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City of Alexandria, Virginia

MEMORANDUM

DATE: JUNE 23, 2008
TO: THE HONORABLE MAYOR AND MEMBERS OF CITY COUNCIL
THROUGH: JAMES K. HARTMANN, CITY MANAGER
FROM: RICHARD J. BAIER, P.E., DIRECTOR, T&ES
BRUCE JOHNSON, DIRECTOR, OMB
SUBJECT: STATUS REPORT ON THE COVANTA ALEXANDRIA/ARLINGTON
ENERGY FROM WASTE FACILITY – TITLE V PERMIT APPLICAITON

Introduction: With Council considering an industrial use study in the Eisenhower West area on Tuesday night, as the two staff leads for energy-from-waste issues, we wanted to update Council on a set of complex energy-from-waste facility issues which will be brought to the community for discussion, and then to Council for a decision in the coming year.

Background: The Covanta Alexandria/Arlington Inc. (CAAI) Facility is located at 5301 Eisenhower Avenue in the City of Alexandria, and has been in operation since February 1988. This facility receives approximately 310,000 tons of solid waste per year from the residents and businesses of Arlington and Alexandria, burns that waste, produces electricity, separates and recovers ferrous materials, and disposes of the ash in the Lorton landfill maintained by Fairfax County. Covanta is the operator and conditional owner of the facility, Arlington County and the City of Alexandria own the land.

The construction of the CAAI facility was initiated by the City of Alexandria and Arlington County governments in the mid-1980s. The two jurisdictions contracted with the private sector to build and operate the facility on land owned by the City. The construction of the facility was financed with over \$100 million in bonds repaid by facility tip-fee revenues and electricity sales.

Under the original agreements, Covanta Energy, Alexandria and Arlington entered into a conditional sale agreement whereby the land and facility were transferred to Covanta until the end of 2024 when the CAAI facility ownership reverts back to Alexandria and Arlington. As part of the guarantee that backs the bonds that financed the facility, Alexandria and Arlington have a “put-or-pay” obligation to use the facility until January 1, 2013. In the next twelve months, Alexandria and Arlington staff plan to initiate and complete a consultant study of solid waste disposal alternatives and economics, in order to develop recommendations on whether Alexandria and Arlington shall continue to dispose of its solid waste at this facility after 2012. This study would parallel and be an element of the proposed Eisenhower West Industrial Study.

If the jurisdictions do not continue to use the facility (direct use now by Alexandria and Arlington is about one-third of the facility capacity), it is likely because all the bonds for the facility will be repaid by 2013, given there is demand for the facility, and given the facility is in very good condition, Covanta would very likely operate the facility as a merchant facility from 2013 until 2025 and sell the currently used Alexandria-Arlington capacity at the plant to private-sector solid waste haulers.

The facility consists of three separate 325 ton/day combustion units, and meets the solid waste disposal needs for the residents and businesses of both the City of Alexandria and Arlington County. The facility can handle 975 tons per day of municipal solid waste, and generates approximately 23 megawatts of power, which is enough to supply about 20,000 homes with electricity. In 2000, a \$43 million retrofit was completed to lower emissions from the stack and to install a continuous emissions monitoring system, and to meet the update, more stringent guidelines of the Clean Air Act. When the facility was retrofitted in 2000, the technology installed met Maximum Achievable Control Technology (MACT) standards. The CAAI facility utilizes dry lime scrubbers to control acid gases, a fabric filter baghouse to control particulate matter and metals, carbon injection for mercury control, and ammonia injection to control NOx emissions. Additionally, the tipping floor and pit enclosure are under negative pressure to control particulates and odors. The facility has consistently scored well below its permitted emission limits with these pollution control technologies and procedures in place.¹

In 2004, the facility became an OSHA VPP STAR worksite, for facilities with outstanding health and safety practices, and in 2005 it was included in Virginia's Environmental Excellence Program sponsored by the VDEQ. In May 2007, the facility added a ferrous recovery system onto the back-end of the system, and currently recovers approximately 2% of the incoming waste stream for metal recycling. The plant is very well managed from an operational point of view, maintaining an average availability of over 96%, which is well above industry averages.

The facility benefits the City and County in providing their waste disposal needs by reducing the quantity of materials landfilled, and by minimizing truck traffic that would otherwise have to haul our solid waste to a distant landfill, hence reducing greenhouse gasses. Also, the facility is considered a green technology in that it burns refuse (in lieu of land filling) and produces electricity without burning coal or oil.

¹ In October 2007, the CAAI facility received a warning letter from VDEQ based upon alleged deficiencies at the facility during an on-site evaluation. The issues in the warning letter were adequately addressed by CAAI, except for one, which stated that the facility exceeded its annual steam production limit, for which a Notice of Violation (NOV) was issued in February 2008. The issue revolved around the calculation methodology for determining the 12-month average, with the strict interpretation dictating that a 12-month rolling average be utilized, as compared to a calendar year total, which had heretofore been accepted by the VDEQ. In a meeting in April 2008, CAAI and VDEQ agreed to enter into a Letter of Agreement to close out the NOV, and to comply with the rolling average reporting requirement.

Current Status of Air Permits: Federal Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have Federal Air Pollution Operating Permits, called Title V Operating Permits. Facilities with emission potentials exceeding statutory thresholds for criteria pollutants (carbon monoxide, nitrogen oxides, sulfur dioxide, particulate matter and volatile organic compounds) and/or one or more hazardous air pollutants (HAP) must file for a Title V Operating Permit. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, CAAI applied for, and has been operating under its Title V Operating Permit since the inception of the program. A Title V permit renewal application was submitted to the Virginia Department of Environmental Quality in August 2006, and was deemed complete in October 2006. In August 2007, and even though City and County staff recommended that Covanta not do so, CAAI also submitted an application package requesting a 10% increase in the facility's annual permitted steam production, to allow the facility to increase the amount of energy produced. A 10% increase in the facility's steam production translates into approximately a 5% increase in truck traffic (about seven trucks per day, six days per week). The City and County staff deemed this Covanta application premature for reasons given below. This application has not yet been acted upon, due to a backlog of applications at VDEQ. It is not expected to be acted upon until late in 2008, or early in 2009. The request to increase steam production will not be approved by DEQ without City approval.

As part of CAAI's application for a steam production increase, CAAI had atmospheric dispersion modeling performed for the criteria pollutants SO₂ and PM₁₀ emitted from the facility's stack. Staff indicated that before the jurisdictions could consider providing support for the facility's request for a steam increase, Alexandria and Arlington would require that additional modeling be performed, similar in nature to the dispersion modeling required for the neighboring Virginia Paving facility. This request called for modeling fine particulate matter, PM_{2.5}, from the stack as well as from fugitive sources such as on-site truck traffic. The modeler selected, Cambridge Environmental Inc., is the very same firm which undertook the modeling study for Virginia Paving. The protocols for the modeling have been submitted to Alexandria and Arlington staff, and are currently being reviewed.

Covanta has offered to install at its own expense new Low NO_x technology to help reduce this emission important to air quality significantly from its current level, which is already 10% to 20% below the current emission limit. This offer by Covanta is conditional upon DEQ approval of the increase in the steam limit.

Once the modeling information is received, Alexandria and Arlington staff will discuss the findings with Covanta, and then discuss these issues with the neighboring homeowners, civic associations, and the Eisenhower Partnership and the West End Business Association. Based on the information from Covanta and feedback from the adjacent neighborhoods, a recommendation(s) on the request to expand steam production by 10% and Covanta's proposal to reduce NO_x emissions will be brought to Council for consideration. As has been the case with energy-from-waste issues for two decades, we will coordinate our efforts with Arlington County.

If you have any questions, please contact Rich Baier at 703-838-4966 or Bruce Johnson at 703.838.4780.

Attachment: June 12, 2008, letter from Covanta regarding the Title V permit

cc: Mark Jinks, Deputy City Manager
Michele Evans, Deputy City Manager
William Skrabak, Director, Office of Environmental Quality
Faroll Hamer, Director, Planning and Zoning
Ron Carlee, County Manager, Arlington County

Covanta Alexandria / Arlington, Inc
5301 Eisenhower Avenue
Alexandria, VA 22304

Tel #: (703) 370-7722
Fax #: (703) 461-3097



June 12, 2008

Mr. Richard Baier, P.E., Chair Board of Trustees
Alexandria/Arlington Waste Disposal Trust Fund
City of Alexandria – Department of Transportation & Environmental Services
P.O. Box 178 – City Hall
Alexandria, VA 22304

**RE: Response to Low NOx (LN™) System –
Title V Permit Renewal and Steam Production Increase Support**

Dear Rich:

This letter is a reiteration of Covanta's request of support from the Jurisdictions of our Title V air permit renewal and request for a 10% increase in steam production. As requested by the Jurisdictions, Covanta is in the process of compiling information regarding an air modeling study of PM2.5 stack emissions as well fugitive emissions at our cost to evaluate the air quality impact associated with the proposed 10% steam production increase.

As a further benefit to the environment, Covanta is willing to design and install our Low NOx (LN™) technology system at no capital expense to the Jurisdictions. As partners with the City of Alexandria and Arlington County, Covanta shares your vision that our LN™ system would be an environmental benefit to all and shows the Jurisdiction's and Covanta's commitment to improving the environment. The improvements and analysis completed will confirm our evaluation of minimal impact by the steam flow increase and in fact with the LN™ system improve an already stellar environmental track record at the facility. The Jurisdiction's commitment of support for the steam increase would trigger the engineering and design sequence as the first step in the facility improvement.

As you are aware, Covanta has developed and successfully installed and operates the LN™ system at several of our Energy from Waste (EfW) facilities. Covanta would use our in-house engineering expertise to design an LN™ system specific to our site. Furthermore, Covanta will utilize our in-house expertise as well as our experienced contractors to install the LN™ system. We anticipate that the system can be installed and operational within 24 months from execution of a NOx Control system agreement or 12-months of VDEQ Title V permit renewal approval, whichever occurs first (depending on outage timing). As part of our agreement, Covanta would not increase the steam flow production until the LN system is installed and operational and the Title V permit modification has been granted by VDEQ.

In exchange for our commitment to design and install the LN™ system at our cost, Covanta requests that the Jurisdictions support our Title V permit renewal/ steam production increase at public forums (as necessary) and in writing as part of any public comment period. In particular, we request that the Jurisdictions sign the VDEQ Local Governing Body Certification Form (Form 7 – see attached) which acknowledges that our facility is consistent with all applicable local ordinances.

Covanta realizes that your support is conditional on the outcome of the air modeling study which will be available in 1-2 months from now. As the leader of environmentally sustainable MSW disposal and clean energy solutions, Covanta shares your desire to continually look to improve our system performance and be protective of the environment. We look forward to executing an LN™ System agreement that benefits the environment while minimizing any adverse impact on our facility operations. If you have any questions, please do not hesitate to contact me at 703-370-7722 ext. 1608.

Sincerely,

A handwritten signature in black ink that reads "Michael Renga". The signature is fluid and cursive, with a long horizontal stroke at the end.

Michael Renga
Business Manager

Attachment: VDEQ Form 7

cc: J. Klecko, B. Donnelly, G. Madelmayer, Covanta
Bruce Johnson, City of Alexandria
Carl Newby, Barbara Liechti, Arlington County
Susan Raila, Don Castro, HDR
File

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY - AIR PERMITS

LOCAL GOVERNING BODY CERTIFICATION FORM

Facility Name: Covanta Alexandria/Arlington	Registration Number: 71895
Applicant's Name: Covanta Alexandria/Arlington, Inc.	Name of Contact Person at the site: George Ball-Llovera
Applicant's Mailing address: Covanta Alexandria/Arlington, Inc. 5301 Eisenhower Avenue Alexandria, VA 22304	Contact Person Telephone Number: 703-370-7722
Facility location (also attach map): 5301 Eisenhower Avenue, Alexandria, VA 22304	
Facility type, and list of activities to be conducted: Cogeneration, combustion of municipal waste to produce electricity	
<p>The applicant is in the process of completing an application for an air pollution control permit from the Virginia Department of Environmental Quality. In accordance with § 10.1-1321.1, Title 10.1, Code of Virginia (1950), as amended, before such a permit application can be considered complete, the applicant must obtain a certification from the governing body of the county, city or town in which the facility is to be located that the location and operation of the facility are consistent with all applicable ordinances adopted pursuant to Chapter 22 (§§ 15.2-2200 et seq.) of Title 15.2. The undersigned requests that an authorized representative of the local governing body sign the certification below.</p>	
Applicant's signature:	Date:
<p>The undersigned local government representative certifies to the consistency of the proposed location and operation of the facility described above with all applicable local ordinances adopted pursuant to Chapter 22 (§§ 15.2-2200 et seq.) of Title 15.2. of the Code of Virginia (1950) as amended, as follows:</p> <p>(Check one block)</p> <p><input type="checkbox"/> The proposed facility is fully consistent with all applicable local ordinances.</p> <p><input type="checkbox"/> The proposed facility is inconsistent with applicable local ordinances; see attached information.</p>	
Signature of authorized local government representative:	Date:
Type or print name:	Title:
County, city or town:	

[THE LOCAL GOVERNMENT REPRESENTATIVE SHOULD FORWARD THE SIGNED CERTIFICATION TO THE APPROPRIATE DEQ REGIONAL OFFICE AND SEND A COPY TO THE APPLICANT.]



M.K.

