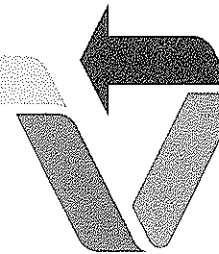


VENTURA REGIONAL SANITATION DISTRICT

1001 PARTRIDGE DRIVE, SUITE 150 ■ VENTURA, CA 93003-0704



A Public
Waste
Management
Agency

November 9, 2011

Board of Directors
Ventura Regional Sanitation District
Ventura, CA 93003

FIRST AMENDMENT TO VRSD CONTRACT NO. 11-006, NRGTEK, INC.

Summary:

Staff is requesting approval to amend existing VRSD Contract No. 11-006 with NRGTEK, Inc., to expand the Scope of Work for siloxane removal from the District's landfill gas and adjust the budget for a new not to exceed contract amount of \$128,000.

Background:

On May 6, 2011, VRSD retained the services of NRGTEK, Inc., under the General Manager's \$25,000 contracting authority, to assist in siloxane removal from District's landfill gas and to provide assistance in selecting a siloxane removal technology, evaluating bench test data, and providing District guidance and recommendation for full scale implementation. NRGTEK was successful in identifying a bench unit that can provide an economical method for removing siloxanes from landfill gas (methane). The next step is to build a pilot unit to treat approximately ten percent of our landfill gas. At the completion of the pilot testing the consultant will report the viability of the siloxane removal method based on treating ten percent of our landfill gas stream. Successful removal will lead to full implementation of the siloxane removal technology. The timeline (schedule) to complete this work is four to six months.

Fiscal Impact:

The adopted Fiscal Year 2012 budget included an allocation of \$300,000 for the under Biosolids Capital Fund 90-390-52079-399901. The cost to design, build, test, and verify a ten percent total gas stream pilot project is approximately \$103,000. The total contract amount will be \$25,000 plus \$103,000 for a total amount of \$128,000. No budget adjustment is needed for this contract amendment.


Recommendation:

It is recommended the Board:

- a. Authorize the Chairman to sign VRSD Contract No. 11-006-1 amending VRSD Contract No. 11-006 with NRGTEK, Inc., to add to the scope of work and add an additional \$103,000 to the contract for a total authorized amount of \$128,000.

Enc.

APPROVED FOR THE NOVEMBER 17, 2011 AGENDA



Mark Lawler - District Manager

**CONTRACT NO. 11-006-1
AMENDMENT NO. 1 TO CONTRACT NO. 11-006
AGREEMENT FOR CONSULTING SERVICES
BETWEEN
VENTURA REGIONAL SANITATION DISTRICT
AND
NRGTEK, INC.**

THIS AGREEMENT is made and entered into this 17th day of November 2011 by and between the VENTURA REGIONAL SANITATION DISTRICT, a public agency formed pursuant to California Health & Safety Code Section 4700 et seq., ("DISTRICT") and NRGTEK, INC. ("CONSULTANT.")

AMENDMENT

A. On the 6th day of May 2011, a certain contract, hereinafter referred to as Contract No. 11-006, was executed between DISTRICT and CONSULTANT recommendations for siloxane removal from District's landfill gas, and to provide assistance in selecting a siloxane removal technology, evaluating bench test data, and providing District guidance and recommendation for full scale implementation.

B. DISTRICT and CONSULTANT have agreed that additions to the original scope of work and compensation are necessary to complete the work and can be accomplished by amending Contract No. 11-006 accordingly.

RECITALS

NOW, THEREFORE, in consideration of the mutual covenants, promises, and agreements set forth, it is agreed the aforesaid Contract No. 11-006, a copy of which is attached as Exhibit "I" and incorporated herein by reference, shall remain in full force and effect, except as otherwise hereinafter provided.

The parties agree the following language shall replace the original provisions of Article 1: Work Statement

"A. CONSULTANT shall provide the consulting services described in the attached as Exhibit "A-1" to this Agreement and incorporated herein.

The parties agree the following language shall replace the original provisions of Article 5: Payment to Contractor

"B. Total fees to be paid by DISTRICT to CONSULTANT for CONSULTANT's services described herein shall be increased by \$103,000.00 and shall not exceed \$128,000.00 without written amendment hereto."

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first above written.

APPROVED AS TO FORM: ARNOLD, BLEUEL,
LaROCHELLE, MATHEWS, & ZIRBEL, LLP

VENTURA REGIONAL SANITATION DISTRICT

By _____
MARK A. ZIRBEL
Legal Counsel for DISTRICT

By _____
JAMES L. MONAHAN, Chairman Board of
Directors

ATTEST:

NRGTEK, INC.

By _____
JOSIE GUZMAN, Clerk of the Board

By _____
SUBRAMANIAN IYER, President/CEO

Exhibit "I"

CONTRACT NO. 11-006
AGREEMENT FOR CONSULTING SERVICES
BETWEEN
VENTURA REGIONAL SANITATION DISTRICT
AND
NRGTEK, INC.

THIS AGREEMENT is made and entered into this 6th day of May 2011 by and between the VENTURA REGIONAL SANITATION DISTRICT, a public agency formed pursuant to California Health & Safety Code Section 4700 et seq., ("DISTRICT") and NRGTEK, INC. ("CONSULTANT.")

RECITALS

A. DISTRICT has a need to engage the specialized services of a CONSULTANT to provide recommendations for siloxane removal from District's landfill gas. Consultant will provide assistance in selecting a siloxane removal technology, evaluating bench test data, and providing District guidance and recommendation for full scale implementation.

B. DISTRICT has selected CONSULTANT in conformance with the negotiated procurement provisions of Section 403 of the DISTRICT Purchasing Resolution No. 89-13.

AGREEMENT

ARTICLE 1: WORK STATEMENT

A. CONSULTANT shall provide the consulting services described in the Work Plan which is attached as Exhibit "A" to this Agreement and incorporated herein.

B. CONSULTANT shall use his best efforts in providing services to DISTRICT and shall cooperate with DISTRICT and provide DISTRICT with all available information and assistance in relation to the Work Plan.

ARTICLE 2: TERM OF CONTRACT

Unless otherwise earlier terminated, this Agreement shall continue in force until the services specified herein have been fully performed. Upon execution of this Agreement by both parties, CONSULTANT shall diligently pursue work to assure completion on a timely basis. Unless otherwise extended in writing by both parties, this contract shall automatically terminate on June 30, 2012.

ARTICLE 3: INDEPENDENT CONTRACTOR RELATIONSHIP

A. It is expressly understood between the parties that no employee/employer relationship is intended, the relationship of CONSULTANT to DISTRICT being that of an independent contractor. DISTRICT shall not be required to make any payroll deductions or provide Workers' Compensation Insurance coverage or health benefits to CONSULTANT.

B. CONSULTANT is solely responsible for selecting the means, methods and procedures for performing its services hereunder as assigned by DISTRICT and for coordinating all portions of the work so the result will be satisfactory to the DISTRICT. CONSULTANT will supply all tools and instrumentalities required

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to perform its services under this Agreement.

C. CONSULTANT pursuant to this Agreement is rendering professional services only and any payments made to it are compensation solely for such services as it may render and recommendations it may make in the performance of services.

ARTICLE 4: CONFIDENTIAL RELATIONSHIP/TITLE TO DOCUMENTS

CONSULTANT agrees that all dealings of the parties under this Agreement shall be confidential and no report, data, information or communication developed, prepared or assembled by CONSULTANT under this Agreement, or any information made available to CONSULTANT by DISTRICT, shall be revealed, disseminated or made available by CONSULTANT to any person or entity other than DISTRICT without the prior written consent of DISTRICT. All data, calculations, drawings and other documents developed, prepared, completed or acquired by CONSULTANT during the performance of its services hereunder shall be turned over to DISTRICT upon termination of this Agreement.

CONSULTANT shall provide copies of original source electronic files (i.e. - Microsoft Word or Excel files, Autocad DWG files, etc.) of all work completed as part of this CONTRACT. Such files shall not be protected or otherwise restrict access.

ARTICLE 5: PAYMENT TO CONSULTANT

A. In consideration of CONSULTANT's performance of services as described herein, DISTRICT shall pay CONSULTANT fees for its services at the rate of \$450 per hour plus any expenses which are pre-approved by DISTRICT. On or prior to the tenth day of each calendar month after actual work is started, CONSULTANT shall submit an invoice in sufficient detail to show the total amount of work done to the last day of the month preceding the one in which the invoice is submitted. DISTRICT shall review and approve CONSULTANT's invoice for accuracy and agree with CONSULTANT on any adjustments that may be appropriate. Such approvals shall not be unreasonably withheld. DISTRICT shall pay CONSULTANT for all approved work and materials within 30 days of agreement on the amount of the invoice. In the event of disagreement with CONSULTANT on adjustments or disallowances, said amounts and disputes shall be withheld until resolved. Upon resolution of the disagreements, payment of the approved amount shall be made within 30 days after deducting therefrom all previous payments and all sums to be retained under the terms of the agreement.

B. Total fees to be paid by DISTRICT to CONSULTANT for CONSULTANT's services described herein shall not exceed \$25,000 without written amendment hereto.

ARTICLE 6: TERMINATION OF CONTRACT

All work shall be done in a diligent and professional manner to DISTRICT's satisfaction. CONSULTANT specifically acknowledges and agrees that DISTRICT may terminate CONSULTANT's services at any time with or without cause, regardless of whether CONSULTANT's services or the Project are completed. Any termination or any special instructions hereunder from DISTRICT shall be made in writing. In the event of such termination, CONSULTANT shall have the right to expend additional time (not to exceed 10% of the total fees payable under this Agreement) to assemble the work in progress for the purpose of proper filing and closing the job. Such additional time shall not increase CONSULTANT's total compensation beyond the maximum stated in Article 5.

ARTICLE 7: INDEMNIFICATION AND HOLD HARMLESS

CONSULTANT agrees to defend, indemnify and hold harmless DISTRICT, and its officers, agents and employees, from and against any and all liability, damages, costs, losses, claims and expenses, however caused, resulting directly or indirectly from or connected with CONSULTANT's negligent performance of this Agreement (including, but not limited to such liability, cost, damage, loss, claim or expense arising from the death

of or injury to, or damage to property of CONSULTANT, DISTRICT, or their respective employees or agents), except to the extent that such liability, damages, costs, losses, claims or expenses are caused by the negligent or wrongful acts or omissions of DISTRICT or any of its agents or employees.

ARTICLE 8: INSURANCE

CONSULTANT shall provide and keep in effect during the term of this Agreement Comprehensive Automobile Liability insurance policies with combined single limit coverage of at least \$300,000 for personal injury, death, or property damage. CONSULTANT shall also supply the DISTRICT with \$1,000,000 in Business Liability and Medical Expenses insurance certificates. CONSULTANT shall provide certificates of such insurance to DISTRICT prior to the start of work.

ARTICLE 9: SUBCONSULTANTS

This Agreement is a personal service contract and the consulting work hereunder shall not be delegated or assigned by CONSULTANT to any person or entity without the consent of DISTRICT. Breach of this provision shall be grounds for immediate termination of this Agreement.

ARTICLE 10: NOTICES

All notices or other official correspondence relating to contractual matters between the parties shall be made by depositing the same as first-class, postage paid mail addressed as follows:

To CONSULTANT: Subramanian Iyer, President/CEO
NRGTEK, INC.
2322 N. Batavia Street, #104
Orange, CA 92865

To DISTRICT: Finance & Administration
VENTURA REGIONAL SANITATION DISTRICT
1001 Partridge Drive, Suite 150
Ventura, California 93003-0704

or to such other address as either party may designate hereinafter in writing delivered to the other party. All notices shall be deemed to have been received three (3) days after mailing.

ARTICLE 11: NO WAIVER

No failure or delay by DISTRICT in asserting any of DISTRICT's rights and remedies as to any default of CONSULTANT shall operate as a waiver of the default, of any subsequent or other default by CONSULTANT, or of any of DISTRICT's rights or remedies. No such delay shall deprive DISTRICT of its right to institute and maintain any action or proceeding which may be necessary to protect, assert or enforce any rights or remedies arising out of this Agreement or the performance of this Agreement.

ARTICLE 12: PARTIAL INVALIDITY

If any term, covenant, condition, or provision of this Agreement is found by a court of competent jurisdiction to be invalid, void, or unenforceable, the remainder of the provisions hereof shall remain in full force and effect, and shall in no way be affected, impaired, or invalidated thereby.

ARTICLE 13: TERMS

No alteration or amendment of the terms of this Agreement shall be valid unless made in writing and signed by the parties. No oral understanding or agreement not incorporated herein shall be binding on any of the parties.

ARTICLE 14: CALIFORNIA LAW

This Agreement shall be interpreted and construed pursuant to the laws of the State of California. The parties agree that should litigation arising from this Agreement be commenced within California, such litigation shall occur within a court of competent jurisdiction within the County of Ventura.

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first above written.

VENTURA REGIONAL
SANITATION DISTRICT

By 
MARK LAWLER, GENERAL MANAGER

NRGTEK, INC.

By 
SUBRAMANIAN IYER, PRESIDENT/CEO

EXHIBIT "A"

WORK PLAN

1. Identifying the appropriate treatment device for preventing siloxane ingress into the mini-turbine system;
2. Installing a test system to evaluate siloxane removal on site at VRSD, at the appropriate location;
3. Testing for efficacy of fuel gas cleanup from siloxanes;
4. Testing to extrapolate economics and efficiencies over varying loading levels as observed in landfill gas;
5. P&ID diagrams and basic design for a complete cleanup system for VRSD landfill gas from siloxanes.

Exhibit "A-1"

Nrgtek Inc. 2322 N. Batavia St #104, Orange CA 92865
Ph/fax: 714-283-1067

Scope of Work and Budget

I. Phase I A: Studies for evaluation of a specifically engineered Siloxane Scrubber System (SSS), and verification of the kinetics, absorption efficiency, absorption media recycling, periodicity of recycling and techno-economic analysis of the SSS process, in comparison with the current carbon media absorption columns and operational/capital costs involved. The process consists of the selective absorption of siloxanes contained in the Toland Landfill Gas by denatured alcohol (methanol/ethanol mixtures, available commercially), to a quality conforming to input gas quality as specified for Ingersoll-Rand power generation turbines (≤ 10 ppb siloxanes). The denatured alcohol, now saturated with siloxanes, is recycled to pure methanol/ethanol by processing in an innovative Reverse Osmosis system, using membrane elements made from an alcohol-resistant material, and capable of long operating life and the ability to separate out the siloxane compounds by size exclusion principles.

Figure 1 shows the process flow diagram of the proposed small-scale system, to be tested over a period of 3 months to establish operational design points, control logic and siloxane removal efficiency.

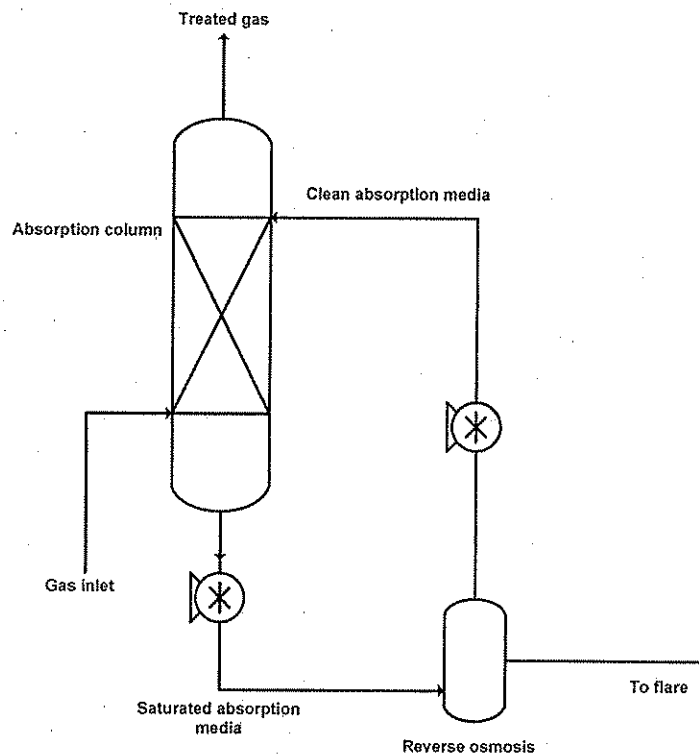


Figure 1: 1 SCFM Siloxane Scrubber System

Scope of Work: The work to be performed in Phase IA will be as follows -

- Engineer a 1 SCFM system for siloxane scrubbing, operating at 110 psi, with a packed-bed liquid-gas scrubber system;
- Test the system for siloxane removal efficiency, as well as comparison to current carbon absorption media for siloxane removal;

- Regenerate the scrubbing media by reverse osmosis, to separate siloxane-saturated media from fresh media for re-scrubbing operations;
- Assess volumetric liquid media needs for a 1 SCFM system, as well as time for media saturation before recycling;
- Instrumental analytical needs for assessing media saturation and time-based siloxane removal efficiency assessment;
- A prototype system with control logic hardware/software, and operational design points for scale-up to a 100 SCFM system.
- Time period for Phase IA: 1 month.

Estimated Budget for Phase IA:

1. System components for a 1 SCFM system, pressure vessels, valves etc	\$ 5,000
2. Labor: design, fabricate and demonstrate system at Toland Landfill Site	<u>\$20,000</u>
Total	<u>\$25,000</u>

II. Phase I B: Engineering design, fabrication and installation of a 100 SCFM Siloxane Scrubber System at the Toland Landfill Site, Ventura County, based on data gathered from Phase IA. The Toland landfill gas capacity, based on 9 Ingersoll-Rand turbines, is approximately 900 SCFM. Phase IB will engineer a 1/9th capacity siloxane cleanup facility for demonstration of the technology on a large-scale skid, to be integrated into a side-stream loop at the existing site. The facility be on a build-test-transfer basis to VRSD, with performance and economic metrics based on the current activated-carbon based system. A benefit/cost ratio of 2 over current operational costs will be demonstrated, based on current VRSD data for activated carbon regeneration expenses and life cycles between regeneration, as compared to liquid absorption media regeneration costs and life-spans between regeneration cycles. The complete piping and instrumentation diagram is shown in Figure 2 below. Complete elevation drawings, PDFs and P&IDs will be created, prior to system fabrication and installation. The installed system will be operated for a period of 3 months, before being transferred to VRSD personnel. This Phase IB system will serve as a basis for a full scale 900 SCFM system design in a subsequent Phase II of the Siloxane project.

Estimated Budget for Phase IB:

1. Packed-Tower Absorption Tower, FRP, 100 SCFM capacity	\$20,000
2. Methanol/Ethanol Reverse Osmosis System	\$10,000
3. Pumps and appurtenances	\$ 5,000
4. Controls and Instrumentation Hardware/Software	\$10,000
5. Miscellaneous items: valves, piping, pressure systems etc	\$ 8,000
6. Labor: engineering design, fabrication, installation and testing	<u>\$25,000</u>
Total	<u>\$78,000</u>

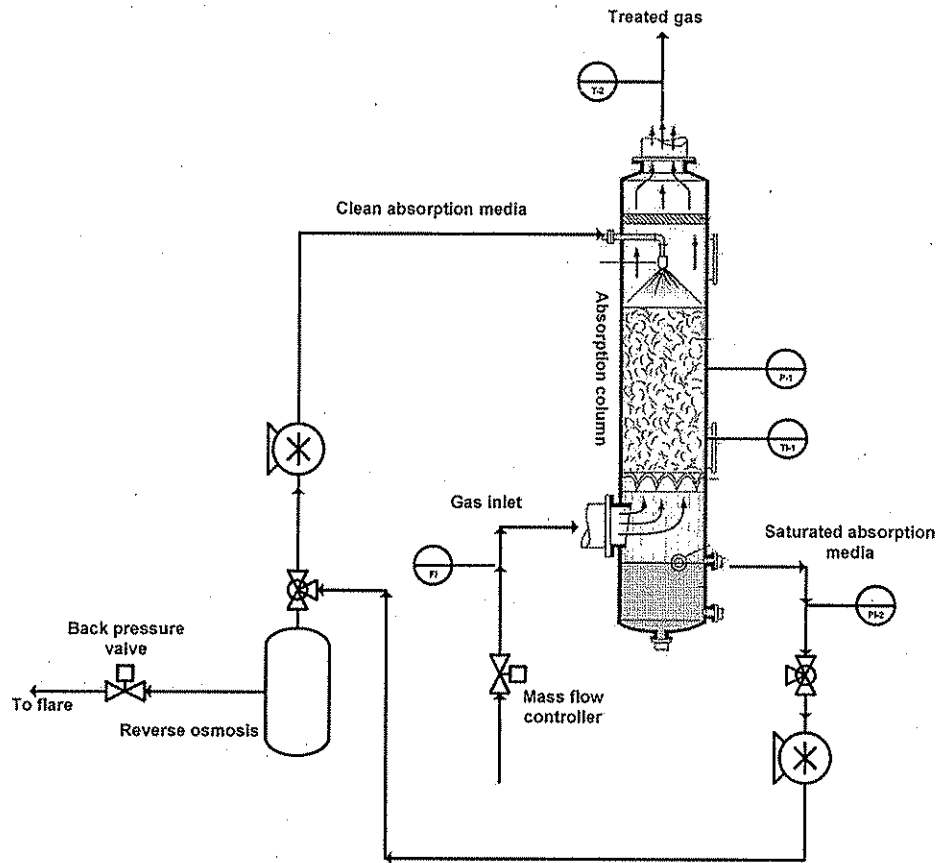


Figure 2: 100 SCFM Demonstration System

Project Schedules, Milestones and Deliverables

Tasks	Period in Months	Budget	Milestones	Deliverables
1. Phase 1A	●————→	\$25K	a. Scrubber η b. RO η	1 SCFM System
2. Phase 1B a. MeOH system b. RO system c. System Integration	●————→ ●————→ ●————→	\$78K	a. System integration b. System demonstration	100 SCFM System; Goal: siloxane removal to turbine spec.
3. Phase II	●-----▶		EPC contract	900 SCFM

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