreement, review of pay requests, exercising withholding, retainage and liquidated damages, and assistance with resolution of disputes between the facility operator and the county.
- Environmental Permitting Reporting Assistance – This task included review of all environmental reports required to be submitted to regulatory agencies, performance of annual Title V fee calculations, and developing permit applications and renewals as required.
- Assistance with administering the initial, secondary, and extended punch lists as those items are defined in the Service Agreement.
- Capital project construction observations and negotiation and witnessing of acceptance testing of approximately \$90 million in new capital projects.
- Providing financial services including construction of a budget model and providing annual budget and rate-making financial assistance.
- Providing other services as requested by the Department of Solid Waste Operations.



*Pinellas County Resource Recovery Facility*

### 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a.	CDM	Tampa, FL	Prime
b.	CDM	Cambridge, MA	Engineering support
c.	CDM	Houston, TX	Engineering support

# F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	2	21. Title and Location (City and State)	Waste-to-Energy Operator Re-procurement, Pinellas County, FL	22. Year Completed	Professional Services 2008	Construction (if Applicable) N/A
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Total Project Cost: **\$2.9M**

## 23. Project Owner's Information

a. Project Owner	Pinellas County Utilities Department of Solid Waste Operations
b. Point of Contact Name	Robert Hauser, Jr., Director
c. Point of Contact Telephone Number	727.464.7541

## 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

CDM was retained by Pinellas County Utilities (county) to lead its procurement team in the development of a procurement process to select a replacement operator for the county's 3,000 ton per day waste-to-energy (WTE) facility. The work included performing evaluations and analyses of the WTE facility, identification of capital project improvements necessary for the facility to continue to operate efficiently for the next 20 years; and developing a Request for Qualification (RFQ) and a Request for Proposal (RFP) which included both a draft long-term Service Agreement and a Construction Agreement for the capital improvement projects. The procurement process included a simultaneous negotiation process with the pre-qualified operators identified through the RFQ step. Pricing was received on the final Service and Construction Agreements. In addition to the management consulting services in connection with developing the Construction and Service Agreements, CDM's services included civil, mechanical, electrical, structural, industrial, solid waste management, and economics/finance/accounting as they related to solid waste management.



Pinellas County Resource Recovery Facility

Specific project tasks included, but were not limited to:

- Assist the county in Developing and Drafting the Procurement Process Framework – work included developing a procurement process, establishing a procurement event timeline, reviewing options and establishing the basis of shortlist and award, establishing submission requirements, and other activities related to the procurement process.
- Pre-procurement Issues – assisted the county in identifying issues to be resolved prior to, and during the procurement process.
- Evaluate Consolidated Management Agreement (CMA) – evaluated the existing CMA to identify strengths and weaknesses and issues causing ambiguity in contract administration and identified key issues that needed to be included in a new Service Agreement.
- Evaluate WTE Conditions – this work included reviewing facility inspection and operating records; documenting conditions of all equipment, machinery, grounds and ancillary facilities; developing a tracking list to monitor conditions during the procurement process; performing inspections of the WTE, as needed; identifying potential capital improvements that may be required or desired by the county; and, performing economic analyses as necessary to support the procurement process related to the above.
- Develop Request for Qualifications – assisted the county in developing an RFQ for the project and assisted in evaluating responses received including making recommendations.
- Request for Proposals – assisted the county in the production and issuance of an RFP including attendance at the bidder's conference and preparation of an addendum. Assisted the county's Selection Committee in the evaluation of bids received.
- Develop New Service Agreement – assisted the county in developing a new service agreement including the identification, review, and evaluation of various contract issues, identify operator responsibilities related to repair and maintenance as well as renewal and replacement. Also assisted in developing operator performance standards.



## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

- **Develop Construction Agreement** – assisted the county in developing a master construction agreement which will govern the construction of a large (approximately 25) number of capital improvement projects.
- **Contract Negotiations** – assisted the county with contract negotiations. A simultaneous negotiations process was employed.
- **Performance Testing** – managed and oversaw performance testing, as required to establish WTE baseline conditions as well as condition of the RRF at time of turnover to a new operator.
- **Monitor Transition Activity** – monitored the activities of the existing operator and the new operator to assist with compliance with the terms of the transition plan, which was set in the new service agreement, and monitored compliance by the existing operator with CDM to prevent deterioration of the RRF from the baseline conditions.
- **Monitor Construction Activity** – performed such activities as necessary to monitor the design and construction of capital projects included as part of the new services agreement for compliance with contract terms and specifications.
- **Economic Analyses** – performed such economic analyses of operating and capital costs as was necessary as part of the overall procurement strategy and process as well as selection of a contractor.
- **Presentations** – prepared presentation materials and made presentations, as requested by the county to various forums including the Board of County Commissioners.

CDM also provided miscellaneous services associated with the procurement process or the county's solid waste management system.

### Latent Defects in a 24-Year Old Waste-to-Energy Facility – Fact or Fiction? Pinellas County Case Study

Paul J. Stoller, Vice President, Camp Dresser & McKee, Presenter

Additional Authors

Anthony LoRe, P.E., BCEE, Principal, Camp Dresser & McKee

William Crellin, Jr., P.E., Camp Dresser & McKee

Robert Hauser, Jr., Director, Pinellas County Utilities Department of Solid

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## Innovations in Waste-to-Energy Facilities

In 1983, Pinellas County, Florida, set an industry standard by using design-build-operate procurement for one of the first waste-to-energy (WTE) facilities in the United States. This flagship 3,000-ton-per-day municipal facility has now become the first to undergo the procurement process to obtain an operator for an already existing WTE facility.

### THE PAST DICTATES THE FUTURE

When drafted, the facility's original service agreement did not include unanticipated requirements and maintenance issues that would arise over the contracted timeframe. Thus, upon contract expiration, Pinellas County chose to procure a new contract rather than renegotiate. "Based on everything we have learned over the last 20 years, we wanted to go out to bid for a modern contract that focused on controls, operations, and maintenance," says Robert Hauser, Pinellas County director of solid waste operations.

### GETTING DOWN TO BRASS TACKS

CDM, selected as the WTE's operator procurement engineer of record, created the request for qualifications, request for proposal, a refurbishment projects construction agreement, proposal analyses, and a new service agreement. The cornerstone of the reprocurment project, this vital service agreement defined the scope and costs of required maintenance—offering the county more operations and maintenance control of this publicly owned facility.

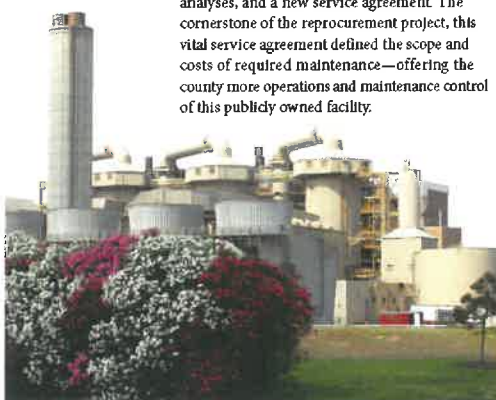
"The original contract focused on construction and making sure the facility worked; operations details were secondary and vague. This new contract details maintenance and performance expectations, giving us greater ability to ensure an efficient, effective, and well-maintained facility," explains Hauser.

Together, CDM and Pinellas County itemized the considerations necessary for the facility to run properly. Recognizing the risks of replacement operator management, the county developed a unique punch list system detailing the equipment that they would pay to repair once the replacement operator was in place. Also, the replacement operator could conduct equipment tests to ensure that required codes and standards were met. CDM then facilitated county-operator negotiations regarding equipment repairs and costs, and assisted with operator transition.

### CONTINUED COLLABORATION, CONTINUED SUCCESS

Impressed with the partnership, Pinellas County hired CDM for design oversight and operations and construction monitoring for \$90 million of capital improvements projects, including replacing three aging furnace/combustion units, which will increase efficiency and reliability and reduce plant maintenance costs.

"Successful operator reprocurment and shrewd capital improvements will enable Pinellas County to continue generating 75 megawatts (MW) of renewable energy for the next 17 years," says Dan Strohbridge, CDM vice president and client service manager. The facility sells approximately 60 MW, which helps power 45,000 homes and businesses every day, and will generate enough revenue to cover facility operations and maintenance costs through 2024.



# CDM

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### 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a.	CDM	Tampa, FL	Prime
b.	CDM	Cambridge, MA	Engineering support
c.	CDM	Houston, TX	Engineering support

## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	3	21. Title and Location (City and State)	Waste-to-Energy Facility Operations Monitoring; Facility Expansion and Clean Air Act Retrofit Assistance, Hillsborough County, FL	22. Year Completed	
				Professional Services Ongoing	Construction (if Applicable) 2009

Total Project Cost: **Design \$2.1M; Construction \$125M**

### 23. Project Owner's Information

a. Project Owner	Hillsborough County
b. Point of Contact Name	Barry M. Boldissar, Solid Waste Management Director
c. Point of Contact Telephone Number	813.276.2900

### 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

In 1983, CDM assisted Hillsborough County with the planning and implementation of a 1,200 tpd waste-to-energy facility. Construction began in 1985 and the facility has been in continuous operation since 1987. CDM has performed operations monitoring services since facility startup.

In 1997, CDM again assisted Hillsborough County in negotiating the service agreements amendments necessary to retrofit the facility with additional air pollution control equipment required to comply with the 1990 Federal Clean Air Act amendments. CDM was responsible for design review and construction oversight of the air pollution control retrofit project, which was undertaken on one unit at a time enabling the remaining two units to continue operating.

In 2004, Hillsborough County again called upon CDM to modify the State permits and assist in negotiating a service agreement amendment to begin preliminary negotiations and obtain pricing to expand the facility with an additional 600 tpd of capacity.

In 2005 CDM assisted the County in negotiating a 20-year extension to the service agreement between the County and Covanta and in developing the basis of design, performance specifications, permit application, and construction agreement for a 600 tpd expansion to the WTE facility. The County also requested CDM to provide a full time resident inspector during construction, the primary goal of which was to provide quality assurance and instill confidence in the County that the contractor's work conformed to the contract documents, the integrity of the design concept was maintained and that the costs incurred under the cost reimbursable-style contract were appropriate.



Hillsborough County Resource Recovery Facility

For more than 20 years, CDM has been providing the following services to Hillsborough County:

- Refuse Quantity and Waste Characterization Studies
- Site Assessments and Site Selection
- Technology Review and Selection, Facility Sizing
- State Permitting and Modifications to the State Permits.

**Waste-to-Energy Facility Operations Monitoring:** Under an Operations and Management Agreement, Ogden Martin Systems of Hillsborough (now Covanta Hillsborough, Inc.) operates the 1,800-tpd Hillsborough County solid waste resource recovery facility for the County. CDM conducts the semi-annual inspections of the WTE facility and the Northwest and South County transfer stations. CDM then reports to the County on the sufficiency of facility performance, maintenance, repair, and operation.

## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

As part of our O&M services, CDM also reviews monthly operations data, attends monthly meetings and reviews the Solid Waste Management Department's annual budget, considering modifications or improvements, and evaluating the Department's financial ability to meet established bond covenants. To ensure compliance with the Title V air emissions operating permit and the Power Plant Siting Act Certification, CDM monitors and evaluates the annual air quality testing of the facility.

**Clean Air Act Retrofit Assistance (2000):** To achieve compliance with the Emission Guidelines of the Clean Air Act, Hillsborough County retained CDM to provide construction monitoring during the air pollution control retrofit of their WTE facility. CDM prepared the Prevention of Significant Deterioration (PSD) air permit applications and successfully negotiated permits for two separate facility improvements at the WTE Facility.

CDM obtained approved modifications to the facility's Florida Power Plant Site Certification for these two projects. The first was obtained between 1998 and 2000 to upgrade APC equipment to comply with the New Source Performance Standards and Emissions Guidelines for Municipal Waste Combustors. The facility's ESPs were replaced with SDAs and FFs. The second project, which took place between 2005 and 2006, was for the construction of a new 600-tpd boiler, referred to as Unit 4. Unit 4 increased the solid waste processing capacity of the facility from 1,200 tpd (three 400-tpd units) to 1,800 tpd. The new Unit 4 also increased the facility's steam electrical generating capacity from 39 MW to 47 MW.

### 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location ( <i>City and State</i> )	(3) Role
a.	CDM	Tampa, FL	Prime
b.	CDM	Cambridge, MA	Engineering support
c.	CDM	Houston, TX	Engineering support



## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	<b>4</b>	21. Title and Location (City and State)	Independent Consulting Engineering Services, Operations Monitoring and Solid Waste Consulting Services, Pasco County, FL	22. Year Completed	Professional Services Ongoing	Construction (if Applicable) N/A
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Total Project Cost: **Original Facility Construction Cost: \$90M; Annual O&M Monitoring Fees: \$150,000**

### 23. Project Owner's Information

a. Project Owner	<b>Pasco County</b>
b. Point of Contact Name	<b>John Gallagher, County Administrator</b>
c. Point of Contact Telephone Number	<b>727.847.8115</b>

### 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

CDM provides Independent Consulting Engineering Services to Pasco County, Florida, for its 1,050-tpd WTE facility. CDM has provided these services since the facility commenced operations in 1991. Pasco County's WTE facility is operated by Covanta Pasco (formerly Ogden Martin Systems of Pasco, Inc.) under a long term service agreement. To verify compliance with the service agreement, Pasco County, retained CDM to provide operations monitoring, evaluations and reporting services. CDM's services also include consulting with the county on its solid waste management system performance, periodic inspection of mechanical systems, review of operating records and maintenance logs, and advising the county on matters related to its solid waste management system.

On a regular basis, CDM evaluates the operation and performance of the Pasco County resource recovery facility with respect to compliance with the county's service agreement with Covanta Pasco; CDM reviews records, analyzes performance data and correspondence to confirm that the facility operation is in compliance with the service agreement. To observe facility operations and collect operational and performance data, CDM conducts onsite visits, paying particular attention to operating practices and equipment conditions for consistency of operations and conformance to industry norms. In addition, CDM attends monthly meetings with the county and Covanta personnel.

Operating data, reviewed on a monthly basis, include control room logs, shift supervisor's logs, air pollution control and turbine-generator maintenance logs, reports of scheduled and unscheduled equipment outages or unusual events, and the facility's monthly operating (production) reports. CDM also monitors permit compliance by Covanta, reporting any problems to the county.



*Pasco County Resource Recovery Facility*

Upon completion of the contract year, CDM prepares a report summarizing the year's operation and maintenance indicating satisfactory or unsatisfactory operation, levels of performance, and identifying measures required for implementation to correct any deficiencies. CDM has provided these services continuously since 1991 when the facility commenced commercial operations.

CDM recently assisted Pasco County in the negotiating a 5-year extension to their original service agreement with Covanta that was set to expire in 2011. CDM also lead the team that developed the original construction agreement and service agreement for this project (1987).

**Solid Waste Management Plan:** CDM prepared a long-term solid waste management plan for the County and assisted them in the implementation of their program. CDM performed the siting study for the facility and adjacent Class I sanitary landfill, helped the County obtain all of the necessary permits under the Florida Power Plant Siting Act, designed the landfill facilities, developed the Request for Qualifications and Request for Proposals for vendor qualification and selection (incorporating a simultaneous negotiation process), developed the Engineer's Feasibility Report in the Official Statement for the revenue bond offering, and provided construction monitoring services for the project.

### 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a.	CDM	Tampa, FL	Prime
b.	CDM	Cambridge, MA	Engineering support
c.	CDM	Houston, TX	Engineering support

## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	<b>5</b>	21. Title and Location (City and State)	<b>Performance Audit of the Spokane Regional Solid Waste System, Including the Waste-to-Energy Facility, Spokane, WA</b>	22. Year Completed
				Professional Services <b>2009</b>
				Construction (if Applicable) <b>N/A</b>

Total Project Cost: **\$172,337**

### 23. Project Owner's Information

a. Project Owner	<b>Spokane Regional Solid Waste System, Washington</b>
b. Point of Contact Name	<b>Damon Taam, System Contract Manager</b>
c. Point of Contact Telephone Number	<b>509.625.6580</b>

### 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

CDM is evaluating the technical performance of the Spokane Regional Solid Waste System (system) Waste-to-Energy (WTE) facility and transfer stations, as well as the organizational performance, and flow of information at the System as a whole. The service area of the system encompasses all of Spokane County. The principal facilities of the System include the 800-ton-per-day mass-burn WTE facility, the Northside Regional Landfill, two solid waste transfer stations, three recycling centers and household hazardous waste facilities, the use of non-system landfills to dispose of by-pass waste and non-processable waste, and the use of a private contractor for composting certain yard and garden debris. The WTE facility is operated by a private contractor (Wheelabrator). The Northside Regional Landfill, the transfer stations, recycling centers and household hazardous waste facilities, as well as the scale systems and residential tipping floor at the WTE facility, are operated by Solid Waste Management on behalf of the system.



*Waste-to-Energy Facility, Spokane, Washington*

CDM's scope of work includes a review of the system's maintenance and operations at its major facilities, a comparison of the system's performance to the goals and objectives established by the Spokane County comprehensive solid waste management plan, and review and assessment of the overall regional program and administrative services and performance provided by the system compared to similar solid waste systems.

### 25. Firms from Section C involved with this Project

(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a. CDM	Cambridge, MA	Engineering support

# F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	6	21. Title and Location (City and State)	Waste-to-Energy Facility – Covanta Service Contract Extension, Pasco County, FL	22. Year Completed	Professional Services 2009	Construction (if Applicable) N/A
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Total Project Cost: **\$65,000**

## 23. Project Owner's Information

a. Project Owner	Pasco County
b. Point of Contact Name	John Gallagher, County Administrator
c. Point of Contact Telephone Number	727.847.8115

## 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

The existing service agreement between Pasco County (County) and Covanta Pasco Inc. (Covanta) for the operation of the County's Resource Recovery Facility expires May 1, 2011. The County and Covanta are interested in extending and modifying the agreement if terms and conditions can be mutually agreed upon by the two parties. Under this task order, CDM assisted the County and the County's legal advisors in negotiating and developing a Service Agreement extension term sheet and ultimately the Second Amended and Restated Service Agreement between Covanta Pasco and Pasco County (Extended Service Agreement or ESA).

CDM met with the County and Covanta personnel to develop a term sheet, which identified all key issues and changes proposed to be incorporated in the ESA. It was an iterative process of reviewing and developing proposed terms, discussing the parties' intents for the proposals, and ultimately reaching an agreement on a set of conceptual changes to be included in the ESA.

CDM met with the County on a regular basis to discuss negotiation strategy, informed county administration of negotiations progress, and identified County policy objectives that may pertain to the development of the ESA. CDM developed draft Service Agreement language to be incorporated in the ESA. CDM also developed summaries of contract modifications to assist and foster understanding of the contractual concepts proposed for modification. Once a draft ESA was developed, CDM assisted the County in reviewing and refining the final ESA.

## 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a.	CDM	Tampa, FL	Prime
b.	CDM	Cambridge, MA	Engineering support



## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	7	21. Title and Location (City and State)	Continuing Services for a Waste-to-Energy Facility, Onondaga County, NY	22. Year Completed	
				Professional Services 2013	Construction (if Applicable) Various Dates

Total Project Cost: **\$1.2M**

### 23. Project Owner's Information

a. Project Owner	Onondaga County Resource Recovery Agency (OCRRA)
b. Point of Contact Name	Amy Lawrence, P.E., Agency Engineer
c. Point of Contact Telephone Number	315.469.5826

### 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

CDM has provided operations monitoring and contract related services to the Onondaga County Resource Recovery Agency from 1994-2004 and 2008 to 2010. In 2010 CDM was again selected as the Agency's consultant for another 3 years – ending in 2013.

These services include:

- Observation of annual air emission tests and review of test results
- Observation of semi-annual ash residue sampling and review of test results
- Conducting semi-annual facility inspections
- Evaluation of operating and maintenance data
- Development of 5-year capital repair/replacement projections
- General consulting.

#### **Construction and Operations Monitoring Services for a Waste-to-Energy Facility:** (Total Project Value: Design \$1,000,000; Construction \$150,000,000)

The Onondaga County Resource Recovery Agency engaged CDM to perform services during construction of the 990-tpd, Waste-to-Energy facility, which was owned, designed, constructed, and operated by a full-service vendor under a long-term contract with the agency. The facility consists of three furnaces and produces approximately 40 MW of electricity (net of in-plant use) for sale to the local electric utility. Each of the three combustion trains included a 330-tpd ABB combustion steam generator with a rated capacity of 85,000 lb/hr at 865 psig and 830°F. Air pollution control was provided by an acid gas scrubber and baghouse for each train. The plant design incorporated NOx reduction technology as well as mercury removal technology. This was one of the first facilities to include both carbon and ammonia injection systems for mercury and NOx control, respectively, along with scrubbers and baghouses.



*Onondaga County Resource Recovery Facility*

CDM provided the following services:

- Attendance at monthly progress meetings.
- Review and approval of the vendor's monthly invoices.
- Weekly onsite review of construction activities.
- Review and approval of acceptance testing protocols.
- Witnessing of acceptance tests.
- Facility inspections, service agreement administration and general oversight assistance.

### 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a.	CDM	Cambridge, MA	Prime
b.	CDM	Tampa, FL	Engineering support

## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	8	21. Title and Location (City and State)	Waste-to-Energy Facility Services and Operator Procurement, Vancouver, Canada	22. Year Completed	
				Professional Services Ongoing	Construction (if Applicable) N/A

Total Project Cost: **\$350,000**

### 23. Project Owner's Information

a. Project Owner	Metro Vancouver (Greater Vancouver Regional District)
b. Point of Contact Name	Chantal Babensee, Division Manager Residuals Management
c. Point of Contact Telephone Number	604.436.6853

### 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

Since 1988 when CDM performed an inspection of the then recently-constructed WTE facility, witnessed performance tests, and reviewed the acceptance test reports, we have provided a number of services to this client including performing regular facility inspections. The GVRD's initial O&M contract with Veolia expired in March 2000 and, prior to that date, CDM assisted the GVRD in negotiating turnover requirements with the then current operator, as well as the preparation of the RFP used to select the new operator on a competitive basis.

In 2003, CDM provided design review services and assisted in the development of changes to the operating agreement related to the addition of a steam turbine/electric generator to the project. CDM has provided a variety of WTE consulting services to the GVRD, including facility inspections and review of acceptance test reports, assistance in the development of turnover requirements at the end of the initial operating agreement, assistance in the development of operator RFPs, design review for the installation of a steam turbine/electric generator, assistance in negotiating changes to the operating agreement related to installation of a steam turbine/electric generator, and technical review of a proposal to convert one of GVRD's existing transfer stations into a refuse derived fuel (RDF) processing facility.

**Facility Inspection and Acceptance Test Data Review:** The Greater Vancouver Regional District (GVRD) engaged CDM to provide consulting services relative to their recently completed Burnaby incinerator facility. CDM's services under this contract were for two primary purposes: (1) an initial inspection of the facility, and (2) a review of acceptance test data. The facility inspection was designed to evaluate the completeness and soundness of facility construction by the design contractor. Construction of the incinerator was substantially completed several months prior to CDM's visit. Based on this inspection, CDM identified specific operational and construction related items which deviated from the design and construction agreements. CDM also prepared a punch list of items requiring completion, repair, or replacement by the design contractor. During the same time period, the design contractor submitted capacity test reports for each boiler to the GVRD. The reports were submitted in order to demonstrate compliance with the continuous throughput guarantee.



Greater Vancouver Regional District  
Waste-to-Energy Facility

As part of CDM's work, we reviewed the test reports for completeness and acceptability. Subsequently, CDM was retained by Birwelco Ltd., the design contractor for the Burnaby incinerator, to conduct energy efficiency tests at the facility. As part of this work, CDM prepared the detailed test protocol for the energy tests including stack gas and residue sampling, supervised the performance of these tests and, upon completion, prepared detailed test reports. Conductance of these tests required that CDM become intimately familiar with the boiler operation, residue handling system, distribution control system (Bailey Net 90), and air emissions equipment. CDM was then selected to conduct a technical inspection of the Burnaby incinerator to determine the condition of plant equipment, buildings and grounds, and to determine if the operating contractor was performing their obligations with respect to maintenance, repair, and efficient operation of the facility.

The operating agreement expired in March 2000 and CDM assisted the GVRD in negotiating turnover requirements with the current operator, as well as preparation of the request for proposals that were used to select the replacement operator.

### 25. Firms from Section C involved with this Project

(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a. CDM	Cambridge, MA	Engineering support

# F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	9	21. Title and Location (City and State)	WTE Services – Budget Reviews, Assistance in Refinancing, Assistance in Negotiating an Expansion, York County, PA	22. Year Completed	Professional Services Ongoing	Construction (if Applicable) N/A
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Total Project Cost: **\$232,919**

## 23. Project Owner's Information

a. Project Owner	York County Solid Waste and Refuse Authority
b. Point of Contact Name	Dave Vollero, Executive Director Jerry Grim, Assistant Executive Director
c. Point of Contact Telephone Number	717.845.1066

## 24. Brief Description of Project and Relevance to this contract (include scope, size and cost)

The York County Solid Waste and Refuse Authority (Authority) owns a 1,344 tpd WTE facility that is operated by a private operator under contract to the Authority. The Authority also contracts for the sale of electricity that is generated by the facility and for the landfilling of the ash residue produced by the facility. CDM's involvement with the Authority includes the following services.

**Budget Review:** Since 1992, CDM has annually performed independent reviews of the proposed budget of the Authority. This work is required by the agreement between the Authority and the County pursuant to which the County has guaranteed to make up any shortfalls in debt service payments that the Authority incurs in any fiscal year on the Authority's debt.

**Assistance in Refinancing:** In 1994, CDM prepared an engineer's statement in conjunction with a forward interest rate swap of the Authority's outstanding debt, and in 1997, CDM prepared an engineer's statement in conjunction with the refinancing of the Authority's \$110,915,000 debt.

Both of CDM's Engineer's Statements included the following:

- Described the 1,344 tpd facility and how it operates
- Reviewed the facility's operating performance
- Reviewed the operation, maintenance, and equipment repair and replacement practices of the full-service operator
- Reviewed the compliance of the Facility with its permit requirements
- Reviewed the history of solid waste deliveries to the facility
- Reviewed the residue and bypass waste disposal facilities and contracts
- Presented conclusions in each of the above areas.



York County Solid Waste and Refuse Authority  
Waste-to-Energy Facility

**Assistance Negotiating an Expansion of the Facility:** Based upon CDM's involvement in the expansion of the Hillsborough County, Florida WTE facility and our role in developing new O&M contracts for both the Hillsborough County and Pinellas County WTE facilities, CDM was retained by the Authority to assist in negotiating an expansion of the facility in order to increase the facility's combustion capacity and to extend the service agreement between the Authority and the existing operator.

CDM's services include assistance in negotiating the project management agreement between the Authority and the existing operator for managing the construction of the expansion; the construction agreements to be bid by the Authority, in accordance with Pennsylvania law, for the various components of the expansion; and the revised operations and maintenance agreement for the existing operator to operate and manage the expanded facility.

## 25. Firms from Section C involved with this Project

(1) Firm Name	(2) Firm Location (City and State)	(3) Role
a. CDM	Cambridge, MA	Prime



## F. EXAMPLE PROJECTS WHICH BEST ILLUSTRATE PROPOSED TEAM'S QUALIFICATIONS FOR THIS CONTRACT

20. Example Project Key Number	<b>10</b>	21. Title and Location <i>(City and State)</i>	<b>Planning, Design and Construction Supervision for Waste-to-Energy Facilities, City of Keelung, Tainan and Ping-Tung Counties, Taiwan</b>	22. Year Completed
				Professional Services <b>2007</b>
				Construction <i>(if Applicable)</i> <b>2007</b>

Total Project Cost: **\$360M**

### 23. Project Owner's Information

a. Project Owner	<b>Taiwan Environmental Protection Administration</b>
b. Point of Contact Name	<b>Vincent Fu, Director</b>
c. Point of Contact Telephone Number	<b>886.2.23117722 ext. 2550</b>

### 24. Brief Description of Project and Relevance to this contract *(include scope, size and cost)*

CDM provided planning, design and construction supervision services for three waste-to-energy facilities with combined capacity of 2,400 tons per day, featuring state-of-the-art technology solutions and representing US\$360 million in capital investment. The project was a central element of a US\$300 billion island-wide development plan to reduce Taiwan's dependence on landfills and protect the environment; the waste-to-energy facilities process municipal solid waste from the City of Keelung (600 tpd), Tainan County (900 tpd in Yung Kang) and Ping-Tung County (900 tpd). To promote state-of-the-art energy recovery and waste processing technologies, the Taiwan EPA requires Taiwan engineering firms secure assistance from foreign firms to execute solid waste incineration projects. CDM teamed with Taiwan-based CTCI Corporation as prime. CDM conducted the following tasks:

- Refuse quantity and waste characterization studies
- Air emission regulatory review
- Environmental and site assessments
- Technology review, equipment sizing and selection
- Preliminary facility design, plant layout, and process and instrumentation diagrams
- Final design review and technical specifications for process equipment
- Preparation of tender documents and evaluation of vendor bids
- Transfer station planning report and conceptual design
- Construction monitoring and facility test monitoring.



The original scope called for the production of design-build-operate (DBO) contract documents with minimal technical direction—just a few performance requirements. However, after CDM learned that the operations period would be five years and not the standard 20-year period common in the United States, CDM convinced the client to allow the production of enhanced DBO contract documents with detailed floor plans, schematics, and technical specifications that mandated the use of high quality materials and equipment.

CDM also guided the DBO developer selection process to follow that used in the U.S.—receive developer technical proposal at the 80% completion level, conduct separate interviews with each developer to advise them of where their designs were deficient, and then ask for final technical and cost proposals.

The new facilities feature mass-burn waterwall boilers and generate electric power for in-plant use and for export to the power companies to earn revenues. State-of-the-art air emission control equipment includes semi-dry scrubbers and fabric filters to control particulate, heavy metal, acid gases, and mercury and dioxin/furans emissions. Bottom ash residue and solidified flyash from the facilities are disposed in secure landfills. In addition, CDM designed an onsite wastewater treatment plant for reuse of process wastewater, thereby minimizing raw water use. CDM assisted with construction oversight activities and the facilities have been successfully commissioned.

### 25. Firms from Section C involved with this Project

	(1) Firm Name	(2) Firm Location <i>(City and State)</i>	(3) Role
a.	CDM	Cambridge, MA	Prime

# G. KEY PERSONNEL PARTICIPATION IN EXAMPLE PROJECTS

6. NAMES OF KEY PERSONNEL (From Section E, Block 12)	27. ROLE IN THIS CONTRACT (From Section E, Block 13)	28. EXAMPLE PROJECTS LISTED IN SECTION F (Fill in "Example Projects Key" section below before completing table. Place "X" under project key number for participation in same or similar role.)									
		1	2	3	4	5	6	7	8	9	10
Daniel E. Strobbridge, QEP	Officer-in-Charge/Project Director; Contract Administration	◆	◆	◆	◆		◆	◆			
William R. Crellin, Jr., P.E.	Project Manager; Independent Consulting Engineer; Design Review and Construction Monitoring	◆	◆	◆	◆		◆		◆		
Paul J. Stoller	Quality Management Officer; Contract Administration	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Anthony M. LoRe, Jr., P.E., BCEE	Independent Consulting Engineer; Design Review and Construction Monitoring	◆	◆	◆	◆	◆	◆	◆	◆	◆	◆
Joseph P. Curro, P.E., BCEE	Independent Consulting Engineer		◆	◆	◆			◆			
Valerie P. Going, P.E.	Independent Consulting Engineer; Environmental Permitting/Monitoring	◆	◆	◆	◆						
Wei-Ting Liu	Independent Consulting Engineer	◆		◆	◆						
Joseph N. Cascio	Design Review and Construction Monitoring; Electrical	◆	◆	◆	◆						
Jack C. McHugh	Design Review and Construction Monitoring			◆	◆						
Nathan D. Schmaus	Design Review and Construction Monitoring	◆		◆							
Tony R. St. Clair, BCEE, QEP, REM	Environmental Permitting/Monitoring	◆	◆	◆	◆						
Cynthia Strong Hibbard	Environmental Permitting/Monitoring		◆	◆	◆						
Cynthia L. Stellmack, P.E.	Electrical	◆	◆	◆							
John S. Kontor, P.E.	Instrumentation			◆							
Timothy A. Verwey, P.E.	Structural		◆	◆							
John G. Ladner, P.E., BCEE	Solid Waste	◆		◆	◆						
Aamod Sonawane, P.E., BCEE	Solid Waste	◆			◆						
Johnstone N. Reid, Jr., FAIA, CCS, LEED® AP	Architecture		◆	◆							
Diane C. Kemp	Financial	◆		◆	◆						

## 29. EXAMPLE PROJECTS KEY

NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)	NO.	TITLE OF EXAMPLE PROJECT (FROM SECTION F)
1	Waste-to-Energy Consulting Services, Pinellas County, FL	6	Waste-to-Energy Facility – Covanta Service Contract Extension, Pasco County, FL
2	Waste-to-Energy Operator Re-procurement, Pinellas County, FL	7	Continuing Services for a Waste-to-Energy Facility, Onondaga County, NY
3	Waste-to-Energy Facility Operations Monitoring; Facility Expansion and Clean Air Act Retrofit Assistance, Hillsborough County, FL	8	Waste-to-Energy Facility Services and Operator Procurement, Vancouver, Canada
4	Independent Consulting Engineering Services , Operations Monitoring and Solid Waste Consulting Services, Pasco County, FL	9	WTE Services – Budget Reviews, Assistance in Refinancing, Assistance in Negotiating an Expansion, York County, PA
5	Performance Audit of the Spokane Regional Solid Waste System, Including the Waste-to-Energy Facility, Spokane, WA	10	Planning, Design and Construction Supervision for Waste-to-Energy Facilities, City of Keelung, Tainan and Ping-Tung Counties, Taiwan

30. PROVIDE ANY ADDITIONAL INFORMATION REQUESTED BY THE AGENCY. ATTACH ADDITIONAL SHEETS AS NEEDED.

## Current Project Workload

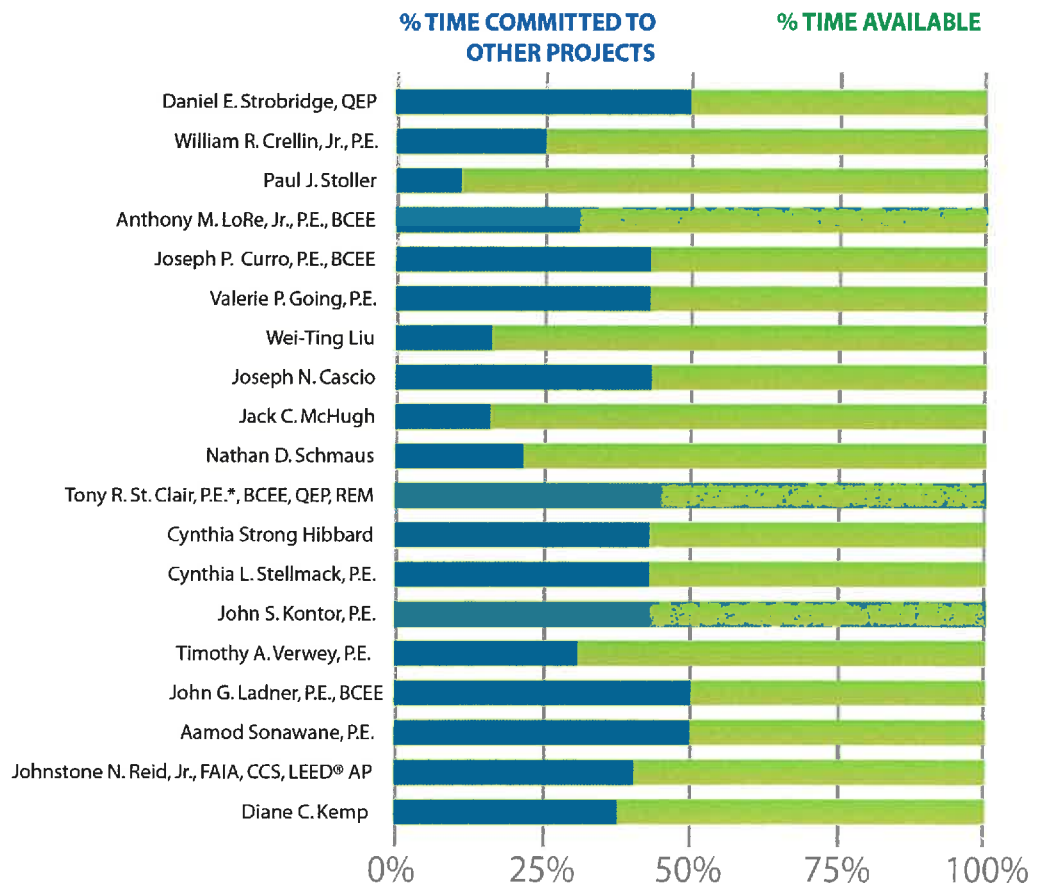
During the past several years, CDM has committed and delivered a considerable amount of professional resources to Pinellas County DSWO projects. If CDM is not selected for this contract it would have a significant impact on the staffing in our Tampa office. The project team proposed for this contract is the same that has previously committed to deliver high quality service to Pinellas County under the previous agreement. Without this assignment, CDM WTE staff face a reduction in hours. We have been able to be responsive to the County on all past assignments with this core project team and stand poised to do so again.

CDM is committed to adhering to this same level of quality that we have delivered on past work for the DSWO and to continue providing exceptional engineering services in the future. The majority of the potential tasks that may be assigned under this contract will be administered from CDM's Tampa office. This local office is staffed by 53 personnel, and houses the core of CDM waste-to-energy staff. A number of our staff are expert at providing technical inspections, facility start-up, and operations services and as well as construction inspection services. Each staff member has a personal computer link to both Local and Wide area networks, allowing e-mail communication and work sharing with CDM's nationwide resources of 4,500. If selected, CDM will use the following procedures to handle the daily activities required by the potential professional engineering consulting services required for this contract:

- Preparation of a Detailed Project Management Plan (PMP). The PMP defines work tasks, establishes budgets, identifies resource requirements, and sets the sequencing of work elements.
- Execution of CDM's Basic Management Tool (BMT). The BMT outlines the projects set up including labor cost and other direct costs.
- Use of a Scheduling Specialist. A Scheduling Specialist will be assigned to every Pinellas County project to keep the project manager informed as to the status of existing work elements and the onset of upcoming milestones.
- Project Management Committee. The Project Management Committee gives CDM project managers the opportunity to present and resolve staffing issues with input from other management staff.

Through the input of the Project Management Committee, CDM consistently evaluates and updates the staffing of all proposed and ongoing projects. CDM personnel are allocated through the project manager in coordination with other project managers at our Project Management Committee Meetings. Bill Crellin, Project Manager for this contract, will prepare and update weekly personnel needs by evaluating upcoming project tasks. The technical project manager identifies the needs and preferences for project engineers, scientists, and support staff at the Project Management Committee Meeting. During these meetings, staffing requirements are evaluated and assigned based upon the demands of current work commitments.

### 12 MONTH CDM PROJECT TEAM/ WORKLOAD COMMITMENT





#### H. ADDITIONAL INFORMATION

As tasks are scheduled and milestones achieved, the project manager communicates with his scheduling specialist to update the overall project schedule. If the project manager senses a potential staffing conflict or deficiency, the project manager indicates the need at the Project Management Committee Meeting, and the appropriate staff is authorized. As indicated by the workload projection graphic on the following page, CDM's key personnel and supporting engineers will have ample time to commit to Pinellas County projects.

#### I. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts

31. SIGNATURE



32. DATE

February 25, 2011

33. NAME AND TITLE

Kart Vaith, P.E., BCEE, Senior Vice President

# ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)  
101-0120-CN (AM)

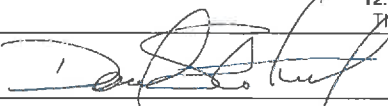
## PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME <b>CDM</b>			3. YEAR ESTABLISHED <b>1947</b>	4. DUNS NUMBER <b>05-599-0261</b>
2b. STREET <b>1715 North Westshore Boulevard, Suite 875</b>			5. OWNERSHIP	
2c. CITY <b>Tampa</b>	2d. STATE <b>FL</b>	2e. ZIP CODE <b>33607</b>	a. TYPE <b>Corporation</b>	
6a. POINT OF CONTACT NAME AND TITLE <b>Daniel E. Strobridge, QEP, Vice President</b>			b. SMALL BUSINESS STATUS <b>Large Business</b>	
6b. TELEPHONE NUMBER <b>(813) 281-2900</b>		6c. E-MAIL ADDRESS <a href="mailto:StrobridgeDE@cdm.com">StrobridgeDE@cdm.com</a>		
7a. FORMER FIRM NAME(S) (if any) <b>Camp Dresser &amp; McKee</b>			7b. YR. ESTABLISHED <b>1947</b>	7c. DUNS NUMBER <b>05-599-0261</b>

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
08	CAD Technician	195	0	A12	Automation; Controls; Instrumentation	7
12	Civil Engineer	573	6	C14	Conservation and Resource Management	6
14	Computer Programmer	132	1	C15	Construction Management	10
15	Construction Inspector	115	2	C18	Cost Estimating; Cost Engineering	7
16	Construction Manager	157	1	E09	Env. Impact Studies; Assessments	6
18	Cost Estimator	50	0	E12	Environmental Remediation	10
21	Electrical Engineer	146	0	E13	Environmental Testing and Analysis	9
23	Environmental Engineer	720	15	G04	Geographic Information System Services	8
24	Environmental Scientist	125	0	H04	Heating; Ventilating; Air Conditioning	8
27	Geotechnical Engineer	100	0	H07	Hwys.; Streets; Airfield Paving; Parking	6
29	GIS Specialist	107	1	P06	Planning (Site, Installation and Project)	8
30	Geologist	139	1	P08	Plumbing and Piping Design	8
32	Hydraulic Engineer	110	4	R06	Rehabilitation (Bldgs.; Structures; Facil.)	10
34	Hydrologist	78	2	R11	Rivers; Canals; Waterways; Flood Cntrl.	8
42	Mechanical Engineer	54	0	S04	Sewage Collection, Treatment, Disposal	10
47	Planner	121	1	S05	Soils and Geologic Studies; Foundations	9
52	Sanitary Engineer	105	2	S07	Solid Wastes; Incineration; Landfill	8
57	Structural Engineer	59	0	S09	Structural Design	7
58	Technician	421	2	S13	Stormwater Handling Facilities	9
62	Water Resources Engineer	108	0	T02	Testing & Inspection Services	8
	Other Employees	768	15	W02	Water Res.; Hydrology; Ground Water	9
Total		4,383	53	W03	Water Supply, Treatment, Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
a. Federal Work	10	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	10	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	10	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
		5. \$1 million to less than \$2 million	10. \$50 million or greater

12. AUTHORIZED REPRESENTATIVE The foregoing is a statement of facts.	
a. SIGNATURE 	b. DATE <b>February 25, 2011</b>
c. NAME AND TITLE <b>Daniel E. Strobridge, QEP, Vice President</b>	

# ARCHITECT – ENGINEER QUALIFICATIONS

1. SOLICITATION NUMBER (if any)  
101-0120-CN (AM)

## PART II – GENERAL QUALIFICATIONS

(If a firm has branch offices, complete for each specific branch office seeking work.)

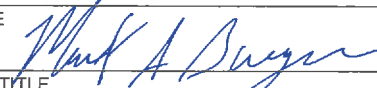
2a. FIRM (OR BRANCH OFFICE) NAME CDM			3. YEAR ESTABLISHED 1947	4. DUNS NUMBER 05-599-0261
2b. STREET 2301 Maitland Center Parkway, Suite 300			5. OWNERSHIP	
2c. CITY Maitland (Orlando)	2d. STATE FL	2e. ZIP CODE 32751	a. TYPE Corporation	
6a. POINT OF CONTACT NAME AND TITLE Mark A. Burgess, P.E., BCEE, Vice President			b. SMALL BUSINESS STATUS Large Business	
6b. TELEPHONE NUMBER (407) 660-2552	6c. E-MAIL ADDRESS <a href="mailto:BurgessMA@cdm.com">BurgessMA@cdm.com</a>		7. NAME OF FIRM (if block 2a is a branch office) CDM	
8a. FORMER FIRM NAME(S) (if any) Camp Dresser & McKee			8b. YR. ESTABLISHED 1947	8c. DUNS NUMBER 05-599-0261

9. EMPLOYEES BY DISCIPLINE				10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS		
a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
08	CAD Technician	195	19	A12	Automation; Controls; Instrumentation	7
12	Civil Engineer	573	7	C14	Conservation and Resource Management	6
14	Computer Programmer	132	6	C15	Construction Management	10
15	Construction Inspector	115	1	C18	Cost Estimating; Cost Engineering	7
16	Construction Manager	157	12	E09	Env. Impact Studies; Assessments	6
18	Cost Estimator	50	11	E12	Environmental Remediation	10
21	Electrical Engineer	146	23	E13	Environmental Testing and Analysis	9
23	Environmental Engineer	720	11	G04	Geographic Information System Services	8
24	Environmental Scientist	125	2	H04	Heating; Ventilating; Air Conditioning	8
27	Geotechnical Engineer	100	4	H07	Hwys.; Streets; Airfield Paving; Parking	6
29	GIS Specialist	107	4	P06	Planning (Site, Installation and Project)	8
30	Geologist	139	3	P08	Plumbing and Piping Design	8
32	Hydraulic Engineer	110	5	R06	Rehabilitation (Bldgs.; Structures; Facil.)	10
34	Hydrologist	78	11	R11	Rivers; Canals; Waterways; Flood Cntrl.	8
42	Mechanical Engineer	54	6	S04	Sewage Collection, Treatment, Disposal	10
47	Planner	121	3	S05	Soils and Geologic Studies; Foundations	9
52	Sanitary Engineer	105	5	S07	Solid Wastes; Incineration; Landfill	8
57	Structural Engineer	59	7	S09	Structural Design	7
58	Technician	421	18	S13	Stormwater Handling Facilities	9
62	Water Resources Engineer	108	7	T02	Testing & Inspection Services	8
	Other Employees	768	47	W02	Water Res.; Hydrology; Ground Water	9
Total		4,383	212	W03	Water Supply, Treatment, Distribution	10

11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS (Insert revenue index number shown at right)		PROFESSIONAL SERVICES REVENUE INDEX NUMBER	
a. Federal Work	10	1. Less than \$100,000	6. \$2 million to less than \$5 million
b. Non-Federal Work	10	2. \$100,000 to less than \$250,000	7. \$5 million to less than \$10 million
c. Total Work	10	3. \$250,000 to less than \$500,000	8. \$10 million to less than \$25 million
		4. \$500,000 to less than \$1 million	9. \$25 million to less than \$50 million
		5. \$1 million to less than \$2 million	10. \$50 million or greater

## 12. AUTHORIZED REPRESENTATIVE

The foregoing is a statement of facts.

a. SIGNATURE 	b. DATE February 25, 2011
c. NAME AND TITLE Mark A. Burgess, P.E., BCEE, Vice President	



**ARCHITECT – ENGINEER QUALIFICATIONS**

1. SOLICITATION NUMBER (if any)

101-0120-CN (AM)

**PART II – GENERAL QUALIFICATIONS**

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME

CDM

3. YEAR ESTABLISHED

1947

4. DUNS NUMBER

05-599-0261

2b. STREET

50 Hampshire Street

5. OWNERSHIP

a. TYPE

Corporation

2c. CITY

Cambridge

2d. STATE

MA

2e. ZIP CODE

02138

b. SMALL BUSINESS STATUS

Large Business

6a. POINT OF CONTACT NAME AND TITLE

Paul J. Stoller, Vice President

6b. TELEPHONE NUMBER

(617) 452-6000

6c. E-MAIL ADDRESS

[StollerPJ@cdm.com](mailto:StollerPJ@cdm.com)

7. NAME OF FIRM (if block 2a is a branch office)

CDM

8a. FORMER FIRM NAME(S) (if any)

Camp Dresser &amp; McKee

8b. YR. ESTABLISHED

1947

8c. DUNS NUMBER

05-599-0261

**9. EMPLOYEES BY DISCIPLINE****10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS**

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
		(1) Firm	(2) Branch			
08	CAD Technician	195	32	A12	Automation; Controls; Instrumentation	7
12	Civil Engineer	573	40	C14	Conservation and Resource Management	6
14	Computer Programmer	132	66	C15	Construction Management	10
15	Construction Inspector	115	40	C18	Cost Estimating; Cost Engineering	7
16	Construction Manager	157	11	E09	Env. Impact Studies; Assessments	6
18	Cost Estimator	50	8	E12	Environmental Remediation	10
21	Electrical Engineer	146	32	E13	Environmental Testing and Analysis	9
23	Environmental Engineer	720	65	G04	Geographic Information System Services	8
24	Environmental Scientist	125	18	H04	Heating; Ventilating; Air Conditioning	8
27	Geotechnical Engineer	100	17	H07	Hwys.; Streets; Airfield Paving; Parking	6
29	GIS Specialist	107	18	P06	Planning (Site, Installation and Project)	8
30	Geologist	139	15	P08	Plumbing and Piping Design	8
32	Hydraulic Engineer	110	12	R06	Rehabilitation (Bldgs.; Structures; Facil.)	10
34	Hydrologist	78	17	R11	Rivers; Canals; Waterways; Flood Cntrl.	8
42	Mechanical Engineer	54	12	S04	Sewage Collection, Treatment, Disposal	10
47	Planner	121	25	S05	Soils and Geologic Studies; Foundations	9
52	Sanitary Engineer	105	16	S07	Solid Wastes; Incineration; Landfill	8
57	Structural Engineer	59	16	S09	Structural Design	7
58	Technician	421	53	S13	Stormwater Handling Facilities	9
62	Water Resources Engineer	108	14	T02	Testing & Inspection Services	8
	Other Employees	768	180	W02	Water Res.; Hydrology; Ground Water	9
Total		4,383	707	W03	Water Supply, Treatment, Distribution	10

**11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS**  
(Insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	10

**PROFESSIONAL SERVICES REVENUE INDEX NUMBER**

- |   |   |
|---|---|
| 1. Less than \$100,000                  | 6. \$2 million to less than \$5 million   |
| 2. \$100,000 to less than \$250,000     | 7. \$5 million to less than \$10 million  |
| 3. \$250,000 to less than \$500,000     | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million   | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater               |

**12. AUTHORIZED REPRESENTATIVE**

The foregoing is a statement of facts.

a. SIGNATURE



b. DATE

February 25, 2011

c. NAME AND TITLE

Kart Vaith, P.E., BCEE, Senior Vice President

**ARCHITECT – ENGINEER QUALIFICATIONS**

1. SOLICITATION NUMBER (if any)

101-0120-CN (AM)

**PART II – GENERAL QUALIFICATIONS**

(If a firm has branch offices, complete for each specific branch office seeking work.)

2a. FIRM (OR BRANCH OFFICE) NAME

CDM

3. YEAR ESTABLISHED

1947

4. DUNS NUMBER

05-599-0261

2b. STREET

3050 Post Oak Boulevard, Suite 300

5. OWNERSHIP

2c. CITY

Houston

2d. STATE

TX

2e. ZIP CODE

77056

a. TYPE

Corporation

b. SMALL BUSINESS STATUS

Large Business

6a. POINT OF CONTACT NAME AND TITLE

Christopher G. Canonico, Vice President

6b. TELEPHONE NUMBER

(713) 423-7300

6c. E-MAIL ADDRESS

CanonicoCG@cdm.com

7. NAME OF FIRM (if block 2a is a branch office)

CDM

8a. FORMER FIRM NAME(S) (If any)

Camp Dresser &amp; McKee

8b. YR. ESTABLISHED

1947

8c. DUNS NUMBER

05-599-0261

**9. EMPLOYEES BY DISCIPLINE**

a. Function Code	b. Discipline	c. No. of Employees		a. Profile Code	b. Experience	c. Revenue Index Number (see below)
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29	GIS Specialist	107	18	P06	Planning (Site, Installation and Project)	8
30	Geologist	139	15	P08	Plumbing and Piping Design	8
32	Hydraulic Engineer	110	12	R06	Rehabilitation (Bldgs.; Structures; Facil.)	10
34	Hydrologist	78	17	R11	Rivers; Canals; Waterways; Flood Cntrl.	8
42	Mechanical Engineer	54	12	S04	Sewage Collection, Treatment, Disposal	10
47	Planner	121	25	S05	Soils and Geologic Studies; Foundations	9
52	Sanitary Engineer	105	16	S07	Solid Wastes; Incineration; Landfill	8
57	Structural Engineer	59	16	S09	Structural Design	7
58	Technician	421	53	S13	Stormwater Handling Facilities	9
62	Water Resources Engineer	108	14	T02	Testing & Inspection Services	8
	Other Employees	768	180	W02	Water Res.; Hydrology; Ground Water	9
	<b>Total</b>	<b>4,383</b>	<b>707</b>	<b>W03</b>	<b>Water Supply, Treatment, Distribution</b>	<b>10</b>

**10. PROFILE OF FIRM'S EXPERIENCE AND ANNUAL AVERAGE REVENUE FOR LAST 5 YEARS****11. ANNUAL AVERAGE PROFESSIONAL SERVICES REVENUES OF FIRM FOR LAST 3 YEARS**  
(Insert revenue index number shown at right)

a. Federal Work	10
b. Non-Federal Work	10
c. Total Work	10

**PROFESSIONAL SERVICES REVENUE INDEX NUMBER**

- |   |   |
|---|---|
| 1. Less than \$100,000                  | 6. \$2 million to less than \$5 million   |
| 2. \$100,000 to less than \$250,000     | 7. \$5 million to less than \$10 million  |
| 3. \$250,000 to less than \$500,000     | 8. \$10 million to less than \$25 million |
| 4. \$500,000 to less than \$1 million   | 9. \$25 million to less than \$50 million |
| 5. \$1 million to less than \$2 million | 10. \$50 million or greater               |

**12. AUTHORIZED REPRESENTATIVE**

The foregoing is a statement of facts.

a. SIGNATURE



b. DATE

February 25, 2011

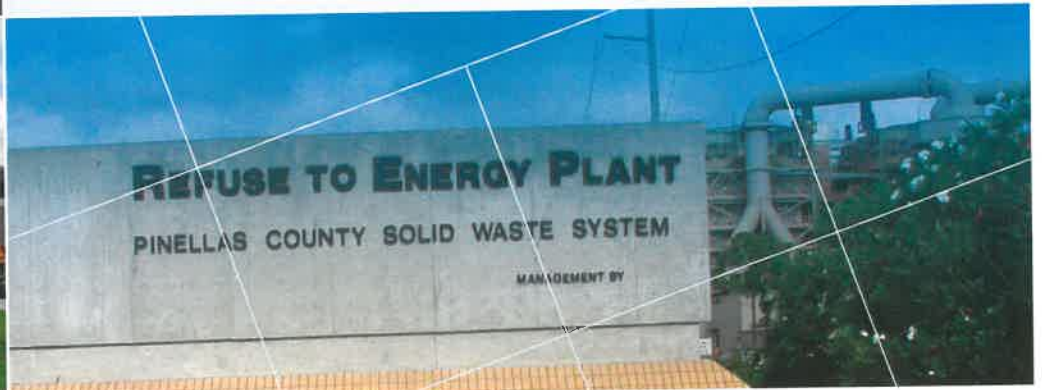
c. NAME AND TITLE

Kart Vaith, P.E., BCEE, Senior Vice President



## Tab 2

### Statements and Documentation







## Tab 2

### Statements and Documentation

CDM brings almost four decades of engineering experience in Florida. Through this experience, CDM has developed the depth, breadth, and diversity of multidisciplinary resources required to deliver high-quality, responsive engineering services to the County. Evidence of our credentials and licenses for the firm and our project staff are attached.

#### 2.1 Proof of Licenses/Certifications

Attached is a copy of CDM's State of Florida Board of Professional Engineers Certificate of Authorization.



Is authorized under the provisions of Section 471.022, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes

Expiration: 28-FEB-11  
Audit No: 22820112476

Certificate of Authorization  
DISPLAYAS REQUIRED BY LAW

CA No:  
20

#### 2.2 State of Florida Business Licensure and Professional Certifications and Registrations

CDM is incorporated in the State of Massachusetts, and became authorized to do business in the State of Florida in 1974. A copy of CDM's Corporation Certification, issued by the Secretary of State, is attached.

As confirmed by the Secretary of State website <http://ccfcorp.dos.state.fl.us/index.html>, CDM's certification is in active status.

#### 2.3 Proof of Corporate Registration

Attached is proof of corporate registration.

## State of Florida Department of State

I certify from the records of this office that CAMP DRESSER & MCKEE INC is a corporation organized under the laws of Massachusetts, authorized to transact business in the State of Florida, qualified on April 23, 1974.

The document number of this corporation is 832235.

I further certify that said corporation has paid all fees due this office through December 31, 2011, that its most recent annual report was filed on January 31, 2011, and its status is active.

I further certify that said corporation has not filed a Certificate of Withdrawal.

Given under my hand and the Great Seal of Florida, at Tallahassee, the Capitol, this the First day of February, 2011



*[Signature]*  
Secretary of State

Authentication ID: 100192881061-020111-832235  
To authenticate this certificate, visit the following site, enter this ID, and then follow the instructions displayed.  
<https://efile.sunbiz.org/certauthver.html>



William Francis Galvin  
Secretary of the Commonwealth

*The Commonwealth of Massachusetts*  
*Secretary of the Commonwealth*  
*State House, Boston, Massachusetts 02183*

December 6, 2010

TO WHOM IT MAY CONCERN:

I hereby certify that according to the records of this office,

**CAMP DRESSER & MCKEE INC.**

is a domestic corporation organized on December 29, 1970, under the General Laws of the Commonwealth of Massachusetts.

I further certify that there are no proceedings presently pending under the Massachusetts General Laws Chapter 156D section 14.21 for said corporation's dissolution; that articles of dissolution have not been filed by said corporation; that, said corporation has filed all annual reports, and paid all fees with respect to such reports, and so far as appears of record said corporation has legal existence and is in good standing with this office.



Processed By: sam

In testimony of which,  
I have hereunto affixed the  
Great Seal of the Commonwealth  
on the date first above written.

*William Francis Galvin*  
Secretary of the Commonwealth

## 2.4 Staff Licenses

Below are CDM staff licenses.

### State of Florida Board of Professional Engineers

**William Robert Crellin JR, P.E.**

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes  
Expiration: 28-FEB-11  
Audit No: 228201124470  
P. E. Lic. No: 46574  
DISPLAY AS REQUIRED BY LAW

### TEXAS BOARD OF PROFESSIONAL ENGINEERS

**This card certifies that  
TONY RAY ST. CLAIR**

**is a Licensed Professional Engineer.**

P.E. License Number 58935 Status ACTIVE Expiration Date 9/30/2011

*Long*  
P.E. Signature

*Long*  
TBPE Executive Director

THE BOARD OF TRUSTEES OF THE

Institute of Professional Environmental Practice

**Daniel E. Strobridge**

February 23, 1998

**Qualified Environmental Professional (QEP)**

Having satisfied the requirements of the Institute's Application and Examination Standards, and in accordance with its bylaws, the above named individual is therefore entitled to the rights and privileges appertaining to the QEP credential. This certificate is given under the seal of the Institute and witnessed by the undersigned. The above named individual must maintain this credential annually and be recertified every five years.

PRESIDENT

SECRETARY

00980007



### State of Florida Board of Professional Engineers

**Cynthia L. Stellmack, P.E.**

IS LICENSED AS A PROFESSIONAL ENGINEER UNDER CHAPTER 471, FLORIDA STATUTES  
EXPIRATION: 2/28/2013  
AUDIT NO: 228201302273  
P.E. Lic. No: 37972

### State of Florida Board of Professional Engineers

**S. John Kontor, P.E.**

IS LICENSED AS A PROFESSIONAL ENGINEER UNDER CHAPTER 471, FLORIDA STATUTES  
EXPIRATION: 2/28/2013  
AUDIT NO: 228201308854  
P.E. Lic. No: 36823

### State of Florida Board of Professional Engineers

**Anthony Michael Lore Jr., P.E.**

IS LICENSED AS A PROFESSIONAL ENGINEER UNDER CHAPTER 471, FLORIDA STATUTES  
EXPIRATION: 2/28/2013  
AUDIT NO: 228201310608  
P.E. Lic. No: 60373

### State of Florida Board of Professional Engineers

**Timothy Andrew Verwey, P.E.**

IS LICENSED AS A PROFESSIONAL ENGINEER UNDER CHAPTER 471, FLORIDA STATUTES  
EXPIRATION: 2/28/2013  
AUDIT NO: 228201304852  
P.E. Lic. No: 50947

### State of Florida Board of Professional Engineers

**Joseph Paul Curro, P.E.**

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes  
Expiration: 28-FEB-11  
Audit No: 228201121649  
P. E. Lic. No: 58416  
DISPLAY AS REQUIRED BY LAW

### State of Florida Board of Professional Engineers

**John Guy Ladrer, P.E.**

Is licensed as a Professional Engineer under Chapter 471, Florida Statutes  
Expiration: 28-FEB-11  
Audit No: 228201123707  
P. E. Lic. No: 37969  
DISPLAY AS REQUIRED BY LAW

### State of Florida Board of Professional Engineers

**Valerie Patricia Going, P.E.**

IS LICENSED AS A PROFESSIONAL ENGINEER UNDER CHAPTER 471, FLORIDA STATUTES  
EXPIRATION: 2/28/2013  
AUDIT NO: 228201307588  
P.E. Lic. No: 58037

### State of Florida Board of Professional Engineers

**Aamod S. Sonawane, P.E.**

IS LICENSED AS A PROFESSIONAL ENGINEER UNDER CHAPTER 471, FLORIDA STATUTES  
EXPIRATION: 2/28/2013  
AUDIT NO: 228201301752  
P.E. Lic. No: 62526

AP# 5375993 STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION  
BOARD OF ARCHITECTURE & INTERIOR DESIGN SEQ# L10121300741

DATE	BATCH NUMBER	LICENSE NBR
12/13/2010	108141382	AR0010272

The ARCHITECT  
Named below is LICENSED  
Under the provisions of Chapter 488, FS  
Expiration date: FEB 28, 2013

REID, JOHNSTONE N JR  
2314 EDMONTON COURT  
CLERMONT, FL 34711

CHARLIE CRIST  
GOVERNOR

CHARLIE LYNN  
SECRETARY

DISPLAY AS REQUIRED BY LAW

AP# 5375993 STATE OF FLORIDA  
DEPARTMENT OF BUSINESS AND PROFESSIONAL REGULATION  
BOARD OF ARCHITECTURE & INTERIOR DESIGN SEQ# L10121300741

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2314 EDMONTON COURT  
CLERMONT, FL 34711

CHARLIE CRIST  
GOVERNOR

CHARLIE LYNN  
SECRETARY

DISPLAY AS REQUIRED BY LAW

## 2.6 Certificate of Florida Small and Minority Business

While CDM is neither a Minority Business Enterprise (MBE) nor a Disadvantaged Business Enterprise (DBE), CDM is committed to utilizing M/DBE firms in meaningful project roles when practical to enhance the opportunities for M/WBE firms to gain the experience that ensures long-term business viability. We believe that our philosophy and commitment aligns with goals of our clients.



CDM ranked #37 on the 18<sup>th</sup> Annual "Top 50 Employers" in Minority Engineer Magazine.

CDM recognizes that the County shares this commitment to involve M/DBE firms in successful project roles.

While we have not currently defined specific roles for M/DBE firms for work under this contract, we have identified a number of M/DBE firms offering a wide range of potential support services that have successfully completed project assignments for CDM in the past. As the County requests the services of CDM for an assignment, we will work closely with your staff to identify the appropriate M/DBE participants for that assignment.

## 2.7 Office Located in Pinellas, Manatee, Hillsborough, or Pasco Counties

CDM maintains an office in Hillsborough County and we have attached the business tax receipt for our nearby Tampa office.

CDM has identified Officer-in-Charge Daniel E. Strobridge, QEP, Vice President and Project Manager William R. Crellin, Jr., P.E. to lead our team. Both Mr. Strobridge and Mr. Crellin are located in CDM's Tampa office, located at:

1715 North Westshore Boulevard, Suite 875  
Tampa, FL 33607-3919  
Tel: 813.281.2900  
Fax: 813.288.8787

This location is less than 20 miles from the Pinellas County offices (Figure 2.7-1).



Figure 2.7-1: CDM's Tampa office is located 15 miles from the Pinellas County offices.

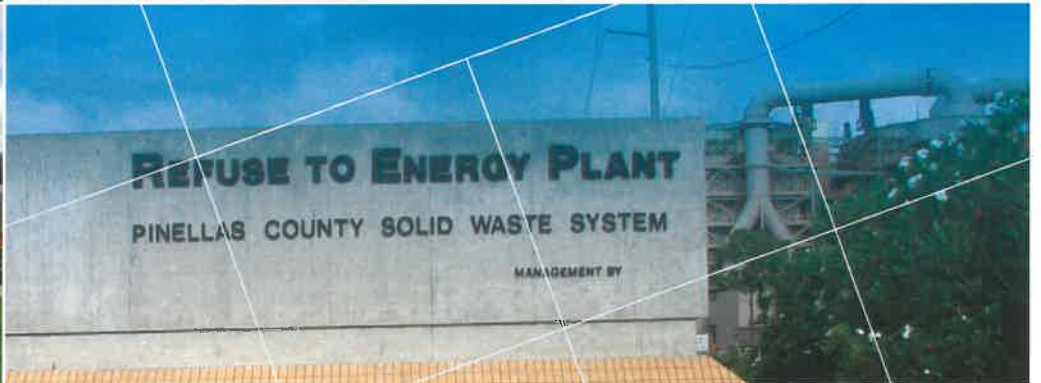
2010-2011 HILLSBOROUGH COUNTY BUSINESS TAX RECEIPT					EXPIRES 9-30-2011 FOLIO NO.		
FACILITIES OR MACHINES	0	ROOMS	0	SEATS	0	EMPLOYEES	0
OCC. CODE	280.026	BUSINESS TYPE	PROFESSIONAL - OFFICE	RENEWAL		36117.0000	
						H. WASTE SURCHARGE	TAX
							30.00
<b>2010-2011</b>							
BUSINESS LOCATION	1715 N WESTSHORE BLVD 875 TAMPA 33607						
NAME	CAMP DRESSER & MCKEE INC						
MAILING ADDRESS	1715 N WESTSHORE BLVD 875 TAMPA FL 33607-0000						
<b>BUSINESS TAX RECEIPT</b>				DOUG BELDEN, TAX COLLECTOR 813-635-5200		PAID - 19577. - 85 08/10/2010 *** 30.00	
<small>HAS HERETOBY PAID A PRIVILEGE TAX TO ENGAGE IN BUSINESS, PROFESSION, OR OCCUPATION DESCRIBED HEREON</small>							
<small>THIS BECOMES A TAX RECEIPT WHEN VALIDATED.</small>							





## Tab 3

### Certificate(s) of Insurance





# Tab 3

## Certificate of Insurance

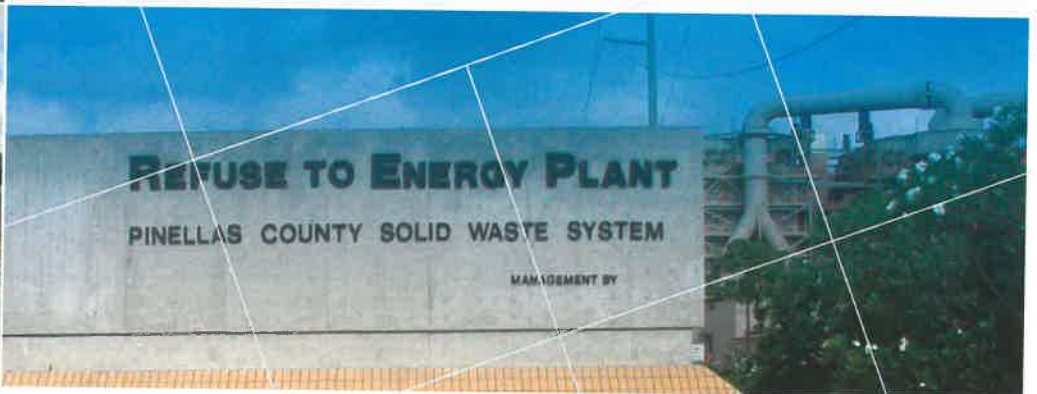
Attached is a copy of CDM's insurance certificate, illustrating compliance with the insurance requirements outlined in the County's RFP.

ACORD CERTIFICATE OF LIABILITY INSURANCE										DATE (MM/DD/YYYY) 02/08/2011																	
<p>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.</p> <p>IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).</p>																											
<b>PRODUCER</b> Aon Risk Services Northeast, Inc. Boston MA Office One Federal Street Boston MA 02110 USA						<b>CONTACT NAME:</b> PHONE (A/C No. Ext): (866) 283-7122 FAX (A/C No.): (847) 953-5390 <b>E-MAIL ADDRESS:</b> PRODUCER CUSTOMER ID #: 10518329																					
<b>INSURED</b> Camp Dresser & McKee Inc. ONE CAMBRIDGE PLACE 50 HAMPSHIRE STREET CAMBRIDGE MA 021390000 USA						<b>INSURER(S) AFFORDING COVERAGE</b> <table border="1"> <thead> <tr> <th>INSURER</th> <th>NAIC #</th> </tr> </thead> <tbody> <tr> <td>INSURER A: ACE Property &amp; Casualty Insurance Co.</td> <td>20699</td> </tr> <tr> <td>INSURER B: Chartis Specialty Insurance Company</td> <td>26883</td> </tr> <tr> <td>INSURER C: Zurich American Ins Co</td> <td>16535</td> </tr> <tr> <td>INSURER D: American Zurich Ins Co</td> <td>40142</td> </tr> <tr> <td>INSURER E: Lloyd's of London</td> <td>0005FI</td> </tr> <tr> <td>INSURER F:</td> <td></td> </tr> </tbody> </table>						INSURER	NAIC #	INSURER A: ACE Property & Casualty Insurance Co.	20699	INSURER B: Chartis Specialty Insurance Company	26883	INSURER C: Zurich American Ins Co	16535	INSURER D: American Zurich Ins Co	40142	INSURER E: Lloyd's of London	0005FI	INSURER F:			
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INSURER F:																											
<b>COVERAGES</b> <b>CERTIFICATE NUMBER:</b> 570041570046 <b>REVISION NUMBER:</b>																											
<p>THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS. Limits shown are as requested</p>																											
<b>INSR</b>	<b>TYPE OF INSURANCE</b>	<b>ADDL SUBR</b>	<b>POLICY NUMBER</b>	<b>POLICY EFF</b>	<b>POLICY EXP</b>	<b>LIMITS</b>																					
C	GENERAL LIABILITY		GL0837663215	01/01/2011	01/01/2012	<table border="1"> <tbody> <tr> <td>EACH OCCURRENCE</td> <td>\$2,000,000</td> </tr> <tr> <td>DAMAGE TO RENTED PREMISES (Ea occurrence)</td> <td>\$300,000</td> </tr> <tr> <td>MED EXP (Any one person)</td> <td>\$5,000</td> </tr> <tr> <td>PERSONAL &amp; ADV INJURY</td> <td>\$2,000,000</td> </tr> <tr> <td>GENERAL AGGREGATE</td> <td>\$4,000,000</td> </tr> <tr> <td>PRODUCTS - COMP/OP AGG</td> <td>\$4,000,000</td> </tr> </tbody> </table>						EACH OCCURRENCE	\$2,000,000	DAMAGE TO RENTED PREMISES (Ea occurrence)	\$300,000	MED EXP (Any one person)	\$5,000	PERSONAL & ADV INJURY	\$2,000,000	GENERAL AGGREGATE	\$4,000,000	PRODUCTS - COMP/OP AGG	\$4,000,000				
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C	AUTOMOBILE LIABILITY		BAP 8376631-15	01/01/2011	01/01/2012	<table border="1"> <tbody> <tr> <td>COMBINED SINGLE LIMIT (Ea accident)</td> <td>\$2,000,000</td> </tr> <tr> <td>BODILY INJURY (Per person)</td> <td></td> </tr> <tr> <td>BODILY INJURY (Per accident)</td> <td></td> </tr> <tr> <td>PROPERTY DAMAGE (Per accident)</td> <td></td> </tr> </tbody> </table>						COMBINED SINGLE LIMIT (Ea accident)	\$2,000,000	BODILY INJURY (Per person)		BODILY INJURY (Per accident)		PROPERTY DAMAGE (Per accident)									
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A	UMBRELLA LIAB	<input checked="" type="checkbox"/> OCCUR	M00527002	01/01/2011	01/01/2012	<table border="1"> <tbody> <tr> <td>EACH OCCURRENCE</td> <td>\$5,000,000</td> </tr> <tr> <td>AGGREGATE</td> <td>\$5,000,000</td> </tr> </tbody> </table>						EACH OCCURRENCE	\$5,000,000	AGGREGATE	\$5,000,000												
EACH OCCURRENCE	\$5,000,000																										
AGGREGATE	\$5,000,000																										
	<input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE <input type="checkbox"/> DEDUCTIBLE <input checked="" type="checkbox"/> RETENTION \$100,000		SIR applies per policy terms & conditions																								
D	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N	WC837663316	01/01/2011	01/01/2012	<table border="1"> <thead> <tr> <th></th> <th>WC</th> <th>STATU-TORY LIMITS</th> <th>OTH</th> </tr> </thead> <tbody> <tr> <td>E.L. EACH ACCIDENT</td> <td></td> <td></td> <td>\$1,000,000</td> </tr> <tr> <td>E.L. DISEASE-EA EMPLOYEE</td> <td></td> <td></td> <td>\$1,000,000</td> </tr> <tr> <td>E.L. DISEASE-POLICY LIMIT</td> <td></td> <td></td> <td>\$1,000,000</td> </tr> </tbody> </table>							WC	STATU-TORY LIMITS	OTH	E.L. EACH ACCIDENT			\$1,000,000	E.L. DISEASE-EA EMPLOYEE			\$1,000,000	E.L. DISEASE-POLICY LIMIT			\$1,000,000
	WC	STATU-TORY LIMITS	OTH																								
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E.L. DISEASE-EA EMPLOYEE			\$1,000,000																								
E.L. DISEASE-POLICY LIMIT			\$1,000,000																								
	<input checked="" type="checkbox"/> ANY PROPRIETOR / PARTNER / EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below																										
E	ENV PROF (E&O)		QK1101367	01/01/2011	01/01/2012	<table border="1"> <tbody> <tr> <td>occurrence USD</td> <td>\$3,000,000</td> </tr> <tr> <td>Aggregate USD</td> <td>\$3,000,000</td> </tr> </tbody> </table>						occurrence USD	\$3,000,000	Aggregate USD	\$3,000,000												
occurrence USD	\$3,000,000																										
Aggregate USD	\$3,000,000																										
<b>DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES</b> (Attach ACORD 101, Additional Remarks Schedule, if more space is required) Evidence of Insurance																											
<b>CERTIFICATE HOLDER</b>						<b>CANCELLATION</b>																					
For proposal purposes only c/o CDM Cambridge MA 02139 USA						SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. <b>AUTHORIZED REPRESENTATIVE</b> <i>Aon Risk Services Northeast Inc.</i>																					

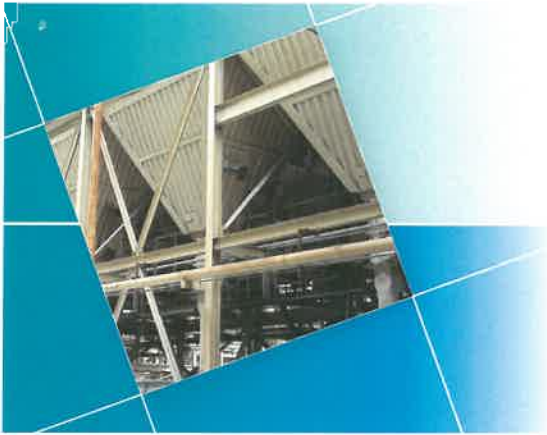


## Tab 4

### Key Personnel Statement







## Tab 4

### Key Personnel Statement

From our three decades-long working relationship with Pinellas County, we know that you place a high priority on experience and seamless communication between project manager and the team, as well as between disciplines and client staff. We also know that you place a high priority on easy access to local staff. Our team's home base for this project is CDM's office in Tampa. Because of the proximity, our key staff members can travel at a moment's notice should any project issues arise.

CDM's approach to providing WTE consulting engineering services incorporates a management plan premised on the streamlined delivery of the right people to perform the assigned task. CDM's proposed project team was assembled specifically to encompass all of the disciplines necessary to fully meet Pinellas County's expectations and requirements,

providing the flexibility to match the appropriate professionals possessing the appropriate skill sets with the appropriate assignment.

Innovative thinking comes from people who combine technical expertise with a deep bench of relevant, hands-on experience. CDM's project manager, William R. Crellin, Jr., P.E. is well acquainted with the

mechanical elements and performance of the Pinellas County WTE facility itself. Mr. Crellin had a lead role in performing the initial facility assessment and has conducted regular monthly facility inspections, overseen maintenance of the ongoing punch list and reviewed monthly facility operating data since



the current operator took over operation of the facility in May 2007.

He was also the on-site throughout the construction of the Lake County Resource Recovery Facility, supervised start-up of the facility in 1991, and managed operations and maintenance of the facility for several years. Other members of CDM's assigned staff have performed countless inspections of WTE facilities. CDM has provided permitting, design review and construction monitoring for installation of several green field WTE projects, as well as existing facility air pollution control retrofits and facility expansions. The unmatched Florida-based experience of CDM's project team will be a great asset to Pinellas County.

### 4.1 Commitment to the County

CDM is committed to making the personnel we have identified in our proposal available to the County for the duration of each task order that comes under this continuing contract. We understand that if we are unable to produce the staff we have listed herein, the County has the right to dismiss CDM from the project.

CDM has built its reputation of being a client focused firm by being responsive to the ever-changing needs of its clients. CDM has implemented communications protocols that guarantee that our clients can reach a CDM staff member familiar with their projects, even if the designated project manager is unavailable due to illness, vacation, or any other reason. These protocols include having staff members coordinate leave (planned and unplanned) with those who will act in their place while they are unavailable. These protocols include forwarding emails and telephone calls to designated replacements. In addition to providing continuity of staff, CDM delivers on clients' needs by making staff available for critical meetings on short notice.

Pinellas County can have confidence in selecting CDM for this waste-to-energy engineering consulting services agreement. Our focus throughout the duration of this contract will be on providing the County with the most innovative, sustainable, and cost-effective engineering solutions possible.

The success of the County's projects will rely on timely and accurate guidance from our team of established experts with superior teamwork ability. Under the leadership of our Officer-in-Charge Dan Strobridge, CDM team offers the County the following key features:

**Continuity** – CDM's project team will be lead by two seasoned WTE veterans, Dan Strobridge and Bill Crellin, both located in our Tampa office. Combined, these two individuals have over 50 years of experience in the procurement,

permitting, construction, operations and maintenance, financing, and contract administration of WTE facilities and operating contracts. Both individuals have been involved continuously with the Pinellas County WTE facility since 2004 beginning with the operator re-procurement project in 2004 and since 2007 providing WTE independent consulting engineering services.

**Specialized Understanding** – Many of these staff members have provided services over the years for the Pinellas WTE facility. CDM offers the County the strongest combination of local, regional and national professional resources, experience, and capabilities to support this contract, organized to ensure responsive and cost effective delivery of quality support. The strategically located professionals we have selected for this program are proven leaders, managers, and waste-to-energy and solid waste specialists. The personnel selected to support the County are representative of the strength that CDM offers.

**Commitment to Quality and Innovation** – Our technical approach to planning and executing services is based upon our extensive experience with providing similar services to other operating WTE plants. In the areas of annual inspections and reporting, our inspections are planned and coordinated with scheduled facility outages (i.e., maintenance periods). This allows CDM's chemical, environmental, mechanical, and electrical engineers and other experts to inspect the internals of the boilers, steam drums, turbine generator, electrical gear and other critical facility equipment. To ensure that our inspections are comprehensive, CDM uses checklists organized by functional facility area. These have been developed based upon our experience performing such services, and successfully utilized in the field. Examples of these functional areas include civil/site areas, refuse delivery and storage, steam generation, air pollution controls, ash processing and metal recovery, electrical generation, and electrical service. A standard evaluation system is employed to assign ratings to the various systems and their components.

**Effective Communication Skills** – CDM understands that the nature of the various work assignments will require effective communication skills, developing a clear understanding of each issue and conveying the required information to County staff and stakeholders in a timely fashion.

**Location of Project Staff** – Our local task leaders and design teams are ready to quickly initiate project execution, with ample back-up staff to maintain schedules under any circumstance.

**Responsive and Responsible** – CDM staff will be responsive and responsible to the County in all matters related to the management and completion of the work under this contract. Bill Crellin will take responsibility for the development and negotiation of work authorizations, contract administration, assignment of staff, and quality control.

**Project Management Tools** – CDM has in place project management tools to support project monitoring for schedule adherence, budget maintenance, and quality control (QC) and achievement of subcontracting goals.

## 4.2 Project Organizational Chart

CDM prides itself on strong client service, which is based on delivering the desired product and our responsiveness to client needs. The selection of our project team demonstrates our understanding of the County's needs and goals for this contract and exemplifies our philosophy of client service—to "Listen.Think.Deliver."

An organization chart illustrating the lines of responsibility is included in **Figure 4.2-1** and Standard Form 330 Section D. Please refer to Standard Form 330 Section E for project team resumes.

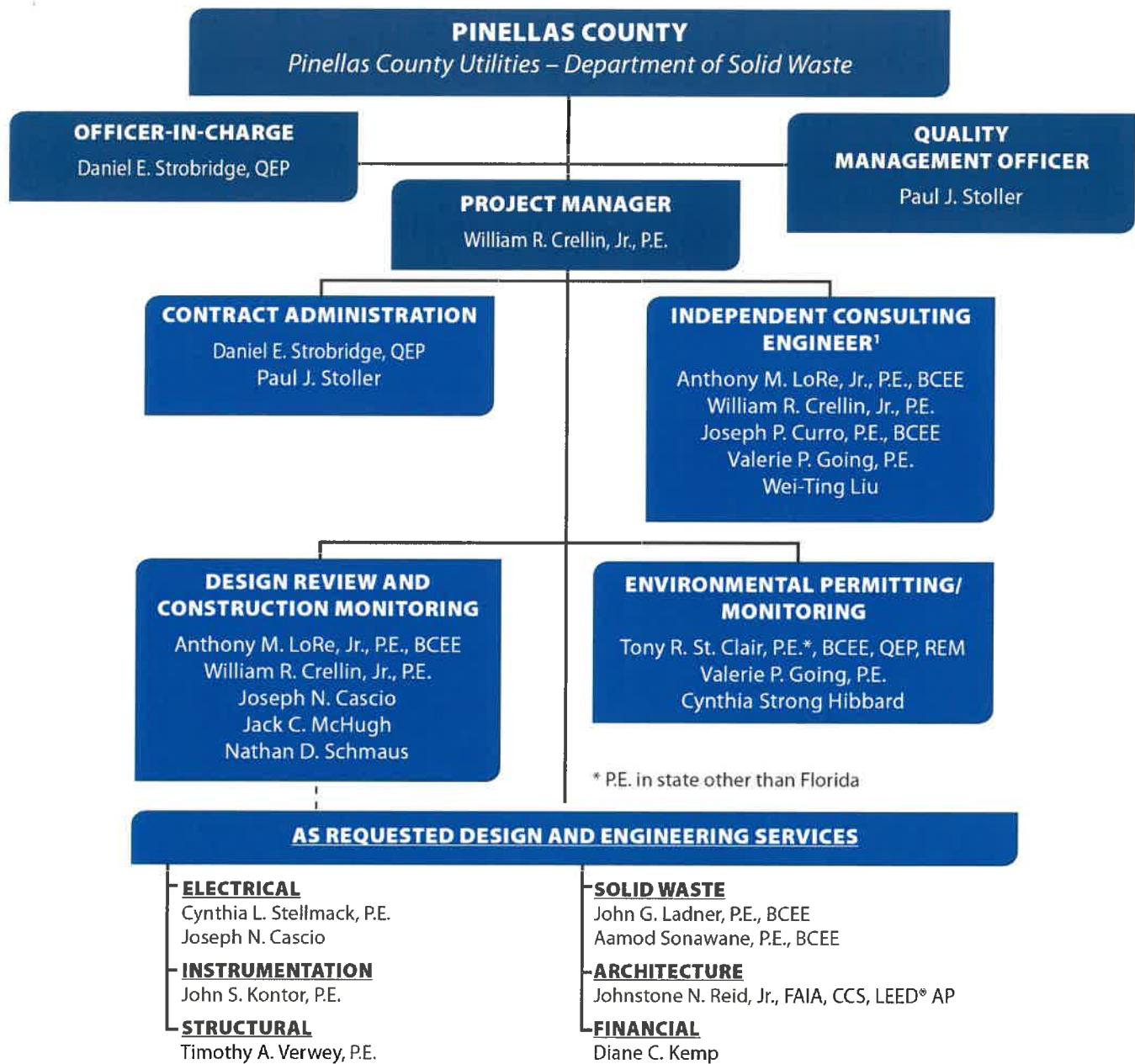
## 4.3 Project Team

CDM is committed to assigning the right resources to successfully complete the specific assignments requested by Pinellas County. All of CDM's proposed staff for this contract are currently providing the same services to Pinellas County under our existing contract which provides a seamless transition and maintains valuable historical knowledge. CDM's proposed project manager, Mr. Crellin is extremely familiar with the Pinellas County Waste-to-Energy Facility. CDM's Mr. Crellin is part of CDM's project team serving Pinellas County with ongoing WTE consulting services.

**William R. Crellin, Jr., P.E.**  
**Project Manager; Independent**  
**Consulting Engineer; Design Review**  
**and Construction Monitoring**

Mr. Crellin has extensive mechanical engineering experience including construction, start-up, and operations and maintenance of WTE facilities. As previously mentioned, Mr. Crellin has been involved continuously with the Pinellas County WTE facility since 2004 beginning with the operator re-procurement project in 2004 and since 2007 providing WTE independent consulting engineering services. He had a lead role in performing the initial Pinellas County facility assessment and has conducted regular monthly facility inspections, overseen maintenance of





1. This includes performance of the following activities: engineering consultations for operation and maintenance activities/issues; engineering studies/reports; acting as the Consulting Engineer per the Service Agreement between Pinellas County and Vedia ES Pinellas, Inc.; periodic inspections; attendance at periodic meetings.

Figure 4.2-1: Organizational chart.

the ongoing punch list and reviewed monthly facility operating data since the current operator took over operation of the facility in May 2007.

Prior to joining CDM, he was regional manager of maintenance and engineering for Covanta Energy (formerly Ogden Martin Systems), where he oversaw maintenance activities and engineering modifications for six WTE facilities in Florida and Michigan. Mr. Crellin was instrumental in developing the Request for Proposal for the new O&M Contract at the Pinellas County WTE facility and manages CDM's project team serving

as the Independent Consulting Engineer for Pasco County and Hillsborough County Solid Waste Departments.

**Daniel Strobridge, QEP**  
**Officer-in-Charge/Project Director;**  
**Contract Administration**

Mr. Strobridge has almost 35 years of experience in solid waste management and resource recovery at the local, state, and regional levels. He specializes in solid





waste management/WTE facility planning and implementation, disposal and vendor procurement and contract negotiations, environmental assessments, environmental regulation, and resource management. He is a nationally recognized expert in the WTE field and has managed a wide variety of solid waste and resource recovery projects. Mr. Strobridge oversees CDM's project team serving Pinellas County. He also managed the competitive re-procurement of a new contract operator for the 3,000 tpd Pinellas County, FL WTE facility. This was the first competitive re-procurement project for a WTE facility in the US and led to the development of the latest generation of service agreements. Mr. Strobridge has served as technical director for operations monitoring and performance evaluations for the City of Tampa's McKay Bay refuse-to-energy facility, as well as the Hillsborough, Pasco, and Bay Counties WTE facilities in Florida, and the Foster Wheeler resource recovery facility in Charleston County, South Carolina.

#### **Paul J. Stoller**

##### **Quality Management Officer; Contract Administration**

Mr. Stoller provides expert consultation in privatization, procurement, and financial feasibility for CDM projects throughout the United States and overseas. He has practiced engineering in the field of solid waste management since 1973 and has directed the RFP preparation and procurement process for solid waste facilities and operating contracts across the United States. Mr. Stoller has been responsible for the implementation (RFQ/RFP and contracts) of six operational WTE facilities with a combined processing capacity of almost 6,000 tpd and a combined construction cost of more than \$500 million. He has also issued RFQ/RFP documents (including contracts) for contract operation of material recovery facilities, transfer stations, landfills, water treatment facilities and wastewater treatment facilities. He is a recognized expert in the field of WTE implementation, has published more than two dozen papers in the field and has been responsible for feasibility studies for more than \$1 billion in debt issuance for solid waste projects. Mr. Stoller led the development of Pinellas County's RFQ and RFP including the new O&M Contract and Construction Agreement for the re-procurement of a contract operator.



#### **Anthony M. LoRe, Jr., P.E., BCEE**

##### **Independent Consulting Engineer; Design Review and Construction Monitoring**

Mr. LoRe is a combustion and air-pollution control engineer with 25 years of experience in WTE field, during which time has been involved in more than 30 different



WTE projects throughout North America and Asia. He has contributed to the successful development and implementation of seven large-scale WTE facilities with capacities ranging from 600 tpd to 3,000 tpd. Additionally, Mr. LoRe has analyzed air pollution control upgrades at several WTE facilities that were required to meet new federal and state air emission regulations. Mr. LoRe was intimately involved with the facility assessments, capital projects specifications and technical portions of the Pinellas County's WTE operator vendor re-procurement RFP and new O&M Contract. He also served as the lead WTE specialist on the recently completed Performance Audit for the System and as a result has a good understanding of the current performance and condition of the System's WTE facility. Through his past work with Pinellas County, Mr. LoRe has developed a successful working relationship with Pinellas County's staff and is committed to working in partnership with County staff.

#### **Joseph P. Curro, P.E., BCEE**

##### **Independent Consulting Engineer**

As a project manager and senior design engineer for municipal facilities, Mr. Curro's work has encompassed studies, design projects, construction, operations assistance, and system assessments. His project assignments with CDM have involved planning, analysis, and design for numerous waste management projects including several WTE facilities. As a project manager and senior design engineer for solid waste management systems, Mr. Curro's work has encompassed collection, storage, recycling, and disposal systems using a multitude of technologies. His background includes studies, design projects, construction, operations assistance, and system assessments. He has served as project manager and/or senior systems design engineer for over 35 landfill gas collection and utilization systems. In addition, Mr. Curro has over 30 years of experience in applying similar technology to soil vapor extraction, digester gas combustion and use, and industrial fume incineration projects.



#### **Valerie P. Going, P.E.**

##### **Independent Consulting Engineer; Environmental Permitting/Monitoring**

Ms. Going is an environmental engineer with experience in solid waste and waste-to-energy facility management, site construction, facility inspections, and landfill design and permitting. She is part of CDM's project team serving as the Independent Consulting Engineer for Pinellas County. Her tasks include site inspection, boiler and equipment inspections, maintenance of the facility ongoing punch list, and attendance at monthly





operations meetings. She also provides services as a project engineer for the construction improvements at the Pinellas County WTE Facility. Her tasks include construction oversight monitoring, review of the design documents, evaluation of requests for information (RFIs), resolution of design issues, attendance at weekly construction meetings, and review of Application for Payments to ensure compliance with the Construction Agreement.

#### **Wei-Ting Liu**

##### **Independent Consulting Engineer**

An environmental engineer, Ms. Liu is experienced in permitting landfill operations, transfer station operations, and inspection of waste management facilities, as well as Phase II site assessments, coordinating well installations, soil sampling, and related regulatory interpretation. Ms. Liu is serving as project engineer for annual inspection reports of the Pasco, Hillsborough, and Pinellas Counties WTE facilities. Ms. Liu also provided field assistance for several Phase II environmental audits and data gap investigations of properties within an acquisition area in Tampa. Her duties included historical and regulatory database reviews, conducting field site investigations, and sampling activities. She also participated in the permitting, design, and construction of a 20-acre ash mono-cell landfill. Her responsibilities included responding to FDEP comments, running the HELP model, sizing the stormwater system, and reviewing the adherence of liner test results to construction quality assurance.



#### **Joseph N. Cascio**

##### **Design Review and Construction**

##### **Monitoring; Electrical**

Mr. Cascio has over 35 years of management experience in the areas of electric power production, distribution, industrial and commercial customer support, and energy conservation technology assessments. He is experienced in electrical systems planning, construction checkout and startup, equipment installation and maintenance, outdoor lighting assessments, energy conservation, electrical energy metering, project management, and renewable energy project development. He worked for over 30 years for the Tampa Electric Company (TEC) before providing services to CDM for the Pinellas County, Hillsborough County, and Pasco County waste-to-energy facilities.



#### **Jack C. McHugh**

##### **Design Review and Construction**

##### **Monitoring**

Mr. McHugh has field experience with waste-to-energy facilities, wastewater treatment plants, storm water management structures, and wetland restoration. As a construction inspector, Mr. McHugh observes and documents the contractor's job site activities to ensure that a quality product meeting the specifications is produced. In addition, he verifies quantities for monthly payment requests and provides sketches of progress onsite for record purposes. He generates detailed daily reports of activities, equipment, and personnel used. He also provides inspection and documentation to the engineer for submittal to the state for permitting, and supplies documentation as required in the permit and contract documents. Mr. McHugh is also experienced in all phases of landfill construction inspection. He has been responsible for all onsite aspects of geosynthetic liner system installations, inspection, training and quality control. He has kept detailed daily reports of activities, equipment, and personnel and has reviewed specifications, generated as built liner drawings, and performed liner testing and documentation during installation.



#### **Nathan D. Schmaus**

##### **Design Review and**

##### **Construction Monitoring**

Mr. Schmaus is a civil and environmental engineer. He has experience in landfill permitting, transfer station inspection, water quality monitoring reports for landfills, and waste-to-energy construction, performance testing, and inspection. Mr. Schmaus served as the resident project representative for the capital improvements at the Pinellas County WTE facility. This project included the replacement of the waterwalls, feed chutes, ash extractors, feed tables, grates, sifting hoppers, and other related components. As the resident project representative, Mr. Schmaus observes and documents the contractor's job site activities. He generates detailed daily reports of activities, equipment, and personnel used to the client and CDM project team. For the Hillsborough County WTE facility he was on the CDM project team tasked to observe the performance testing for newly constructed Boiler #4, including ash sampling, performance parameter monitoring, and utility usage.



**Tony R. St. Clair, BCEE, QEP, REM****Environmental Permitting/Monitoring**

Mr. St. Clair has 29 years of experience, specializing in air quality project management. He is an expert in air quality assessment, the development of air emission estimates and inventories, air dispersion modeling, regulatory analysis, air quality permit acquisition and compliance monitoring. He leads the collection and interpretation of field and laboratory data and the siting, installation, calibration, and operation of meteorological stations and ambient air monitoring equipment. In addition to his air quality evaluations, his extensive background covers all aspects of environmental engineering investigations. Mr. St. Clair currently provides environmental support to several solid waste resource recovery (waste-to-energy) facilities, including the Pinellas County WTE facility. He prepares and reviews environmental reports, oversees RATA and compliance test programs, and conducts landfill NMOC emission estimates. In addition, he prepares new source review and Title V operating permit applications in support of WTE facility expansions.

**Cynthia Strong Hibbard****Environmental Permitting/Monitoring**

Ms. Hibbard has almost 30 years of experience in air quality management. This includes obtaining air permits, assisting with air regulatory compliance, conducting emissions and dispersion modeling, control technology evaluations, air pollutant monitoring and sampling, environmental impact assessments, and noise studies. She manages projects with major air quality components and provides technical oversight and expert testimony on air quality issues. She is familiar with air quality regulations and state agencies throughout the country. She has also made presentations to industry groups, professional organizations, and citizens groups on how particular air quality rules and programs will affect them. She assisted the City of Pittsburgh, PA, in Title V deviation and compliance certification reporting at the Bellefield Boiler Plant and has assisted the City of Tampa with air permitting at their McKay Bay Resource Recovery Facility.

**Cynthia L. Stellmack, P.E.****Electrical**

Ms. Stellmack provides electrical engineering services for environmental facilities. She recently assisted Lee County by identifying a problem with the electrical system at the North Lee County WTP



when she visited the facility. The issue she discovered is a serious issue caused by a lack of coordination between the as-built drawings for the facility and what is actually in service. Her recent experience includes serving as electrical design engineer for plant improvements for the Pinellas County WTE and the expansion of the Hillsborough County WTE.

**John S. Kontor, P.E.****Instrumentation**

Mr. Kontor's 30 years of expertise as an I&C specialist has allowed him to experience all facets of SCADA design and implementation at large treatment plants, including a keen understanding of the complexities of integrating new HMI systems with existing instrumentation and making a smooth transition to new operating systems. Mr. Kontor served as the project manager for the computer-based instrumentation system design for a 20 mgd WWTP for Boca Raton and the City of Lakeland WTP process I&C system improvement project. He designed integrated process control computer and radio telemetry systems for WTPs and WWTPs in Orange County. Nationally, his project experience includes senior I&C engineer for Milwaukee's WWTP upgrades; project manager of SCADA design services for 200- and 120- mgd WWTPs in Columbus; SCADA design manager for the 144 mgd McCarron WTP and the 250 mgd Metro WWTP in St. Paul; SCADA design and implementation manager for a 240 mgd WTP in Kansas City, and SCADA master plan manager for a 225 mgd WTP in Virginia.

**Timothy A. Verwey, P.E.****Structural**

Mr. Verwey is a highly qualified structural engineer with over 23 years of experience. His knowledge extends to solid waste facilities, stormwater pump stations, concrete structures, various building structures, and concrete piers. The County will greatly benefit from his wide ranging experience—which extends to solid waste facilities and landfills. Mr. Verwey is also skilled in the use of various computer applications for the performance of structural engineering design and analyses. Mr. Verwey previously served as the structural engineer for the structural design portion of the Porter refuse transfer station in Orange County and for the Bee Ridge Landfill facility in Sarasota County. Mr. Verwey served as the project structural engineer for the design, construction, outfitting, start-up, performance testing, and permitting for the Arbennie Pritchett Water Reclamation Facility in Okaloosa County. Mr. Verwey's services included design of cast-in-place concrete structures, as well as several concrete masonry unit buildings.



**John G. Ladner, P.E., BCEE****Solid Waste**

Mr. Ladner is experienced in the management and supervision of various solid waste design and construction projects, including serving as lead solid waste practitioner, senior technical engineer, and engineer-of-record for the design, permitting, and construction of Class I landfills and other solid waste facilities, as well as landfill closures. In addition to providing quality assurance for solid waste permitting activities for Indian River, Pasco and Pinellas Counties, Florida, Mr. Ladner participated in the solid waste master planning projects for Alachua, Pasco, and St. Lucie Counties. He has extensive experience with the design and permitting of Class I landfills, having served as senior technical engineer for the permitting of new Class I cells in Pasco and Pinellas Counties, as project engineer for Class I landfill cell expansions in Palm Beach County, and the development of construction drawings for a Class I landfill in St. Lucie County.

**Aamod Sonawane, P.E., BCEE****Solid Waste**

Mr. Sonawane is an environmental engineer specializing in landfill engineering and other solid waste management practices. As CDM's solid waste projects manager for Pasco County, Mr. Sonawane has performed WTE Operation and Maintenance, Groundwater and Leachate Monitoring, Leachate Treatment Plant Equipment Bidding and other miscellaneous, as-needed tasks. Additionally, Mr. Sonawane participated in the solid waste master plan update for Pasco County. He has more than eight years of consulting experience that also includes stormwater design, as well as O&M manual preparation for pump stations. Mr. Sonawane continually works on various solid waste projects, including site master planning, WTE facilities' annual reports, landfill designs, and solid waste facility permitting. For this engagement, Mr. Sonawane will administer all matters related to the management and completion of work for the duration of this contract.

**Johnstone N. Reid, Jr., FAIA, CCS, LEED® AP****Architecture**

As a registered architect and LEED® Accredited Professional, Mr. Reid has over 30 years of diverse experience in the architectural field. Mr. Reid has extensive experience working with planning agencies and community groups and understands their concerns regarding the impact of the design on the environment and the character of the neighborhood. Mr. Reid's designs consistently demonstrate sensitivity to these concerns. In fact, he has overseen the design of several LEED® certified projects, including the operations building for the Babcock Ranch Water Treatment and Reclamation Facility; the operations building for the SWA of Palm Beach County; and the Civilian Personnel Administration Center for Fort Hood, Texas. Mr. Reid was the project manager and architect-of-record for Bay County's 7,000-square-foot ash management building at the WTE facility. The building was designed to store four days of accumulated ash and to allow for the indoor storage and loading of dump truck vehicles. In addition, Mr. Reid was the lead architect and architect-of-record for the programming and design of a new solid waste transfer station and administration building at the Palm City II Landfill site in Martin County. The facility design featured include a two-story transfer station building with two drop chutes, an adjacent two-story administration building, an emergency power supply system, and an isolated residential customer waste disposal area.

**Diane C. Kemp****Financial**

Ms. Kemp applies her experience in rate setting, special assessments, budget reviews, financial feasibility studies, and municipal accounting to a variety of solid waste and other public works project. In the solid waste arena, she has worked on Hillsborough County's resource recovery budget reviews for nearly ten years and recently completed developing a financial model of the County's solid waste system; prepared a full cost accounting and financial analysis for Bay County, Florida's solid waste system and strategic plan relative to the retrofit of their WTE facility; and assisted in documenting the condition of the Pinellas County Resource Recovery Facility, completing the re-procurement project, evaluating vendor proposals, and providing transition assistance. Ms. Kemp will assist with operations monitoring.

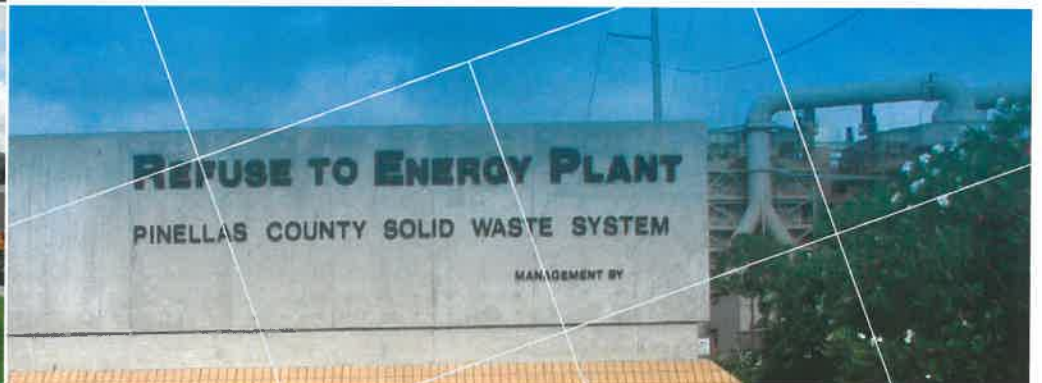






## Tab 5

### Required Forms







# Tab 5

## Required Forms

Provided in the following pages are the required forms for this submittal.


- Acknowledgment of Addenda
- W-9 Request for Taxpayer Identification Number and Certification
- Section D Vendor References: Provided on Form Section D
  - Vendor References are references for projects completed by CDM that are of a similar nature to the services requested by the County
- Page 1, Signature Page of the RFP
- Section F — Instructions for Bid Submittal.

**SECTION G - ADDENDA ACKNOWLEDGMENT FORM**

Proposal Title: WASTE TO ENERGY CONSULTING SERVICES  
Proposal Number: 101-0120-CN (AM)

~~PLEASE ACKNOWLEDGE RECEIPT OF ADDENDA FOR THIS RFP BY SIGNING AND DATING BELOW:~~

**ADDENDA NO.****SIGNATURE/PRINTED NAME****DATE RECEIVED**

N/A		

Note: Prior to submitting the response to this solicitation, it is the responsibility of the firm submitting a response to confirm if any addenda have been issued. If such document(s) has been issued, acknowledge receipt by signature and date in section above and return Addenda Acknowledgement Form with RFP. Failure to do so may result in being considered non-responsive or result in lowering the rating of a firm's proposal.

Information regarding Addenda issued is available on the Purchasing Department section of the County's website at, [www.pinellascounty.org/purchase/Current\\_Bids1.htm](http://www.pinellascounty.org/purchase/Current_Bids1.htm) , listed under category 'Current Bids'. You will be directed to DemandStar.com

# Request for Taxpayer Identification Number and Certification

Give form to the  
requester. Do not  
send to the IRS.

Print or type  
See Specific Instructions on page 2.

Name (as shown on your income tax return)

**CAMP DRESSER & McKEE INC.**

Business name, if different from above

Check appropriate box: ☐ Individual/Sole proprietor ☒ Corporation ☐ Partnership  
☐ Limited liability company. Enter the tax classification (D=disregarded entity, C=corporation, P=partnership) ▶ .....  
☐ Other (see instructions) ▶

☒ Exempt  
payee

Address (number, street, and apt. or suite no.)

**ONE CAMBRIDGE PLACE, 50 HAMPSHIRE STREET**

City, state, and ZIP code

**CAMBRIDGE, MA 02139**

Requester's name and address (optional)

List account number(s) here (optional)

## Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on Line 1 to avoid backup withholding. For individuals, this is your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the Part I instructions on page 3. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN* on page 3.

**Note.** If the account is in more than one name, see the chart on page 4 for guidelines on whose number to enter.

Social security number

or

Employer identification number

04

2473650

## Part II Certification

Under penalties of perjury, I certify that:

1. The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me), and
2. I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding, and
3. I am a U.S. citizen or other U.S. person (defined below).

**Certification instructions.** You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the Certification, but you must provide your correct TIN. See the instructions on page 4.

Sign  
Here

Signature of  
U.S. person ▶

Date ▶ February 24, 2011

## General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

### Purpose of Form

A person who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) to report, for example, income paid to you, real estate transactions, mortgage interest you paid, acquisition or abandonment of secured property, cancellation of debt, or contributions you made to an IRA.

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN to the person requesting it (the requester) and, when applicable, to:

1. Certify that the TIN you are giving is correct (or you are waiting for a number to be issued),
2. Certify that you are not subject to backup withholding, or
3. Claim exemption from backup withholding if you are a U.S. exempt payee. If applicable, you are also certifying that as a U.S. person, your allocable share of any partnership income from a U.S. trade or business is not subject to the withholding tax on foreign partners' share of effectively connected income.

**Note.** If a requester gives you a form other than Form W-9 to request your TIN, you must use the requester's form if it is substantially similar to this Form W-9.

**Definition of a U.S. person.** For federal tax purposes, you are considered a U.S. person if you are:

- An individual who is a U.S. citizen or U.S. resident alien,
- A partnership, corporation, company, or association created or organized in the United States or under the laws of the United States,
- An estate (other than a foreign estate), or
- A domestic trust (as defined in Regulations section 301.7701-7).

**Special rules for partnerships.** Partnerships that conduct a trade or business in the United States are generally required to pay a withholding tax on any foreign partners' share of income from such business. Further, in certain cases where a Form W-9 has not been received, a partnership is required to presume that a partner is a foreign person, and pay the withholding tax. Therefore, if you are a U.S. person that is a partner in a partnership conducting a trade or business in the United States, provide Form W-9 to the partnership to establish your U.S. status and avoid withholding on your share of partnership income.

The person who gives Form W-9 to the partnership for purposes of establishing its U.S. status and avoiding withholding on its allocable share of net income from the partnership conducting a trade or business in the United States is in the following cases:

- The U.S. owner of a disregarded entity and not the entity,



## SECTION D - VENDOR REFERENCES

**Proposal Title: WASTE TO ENERGY CONSULTING SERVICES**  
**Proposal Number: 101-0120-CN (AM)**

THE FOLLOWING INFORMATION IS REQUIRED IN ORDER TO REVIEW AND PROPERLY EVALUATE YOUR PROPOSAL.

COMPANY NAME: Camp Dresser & McKee Inc. (CDM)

LENGTH OF TIME COMPANY HAS BEEN IN BUSINESS: 64 years

BUSINESS ADDRESS: 1715 North Westshore Boulevard, Suite 875, Tampa, FL 33607-3919

HOW LONG IN PRESENT LOCATION: 27 years - Tampa; 64 years - Cambridge

TELEPHONE NUMBER: 813.281.2900 FAX NUMBER: 813.288.8787

TOTAL NUMBER OF CURRENT EMPLOYEES: 46 - Tampa FULL TIME 0 - Tampa PART TIME

NUMBER OF EMPLOYEES YOU PLAN TO USE TO SERVICE THIS CONTRACT: 19  
4,506 - Corporate 205 - Corporate

All references will be contacted by a County Designee via email, fax, mail or phone to obtain answers to questions, as applicable before an evaluation decision is made.

EITHER LOCAL COMMERCIAL OR GOVERNMENTAL REFERENCE(S) (PINELLAS COUNTY GOVERNMENT REFERENCES WILL NOT BE ACCEPTED) THAT YOU HAVE PREVIOUSLY PERFORMED SIMILAR CONTRACT SERVICES FOR:

All fields below must be completed

- |   |  |
|---|--|
| <p><b>1 Hillsborough County</b></p> <p>COMPANY NAME<br/>Tampa, FL</p> <p>CITY, STATE<br/>Barry M. Boldissar, Public Works Director</p> <p>CONTACT PERSON<br/>813.276.2900</p> <p>TELEPHONE<br/>813.276.2960</p> <p>FAX<br/>boldissarb@hillsboroughcounty.org</p> <p>EMAIL ADDRESS</p> | <p><b>2 City of Tampa</b></p> <p>COMPANY NAME<br/>Tampa, FL</p> <p>CITY, STATE<br/>Nancy McCann, Urban Environmental Coordinator</p> <p>CONTACT PERSON<br/>813.348.1118</p> <p>TELEPHONE<br/>813.348.1156</p> <p>FAX<br/>nancy.mccann@ci.tampa.fl.us</p> <p>EMAIL ADDRESS</p>  |
| <p><b>3 Pasco County</b></p> <p>COMPANY NAME<br/>New Port Richey, FL</p> <p>CITY, STATE<br/>John Gallagher, County Administrator</p> <p>CONTACT PERSON<br/>727.847.8115</p> <p>TELEPHONE<br/>727.815.7010</p> <p>FAX<br/>pcadmin@pascocountyfl.net</p> <p>EMAIL ADDRESS</p>           | <p><b>4 Metro Vancouver (Greater Vancouver Regional District)</b></p> <p>COMPANY NAME<br/>Vancouver, Canada</p> <p>CITY, STATE<br/>Chantal Babensee, Division Manager Residuals Management</p> <p>CONTACT PERSON<br/>604.436.6853</p> <p>TELEPHONE<br/>604.451.6180</p> <p>FAX<br/>chantal.babensee@metrovancover.org</p> <p>EMAIL ADDRESS</p> |

**SECTION F - INSTRUCTIONS FOR BID SUBMITTAL**

**Proposal Title: WASTE TO ENERGY CONSULTING SERVICES**  
**Proposal Number: 101-0120-CN (AM)**

All proposals shall be signed in ink by authorized principals of the firm.

Proposals are to be submitted in a sealed envelope. The face of the envelope shall indicate the RFP number, name, and address of the firm, and title of the proposal.

Proposals are to be submitted to Pinellas County Purchasing Department, 400 S. Ft. Harrison Avenue, Annex Bldg, 6th Floor, Clearwater, FL 33756 by the date and time indicated on the cover sheet.

**Proposals shall be submitted in one (1) original and SEVEN copies.**

**Electronic Payment (ePayables)**

The Board of County Commissioners (County) is offering faster payments. The County would prefer to make payment using credit card.

Would your company accept to participate in the ePayables credit card program?

Yes ☐

No ☒

For more information about ePayables credit card program please visit Purchasing Department website [www.pinellascounty.org/purchase](http://www.pinellascounty.org/purchase).

Camp Dresser & McKee Inc. (CDM)

Company Name

Signature

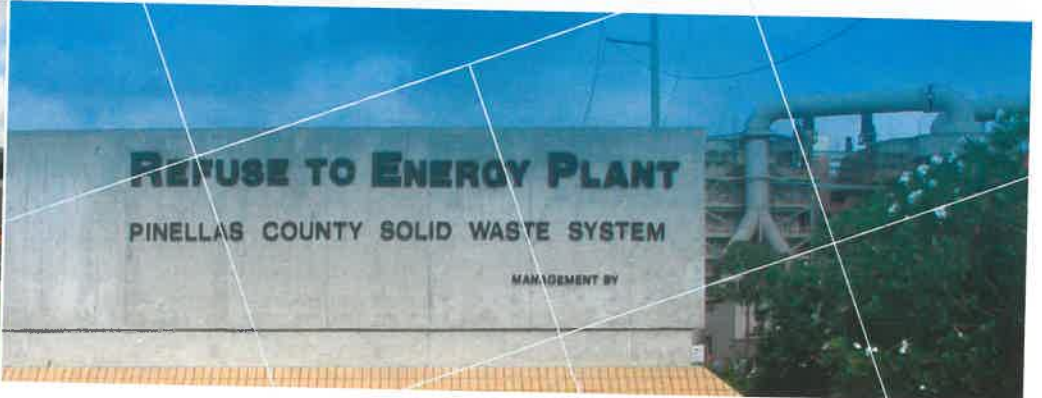
Daniel E. Strobridge, QEP

Printed Signature



## Tab 6

### Additional Information







# Tab 6

## Additional Information

### 6.1 Past Project Experience

The strength and uniqueness of CDM is best demonstrated by our expertise with similar projects. Of significance to this project is the fact that our core project team has worked together for over 20 years on WTE projects. Our experience globally in WTE projects includes feasibility studies, planning, design, permitting, and construction. The following are additional project descriptions for projects on which our team members have worked.

#### Engineer of Record Services for Waste-to-Energy Facility Tampa, Florida

CDM was engaged to provide comprehensive solid waste consulting services for the City of Tampa's McKay Bay refuse-to-energy facility.

The McKay Bay refuse-to-energy facility processes 1,000 tpd of solid waste. CDM's services for this project included operations monitoring, periodic evaluations of various plant components, and overall plant performance. The McKay Bay facility is owned by the City of Tampa but operated by a private contractor. CDM conducted annual inspections of the facility and prepared a report to the City on the performance of the contractor with respect to the satisfactory performance of maintenance, repair, and operations activities in accordance with the bond resolution that financed the project. The annual report evaluated performance of the facility during the previous year and contained the results of the annual inspection, any environmental testing conducted during the report year, and other information pertinent to the O&M of the facility pursuant to the operating contract and other contractual and regulatory requirements. For the retrofit of the facility required to meet



the requirements of the 1990 amendments to the CAA, CDM prepared the application to amend the operating permit, negotiated permit conditions with the Florida Department of Environmental Protection (FDEP), and obtained a permit modification that was in the best interest of the City. CDM tracked all regulations (federal, state, and local) pertinent to the retrofit and operation of the McKay Bay facility including those under development and/or in the process of review and revision. CDM personnel attended regulatory agency hearings and meetings and responded to requests for additional information (RFIs). CDM assisted in identifying and obtaining all permits necessary for the project.

#### Request for Proposal Assistance for McKay Bay Refuse-to-Energy Facility

##### Tampa, Florida

The City of Tampa retained CDM to assist in the development of a procurement approach for retrofit of the McKay Bay refuse-to-energy facility and to prepare architectural, foundation, and civil/



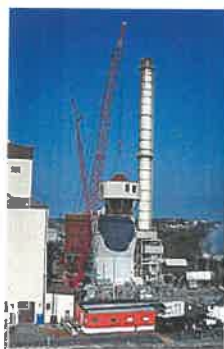
site evaluations. Previously operated as a municipal solid waste incinerator, the facility was retrofitted with WTE and APC technology in 1984 to become one of the area's first energy recovery facilities. The McKay Bay refuse-to-energy facility processes 1,000 tpd of solid waste. CDM prepared a foundation study that documented the basis of the design and configuration of the foundations beneath the facility's boiler and APC structures. In addition, a limited architectural study was done to determine whether any significant architectural modifications to the facility were necessary in conjunction with the retrofit. As consultant to the City and its lead procurement consultant, Malcolm Pirnie, CDM participated in procurement briefings and strategy sessions, reviewed procurement documents, prepared civil and structural components of the capital cost estimates, and prepared permitting, environmental guarantees, and facility environmental information for incorporation into the RFP. Once retrofit of the facility was complete, it provided significantly better performance environmentally than the existing facility.

#### Air Pollution Control Retrofit Review and Operations Monitoring Assistance

##### North Andover, Massachusetts

The North East Solid Waste Committee (NESWC), an association of 23 Massachusetts communities, retained CDM to evaluate new air emission control requirements to

be imposed on their North Andover mass-burn resource recovery facility as a result of recent changes to federal and state regulations and to serve as their engineer of record for the project. As part of this effort, CDM provided an evaluation of available technologies to accomplish the necessary control, as well as a recommendation to NESWC regarding the best technology for the facility owner to use. Specific services provided by CDM included:



- **Legislative Review** – Review of recent changes to federal and state air emission regulations and determination of additional emission control requirements likely to be imposed on the NESWC facility.
- **Facility Review** – Review of existing facility conditions, including current APC equipment and historical air emission test data.
- **Technology Review** – Based on the results of the legislative and facility reviews, CDM evaluated the available APC technologies capable of achieving the additional emission control required.
- **Preliminary Design Report and Cost Estimate** – Preparation of a preliminary design report and cost estimate of the recommended retrofit alternative.
- **Independent Consulting Engineer's Bond Feasibility Report.**
- **Retrofit design and construction reviews.**
- **Facility inspections, service agreement administration, and general oversight assistance.**

### Various Waste-to-Energy Facility Services

#### Bay County, Florida

CDM assisted Bay County with retrofitting its APC system to meet the CAA amendment requirements. This work entailed conducting negotiations with Westinghouse, reviewing equipment selection, and providing cost estimates.

CDM was engaged as Bay County's general solid waste management consultant. Under this contract, CDM performed several work assignments, including the development of an ash management plan to comply with state regulations and an analysis of the methodology used by Westinghouse to determine the higher heating value (HHV) of municipal solid waste delivered to its 510-tpd WTE facility. The latter project included evaluating Westinghouse's methodology for determining the HHV of the County's waste and analyzing the methodology in terms of industry standards.

The ash management project entailed collecting data, including existing environmental permits related to existing ash

management practices in the County and developing an ash residue management plan pursuant to the requirements of the FDEP.

CDM developed permit applications, design plans, and specifications for the expansion of the County's Steelfield landfill where ash from the WTE facility was disposed. CDM assisted the County in reviewing the service contract and operations during the transfer of the operating contract from CBS/Westinghouse to Monteney. Subsequently, CDM assisted the County in derating the facility below the 250 tpd threshold for large municipal waste combustors (MWCs) in order to defer retrofitting the facility's APCs. CDM's assistance included negotiations with the U.S. Environmental Protection Agency (EPA) and FDEP.

### Design of Ash Management Building

#### Bay County, Florida

The Bay County WTE plant was constructed to incinerate municipal solid waste and placed into service in 1988.

The plant was designed and constructed with an elevated, external ash drop. After the combustion process, the resultant ash was conveyed with mechanical drags to an area outside the building. At this point, it dropped from an elevation of approximately 18 feet above grade into solid waste roll-off containers. A loaded roll-off container can weigh between 10 and 16 tons. The roll-off containers were then loaded onto trucks and carried to Steelfield Road Landfill, and the ash was deposited into lined cells.



When stormwater contacts the ash, leachate is generated. This leachate is collected and handled on-site. The U.S. EPA and the FDEP regulate the entire solid waste incineration and landfill process. The plant was recently categorized as a small facility and needed to go through a retrofit to meet the requirements of the CAA. As part of the retrofit to meet CAA compliance, a building to manage the deposition of the ash was identified as a necessary component.

Because the ash loading operation is conducted outside the building, FDEP expressed concerns about fugitive emissions being released from the ash handling operation. County staff and Monteney Bay LLC, the contract operations firm for the County, recommended that the ash management building be expedited to provide two benefits to the process:

- **Reduction in leachate generation**
- **Operational efficiency of ash hauling to the Steelfield Road Landfill.**

This project included constructing a new ash management building adjacent to the existing incinerator building. The project was further defined in the ash management building conceptual design report prepared by CDM. CDM was responsible for preparing final design documents, permitting, and providing bidding services for the ash management building. A construction services contract was issued to CDM under a separate task order.

### Energy Recovery Facility Study, Implementation, and Operations Monitoring

#### Bristol, Connecticut

CDM conducted an evaluation of several solid waste management alternatives for the City of Bristol. The alternatives included continued use of the City's landfill, potential for other landfill development, transfer/haul to the proposed mid-Connecticut energy recovery facility in Hartford or out-of-Bristol landfills, and a regional energy recovery facility located within the City. CDM then assisted the City and 11 surrounding communities in negotiating contracts with a full-service contractor to own, design, construct, and operate a 650-tpd mass-burn energy recovery facility. The facility is located within the City and uses the energy recovered from the solid waste generated by the communities to generate electricity, which is sold to the local electric company.

CDM also prepared the engineer's feasibility report for inclusion in the official statement for the approximately \$74 million revenue bond issue that financed the facility. In addition, CDM provided construction services for the project, including acceptance testing, progress payments, and other engineering assistance to the member communities.

After the facility began commercial operations, the Bristol Resource Recovery Facility Operating Committee (BRRFOC) retained CDM to provide ongoing consulting services, including an initial review of facility operations and performance and regular monthly monitoring of operation and performance of the facility. Reviews were conducted with respect to compliance with the technical and engineering terms and conditions of the service agreement between BRRFOC and Ogden Martin Systems of Bristol.

### Waste-to-Energy Project Implementation

#### Kent County (City of Grand Rapids), Michigan

The Kent County facility combusts 625 tpd of municipal solid waste to cogenerate steam and electricity. Steam is supplied to the City of Grand Rapids District heating and cooling system, and electricity is sold to Consumers Power Company,



the local electric utility. A transfer station is an integral part of the facility to transfer excess waste to the County's landfill. CDM was engaged as the engineer and technical advisor to Kent County during the implementation of this project. Tasks that CDM provided included site layout; cost analyses; preparation of the consolidated state permit application, which included analyses of air (including prevention of significant deterioration (PSD), best available control technology (BACT), and modeling ground level concentrations), water, noise, traffic, and health risk impacts; preparation of the RFQs/RFPs (including technical requirements and contracts) for a full-service vendor and assistance during simultaneous negotiations; and preparation of the engineer's feasibility report, which was included in the official statement for the issuance of approximately \$90,000,000 in bonds to finance the construction of the project.

### WTE Services – Budget Reviews, Assistance in Refinancing, Assistance in Negotiating an Expansion

#### York County, Pennsylvania

The York County Solid Waste and Refuse Authority (Authority) owns a 1,344 tpd WTE (facility) that is operated by a private operator under contract to the Authority. The Authority also contracts for the sale of electricity that is generated by the facility and for the landfilling of the ash residue produced by the facility. CDM's involvement with the Authority includes the following services.

**Budget Review:** Since 1992, CDM has annually performed independent reviews of the proposed budget of the Authority. This work is required by the agreement between the Authority and the County pursuant to which the County has guaranteed to make up any shortfalls in debt service payments that the Authority incurs in any fiscal year on the Authority's debt.

**Assistance in Refinancing:** In 1994, CDM prepared an engineer's statement in conjunction with a forward interest rate swap of the Authority's outstanding debt, and, in 1997, CDM prepared an engineer's statement in conjunction with the refinancing of the Authority's \$110,915,000 debt.

**Assistance Negotiating an Expansion of the Facility:** Based upon CDM's involvement in the expansion of the Hillsborough County, Florida WTE facility and role in developing new operation and management agreements for both the Hillsborough County and Pinellas County WTE facilities, CDM was engaged by the Authority to assist in negotiating an expansion of the facility in order to increase the facility's combustion capacity and to extend the service agreement between the Authority and the existing operator.



## Energy Recovery Facility Implementation

### Lancaster County, Pennsylvania

The Lancaster County Solid Waste Management Authority (LCSWMA), as a step in developing a solid waste management system to serve its long-term needs, evaluated the technical, economic, and institutional feasibility of implementing a solid WTE recovery system. CDM provided technical consulting services leading to the procurement and implementation phases in the development of a 1,200-tpd solid WTE facility. CDM's work included waste stream analysis, environmental assessment, impact on landfill, co-disposal of wastewater sludge, technology evaluation, energy market analysis, site selection and design, financial/cost risk factors and project procurement, and public participation. CDM's detailed waste stream characterization included estimation of both the processible and non-processible waste stream fractions. The Lancaster County facility combusts residential solid waste and produces electricity equivalent to that used by approximately 10,000 households; the electric power generated is sold to the Metropolitan Edison Company. Thus, the County's dependence on costly and finite landfill disposal of waste is reduced, while revenue to offset the cost of the disposal system is generated in the form of energy sales. CDM provided services during construction, acceptance testing, and operations monitoring for this project.



high voltage transmission line effects, a recycling study, and an acid gas emission analysis.

CDM performed the various levels of computer modeling required by the State Air Pollution Control Board to obtain the initial air permits for the facility. CDM prepared the PSD Permit Application, which included a BACT evaluation and a new source review. CDM also prepared the application to the Department of Waste Management for a permit to operate a solid waste disposal system. In addition, a permit to construct the facility stack was obtained by CDM from the Federal Aviation Administration (FAA). CDM provided construction monitoring services for this project, which were completed on schedule, and also provided acceptance, startup, performance-testing supervision, and operation monitoring.

## Energy Recovery Facility Siting Study

### Prince William County, Virginia

CDM was engaged by Prince William County to identify an energy recovery facility site, to perform economic feasibility studies and to provide extended engineering services. The site selection process began with the development of site evaluation criteria. The site evaluation criteria ultimately used for this project were developed in conjunction with input from the Solid Waste Citizen Advisory Committee and County staff. CDM also prepared an economic feasibility study for this project and identified the environmental and technical issues that must be considered prior to the initiation of facility construction.

## Environmental and Construction Services for an Energy Recovery Facility

### Fairfax County, Virginia

CDM was retained by Fairfax County to perform extensive environmental services during the planning and procurement phases of implementing a 3,000 tpd WTE facility. CDM installed and operated an ambient air monitoring station between the proposed facility site and an environmentally sensitive eagle habitat on the confluence of the Potomac and Occoquan Rivers. Data from this station were collected and analyzed for one year. CDM prepared an environmental assessment for the proposed facility. The impact analysis included noise, geology, hydrology, air quality, traffic, utilities, natural systems, public health, land use, zoning, aesthetics, archaeology, historic resources, and economics. Other studies included a detailed dioxin risk assessment, a hazardous waste assessment, a noise study with field measurements, an analysis of potential



## 6.2 Project Management/Controls

Our track record on schedule, budget, and quality is integral to each project and evident in our work products. This holds true for our past and ongoing work with the County, as it does for clients throughout Florida and the country. We encourage the County to contact our references for specific example projects, provided in Form D and SF 330 Section F, for direct feedback on our performance in delivering quality, timely, and cost-effective products. We will conduct scheduled progress meetings with the County, and use CDM's web-based eRoom application to facilitate project status reporting, electronic file control, and communications. This approach streamlines review processes by keeping the County apprised of decisions and work status. **Figure 6.2-1** represents CDM's PRISM's project management functions.

We believe that the following seven key factors, diligently applied, will fulfill our responsibilities to carry this contract successfully:

- **Project Management Strategies** – Provide careful planning of all assignments and diligently monitor their progress



- **Schedule Control** – Ensure that all deliverables meet or exceed schedule requirements, completing our work in time for effective integration into other projects as appropriate
- **Budget Management and Control** – Manage the work to meet budget expectations, utilizing the right mix of expertise and staff resources for cost-effective execution
- **Quality Management** – Ensure that deliverables meet the County and CDM's quality expectations
- **Resources** – Provide the best available people, experienced in each of the disciplines relevant to the task at hand, to execute the project
- **Project Communication** – Establish effective working relationships with County and project stakeholders to ensure open and effective communication
- **Responsiveness** – Be there when you need us! Responsiveness goes hand-in-hand with quality and communications as the core of our services for the County.

### 6.2.1 Schedule Techniques

CDM has a proven record of meeting aggressive project schedules for major projects. Our project managers have a variety of scheduling and project management tools available—including mainframe based critical path method (CPM) programs, such as Primavera, to state-of-the-art PC-based programs, such as Microsoft Project. These tools are used to track progress, analyze staffing requirements and timing of the specific assignments as well as to assist in budget management. While the mainframe project is geared towards large construction project management, the PC programs are used on most design projects, both large and small.

Initially, a schedule is developed as a set of milestones with the client. This is typically reviewed weekly to ensure that the assigned tasks are being completed in a timely manner. This weekly review also serves to identify critical information that may impact the schedule. This could include receipt of survey information, review of documents by regulatory agencies, and

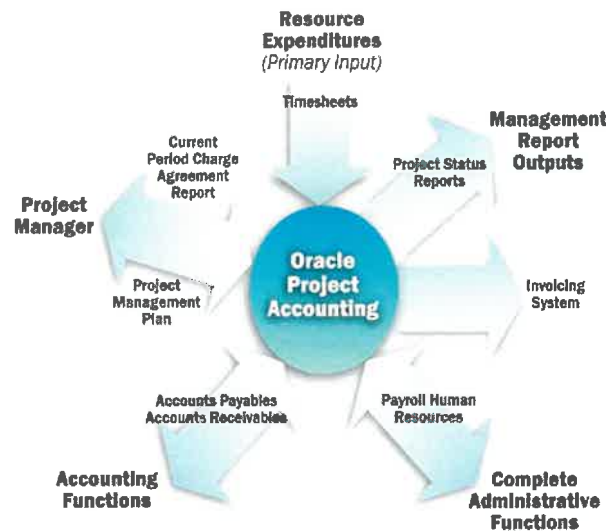


Figure 6.2-1: PRISM project management functions.

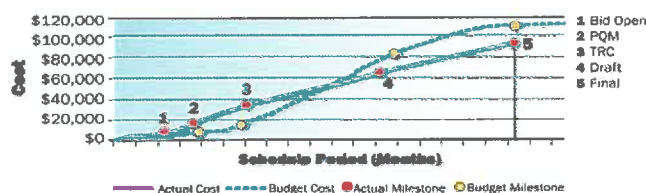


Figure 6.2.1-1: In this example S-Curve, the vertical axis represents costs, either budgeted or actual, and the horizontal axis represents the project weeks.

other in-house and external project interaction. As the project continues, earned value analyses are performed regularly and compared with the actual time and money spent on the project. In Figure 6.2.1-1 is an example of an S-curve.

We have found that the use of CPM scheduling techniques reduces the number of surprises on a project. It helps keep the project on track, provides a good framework for the scope of the project, and provides for early identification of either budget or scheduling problems. It also provides a useful tool for the client to measure project.

### 6.2.2 Budget Tracking & Management

As previously mentioned, project management is essential to the proper control and successful completion of a project. CDM's project

managers have several tools to help track and control costs:

- **Project Management Plan (PMP).** At the beginning of the project, CDM's internal budget is established using the PMP. The PMP is used to create individual budgets for each project phase and design discipline involved, essentially dividing the overall project into several smaller projects that can be more easily monitored.
- **Current Period Charge Reports (CPCRs).** CPCRs are automatically sent to the CDM project manager on a weekly basis. These reports show all internal labor and expenses charged to the project in the prior week, as well as an update on the overall project costs compared to the budget. This allows the project manager to verify the staff working on the project and to track the budgets on each task as established in the PMP.
- **Project Status Reports (PSRs).** All CDM project managers are required to complete PSRs on a monthly basis. The PSR is designed to keep the project manager's upper management abreast of the project status, including budget and schedule performance, projected cost to complete the project, and any variances in project scope or funding.

CDM's approach to projects is integrated and fosters a partnering environment between the design team and the County's project team to address technical planning and design issues, while meeting the County's operational and financial expectations. A company the size of CDM has an extensive array of resources to draw from, including up-to-date computer facilities and technical resources. We also have a structured QA/QC program and a proven project workflow approach.

### 6.3 Quality Control

CDM has a formal procedure for managing the quality of a project and meeting client expectations. The CDM Quality Management Program (QMP) Manual No. 1 defines the requirements for maintaining a high level of quality in all stages of a project, including project initiation (scope and budget development) activities, project start-up activities, project execution activities, and project closeout activities. CDM project managers are trained in correct procedures in our multilevel training program administered by CDM University (CDMU), based on Project Management Institute guidelines. Project managers must take the designated training and pass certification to enable them to manage the appropriate level of risk and complexity of projects.

Because of the diversity of the services we provide and the clients we serve, QMP manuals have also been developed for engineering services during construction, construction, and alternative delivery projects. CDM unit presidents are responsible for compliance with all the QMP requirements within their units, using their quality managers to develop auditing systems consistent with their specific operations and client requirements. As a corollary to these review requirements, CDM uses specialized project tracking software for schedule, budget, and staffing factors for each major component of the project, so that key staff have instantly available information to assist them in completing the project on time and within budget. Issues of quality management, cost control, and early identification and resolution of problems are addressed in every feature of our QMP.

Our approach to quality management has three overriding principles:

- **Quality Checkpoints.** These include ongoing direction and review by senior technical specialists during task/activity execution, in the definition of outcomes and measures, and during the production cycle. For a design project, the main checkpoints are at the 10%, 30%, and 60% design stages so as to minimize rework and schedule slippage. A technical review committee (TRC) consisting of distinguished and experienced practitioners that have not been heavily involved in the design will be assigned to perform reviews at the specified design milestones. These independent reviewers are assigned by the contract manager.
- **Quality Audits.** During the kickoff meeting, our project managers identify opportunities for quality audits, including direct follow-up contact with the County's project team on a specific task; for example, to a formal quality audit with senior CDM and County management staff. At the core of a sound quality management program is the early identification and resolution of potential problems. Our project managers will do so through regularly scheduled progress meetings to monitor performance against scope with County staff, and regular project status reports to the County and follow-up on items needing attention.

### 6.4 Comments on the Service Agreement

No comments on the service agreement.

- **Quality Ethic.** Quality, excellence delivered, is embodied in CDM's core values of excellence, initiative, shared commitment, integrity, and teamwork. These are the fundamental principles that guide our collective and individual decisions, strategies, and actions at CDM. Our staff has been instrumental in effectively permitting, designing, and constructing numerous complex projects, and we will reinforce this ethic in our project start-up kickoff meeting and adhere to it throughout project execution.