SOLID WASTE CONSULTANT CONTRACT MODIFICATION

SOLID WASTE MANAGEMENT PLAN 2018
PROJECT BUDGET: CONTRACT OF DECEMBER >>, 2007

Jurisdiction	Population 2006 Final	Percent	**PROJECT SHARE**
Chesapeake	215,271	19.24%	**$19,221.02**
Franklin	8,411	0.75%	**$751.00**
Gloucester		0.00%	**$0.00**
Hampton		0.00%	**$0.00**
Isle of Wight	33,090	2.96%	**$2,954.53**
James City		0.00%	**$0.00**
Newport News		0.00%	**$0.00**
Norfolk	234,219	20.93%	**$20,912.84**
Poquoson		0.00%	**$0.00**
Portsmouth	98,318	8.79%	**$8,778.57**
Smithfield		0.00%	**$0.00**
Southampton	17,933	1.60%	**$1,601.19**
Suffolk	79,795	7.13%	**$7,124.70**
Surry		0.00%	**$0.00**
Virginia Beach	431,820	38.59%	**$38,556.15**
Williamsburg		0.00%	**$0.00**
York		0.00%	**$0.00**
Region	1,118,857	100.00%	**$99,900.00**
			$99,900.00

NOTE: Population is 2006 Final Estimate of Population.
Contract of January 1, 2008; Amend #1, March 4, 2009

Contract Modification No. 1

Task 7 – Additional Services
Valuation of SPSA Assets

The Chief Administrative Officers (CAOs) of the member communities of the Southeastern Public Services Authority (SPSA) have requested that SCS Engineers (SCS) provide an independent assessment of the value of the Southeastern Public Service Authority's waste to energy, landfill, and transfer station assets. The work is to be completed under "Task 7 – Additional Services" of SCS's contract with the Hampton Roads Planning District Commission (HRPDC). The scope of services to provide the valuation is provided below and includes:

- Technical assessment of the current facilities.
- Identification of potential improvement that will increase the value of the facilities.
- Financial assessment including revenues, O&M cost estimate and recommended capital expenditures (Capex). Free cash flow analysis to estimate the market value of the facilities. The financial modeling of these facilities and the projected facility performance will have a major impact on the valuation.
- Review of other valuations publicly available.

SCOPE OF SERVICES

Task 7.1 – Assessment of Refuse Derived Fuel Waste to Energy Facility

1. Current Plant Performance Assessment

   - Facility evaluation for four consecutive days by two technical experts in Waste to Energy facilities.
   - Review SPSA reports and compare actual performance (waste throughput, energy sales, and consumable usage) to plant design.
   - Compare actual performance (plant load, availability, steam cycle efficiency, internal power consumption) to industry standard and Best Practices.

2. Plant Equipment Review

   - Review main equipment (Grate, Boiler, Air Pollution Control, Turbine, biogas motors, etc…) design.
   - Verify integrity of main data received against Best Practices.
   - Audit main technical risks against Best Practices

- Evaluate major equipment life.
- Propose main risk mitigation solution and estimate required Capex.

3. Plant Operation Review

- Review current employee headcount.
- Review maintenance plan and expenses.
- Review consumable usage against industry benchmark and Best Practices.

4. Technical Improvements Review

- Evaluate improvements that are planned by the current owner of the facility.
- Identify other potential performance improvement using Best Practices and experience.
- Evaluate financial benefits and required Capex.

5. Deliverables

- **Required document list.** A list of documents requested for the technical review / list of technical questions to SPSA will be developed.
- **Summary of current performance assessment.** A short MS Power Point report will be prepared presenting the key findings of our performance assessment of the current plant and the key production ratios that will be used to build our projections.
- **Proposed improvement plan.** A performance improvement plan will be prepared in summarized format (table or short MS Power Point presentation) that will provide a short description of each identified upside, its anticipated benefits (additional plant capacity, reduced O&M costs, increased power or by-product production, etc.), required Capex or O&M cost (if any) and other important information. Upsides can include:
  - Procedure or operational changes
  - Equipment upgrade
  - Maintenance program improvement (part sourcing, sub-contracts practices review, maintenance practices improvements, etc.)
  - Organizational changes
  - Capex plan

- **Identified operation risks and proposed mitigation plan.** In a summarized format, A list of risks identified during the review, the likeliness of their occurrence and an estimation of their potential impact on financial projections will be developed in summarized format (table or short MS Power Point presentation). A mitigation plan will be prepared for each risk, with an estimation of Capex and additional O&M costs if applicable. Environmental risks are not part of the technical due diligence.

- **20 year operation plan and free cash flow analysis.** A financial model will be prepared which will include 20-year estimation of the following:

  - Production: yearly waste tonnage; ash, residue and by-product tonnage; energy sold.

  - Operation & Maintenance costs: projection based on existing practices and costs. Adjustment and Identification of upsides with cost databases, industry ratios, proposed improvement plan and risk mitigation plan.

  - Capex: projection based on current practices + upsides/downsides based on our improvement plan and risk mitigation plan.

  - Free cash flow analysis and project valuation.

Task 7.2 – Assessment of Regional Landfill Facility

1. Current Landfill Assessment

   - Conduct site evaluation to confirm equipment and staffing levels of the landfill.

   - Compare staffing, equipment levels, maintenance costs, and performance with other similar facilities.

   - Identify main technical risks against Best Practices

   - Evaluate major equipment life.

   - Propose main risk mitigation solution and estimate required Capex.

   - Review maintenance plan and expenses.

2. Technical Improvements Review

   - Evaluate improvements that are planned by SPSA.

   - Identify other potential performance improvement using Best Practices and experience.

   - Evaluate expansion potential of the landfill. We understand that SPSA had begun evaluating various expansion alternatives at the same time SCS's initial study for the

HRPDC was being conducted. SCS will review the engineering analysis prepared by its outside consultants and independently assess the feasibility of substantially increasing the capacity of the landfill. The feasibility of expanding the site to provide substantial additional capacity is a critical factor in the landfill valuation.

- Evaluate financial benefits and required Capex.

3. Deliverables

- **Required document list.** A list of documents requested for the technical review / list of technical questions to SPSA will be developed.

- **Summary of current performance assessment.** A short MS Power Point report will be prepared presenting the key findings of our performance assessment of the current plant and the key production ratios, landfill, and transfer stations that will be used to build our projections.

- **Proposed improvement plan.** A performance improvement plan will be prepared in summarized format (table or short MS Power Point presentation) for the landfill that will provide a short description of each identified upside, its anticipated benefits (additional disposal capacity, reduced O&M costs, etc.), required Capex or O&M cost (if any) and other important information. Upsides can include:

  - Procedure or operational changes

  - Equipment upgrade

  - Maintenance program improvement (part sourcing, sub-contracts practices review, maintenance practices improvements, etc.)

  - Organizational changes

  - Capex plan

- **Identified operation risks and proposed mitigation plan.** In a summarized format, A list of risks identified during the review, the likeliness of their occurrence and an estimation of their potential impact on financial projections will be developed in summarized format (table or short MS Power Point presentation). A mitigation plan will be prepared for each risk, with an estimation of Capex and additional O&M costs if applicable. Environmental risks are not part of the technical due diligence.

- **20 year operation plan and free cash flow analysis.** A financial model will be prepared which will include 20-year estimation of the following:

  - Production: yearly waste tonnage and projected revenues from the sale of landfill gas.

- Operation & Maintenance costs: projection based on existing practices and costs. Adjustment and Identification of upsides with cost databases, industry ratios, proposed improvement plan and risk mitigation plan.

- Capex: projection based on current practices + upsides/downsides based on our improvement plan and risk mitigation plan.

- Free cash flow analysis and project valuation.

Task 7.3 – Assessment of SPSA Transfer Stations

1. Current Transfer Station Assessment

   - Conduct site evaluation to confirm equipment and staffing levels at the SPSA transfer stations.

   - Compare staffing, equipment levels, maintenance costs, and performance with other similar facilities.

   - Identify main technical risks against Best Practices.

   - Evaluate major equipment life.

   - Propose main risk mitigation solution and estimate required Capex.

   - Review maintenance plan and expenses.

   - Confirm contractual relationships regarding property and facility ownership for each site.

2. Technical Improvements Review

   - Evaluate improvements that are planned by SPSA.

   - Identify other potential performance improvement using Best Practices and experience. For example, if a private firm were to take over the transfer station assets, they may elect to consolidate operations to improve operational efficiencies and reduce costs.

   - Evaluate expansion potential and limitations at each facility. SCS will review the engineering analysis prepared by SPSA's consultants regarding the condition and expansion potential of its facilities.

   - Evaluate financial benefits and required Capex.

3. Deliverables

- **Required document list.** A list of documents requested for the technical review / list of technical questions to SPSA will be developed.

- **Summary of current performance assessment.** A short MS Power Point report will be prepared presenting the key findings of our performance assessment of the current transfer stations and the key production ratios of the transfer stations that will be used to build our projections.

- **Proposed improvement plan.** A performance improvement plan will be prepared in summarized format (table or short MS Power Point presentation) for each facility that will provide a short description of each identified upside, its anticipated benefits (additional capacity, reduced O&M costs, etc.), required Capex or O&M cost (if any) and other important information. Upsides can include:

  - Procedure or operational changes

  - Equipment upgrade

  - Maintenance program improvement (part sourcing, sub-contracts practices review, maintenance practices improvements, etc.)

  - Organizational changes

  - Capex plan

- **Identified operation risks and proposed mitigation plan.** In a summarized format, A list of risks identified during the review, the likeliness of their occurrence and an estimation of their potential impact on financial projections will be developed in summarized format (table or short MS Power Point presentation). A mitigation plan will be prepared for each risk, with an estimation of Capex and additional O&M costs if applicable. Environmental risks are not part of the technical due diligence.

- **20 year operation plan and free cash flow analysis.** A financial model will be prepared which will include 20-year estimation of the following:

  - Capacity of each transfer station.

  - Operation & Maintenance costs: projection based on existing practices and costs. Adjustment and Identification of upsides with cost databases, industry ratios, proposed improvement plan and risk mitigation plan.

  - Capex: projection based on current practices + upsides/downsides based on our improvement plan and risk mitigation plan.

  - Free cash flow analysis and project valuation.

Task 7.4 – Report and Meetings

1. Meet with the CAOs mid-way through the valuation to present the valuation methodology, preliminary findings, and discuss issues that have been identified.

2. Complete analysis of valuations and prepare draft report and submit to the HRPDC for review and comment.

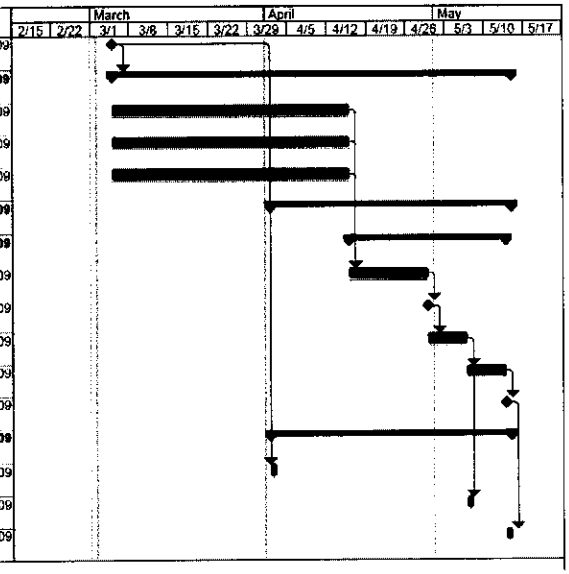
3. Meet with HRPDC and CAOs to review draft comments

4. Address and incorporate comments, prepare final report, and submit to the HRPDC.

SCHEDULE

The scope of services outlined above will be completed within 8 weeks of notice to proceed.

ID	Task Name	Duration	Start	Finish
1	Notice to Proceed	0 days	3/5/09	3/5/09
2	**SPSA Assest Valuation**	**51 days**	**3/5/09**	**5/14/09**
3	Task 7.1 - RDF WTE Valuation	6 wks	3/5/09	4/15/09
4	Task 7.2 - Landfill Valuation	6 wks	3/5/09	4/15/09
5	Task 7.3 - Transfer Station Valuation	6 wks	3/5/09	4/15/09
6	**Task 7.4 - Report and Meetings**	**31 days**	**4/2/09**	**5/14/09**
7	**Report**	**20 days**	**4/16/09**	**5/13/09**
8	Prepare draft report	2 wks	4/16/09	4/29/09
9	Submit draft report	0 days	4/29/09	4/29/09
10	CAO revew	1 wk	4/30/09	5/6/09
11	Prepare final report	1 wk	5/7/09	5/13/09
12	Submit final report	0 days	5/13/09	5/13/09
13	**Meetings**	**31 days**	**4/2/09**	**5/14/09**
14	Mid-way meeting with CAOs	1 day	4/2/09	4/2/09
15	Draft report review with CAOs	1 day	5/7/09	5/7/09
16	Final report meeting with CAOs	1 day	5/14/09	5/14/09



PROJECT TEAM

In order to complete this evaluation within the 8-week timeframe requested, SCS has assembled the following project team experts to complete the valuation:

Firm	Responsibility	Key Personnel
SCS Engineers	Management of project, assessment and valuation of landfill and transfer stations, and management of RDF WTE	Robert Gardner, PE Marc Rogoff, PhD Keith Matteson, PE Tony Tomlin, PE

	Facility evaluation	
Deltaway Energy, Inc.	RDF WTE assessment and valuation.	Francois Screve Fred Caillard Ken Boatwright
J. A. Hayden & Associates	Third party review of valuation.	John Hayden, PE, PhD

By way of background, a brief description of our project team partners is provided below:

- **Deltaway Energy** has conducted similar valuations of RDF facilities. Deltaway Energy has a special knowledge of SPSA "sister" plant in Miami-Dade where it has provided performance optimization and engineering services for the past 5 years. Members of Deltaway Energy team have been personally involved with the Miami Dade Resources Recovery Facility between 1990 and 2002 in the following capacity: Francois Screve as Facility Manager, Fred Caillard as Environmental Engineer and Claude Braun as Assistance Facility Manager. The key personnel from Deltaway Energy advised CVC, KKR, Suez in successful acquisition of projects in Europe and Asia. Deltaway Energy project references and resumes of key staff can be found on their web site at: www.deltawayenergy.com. The resumes of the Deltaway staff proposed for this assignment are attached.

- **J. A. Hayden & Associations** is a planning and management firm that specializes in providing high-level technical consulting and advisory services for regional solid waste authorities and counties. SCS has worked with J. A. Hayden & Associates on several waste-to-energy related projects including Regional Waste Systems (now eco maine), Broward County Resource Recovery Board, and the Hudson County Improvement Authority. John Hayden, PE, PhD will provide third party review of the valuations prepared. John Hayden's resume is attached.

FEE

Task	Fee ($)
Task 7.1 - RDF WTE Valuation	57,200
Task 7.2 - Landfill Valuation	12,800
Task 7.3 - Transfer Station Valuation	9,200
Task 7.4 - Report and Meetings	20,700
Total	**99,900**