



Mid-Atlantic Chapter Solid Waste Association of North America

SOLID WASTE NEWS For Waste Professionals

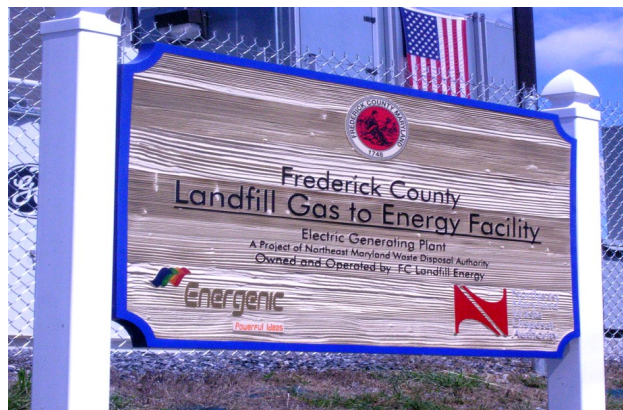
May 9, 2011

The 2MW Landfill Gas to Energy Project Frederick, Maryland

By: *Mehal Trivedi, Engineer II
Frederick County*

Frederick County, Maryland's Department of Solid Waste Management operates the Reichs Ford Road Sanitary Landfill (RFRSL) for disposal of non-recyclable solid wastes. In operation since 1969, the 520-acre facility comprises two sites. Site A reached final elevation and was closed and capped in 1998. A landfill gas (LFG) collection and control system consisting of gas wells, collection headers, multiple blowers, and an enclosed flare were installed. Site B began operation in 1997 and continues to receive municipal solid waste not included in the County's aggressive diversion initiatives intended to extend the landfill life through 2045. The RFRSL has a design capacity in excess of 2.75 million tons of solid waste and is therefore subject to the federal New Source Performance Standards/Emission Guidelines for MSW landfills (40 CFR 60 Subpart WWW). The landfill has a Title V – Part 70 Operating Permit, but the annual generation of non-methane organic compounds (NMOC) is not projected to exceed 55 tons in the foreseeable future. As a result, installation of LFG collection and control systems at the landfill is not mandatory.

In 2008, the Northeast Maryland Waste Disposal Authority (the "Authority") issued a Request for Proposals for the Development, Ownership, and Operation of a Landfill Gas to Energy System and Purchase of Landfill Gas at the Reichs Ford Road Landfill in Frederick County, Maryland. The successful respondent in this procurement was Energenic, LLC.



LANDFILL GAS TO ENERGY PROJECT continues on page 2

SWANA Mission Statement:

"Advancing the practice of economically and environmentally sound solid waste management in North America."

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The project scope included the following major design/build elements:

- new LFG collection systems for the uncapped and active Area B;
- integration of the new Area B collection system with the existing Area A collection system and flare;
- upgrades to the existing flare system;
- new LFG conditioning systems and blowers;
- two containerized reciprocating internal combustion engine-driven generators; and
- power transformation equipment and utility interconnection.

Under a commercial agreement between Energenic, the Authority, and Frederick County; FCLE, LLC was created to purchase LFG from the County, maintains and operates all of the gas collection systems and the flare, expands the collection system as required in the future, owns and operates the electric generating plant, and sells electric power into the grid. Project revenues include energy sales, environmental attributes including renewable energy credits (RECs) and carbon credits from voluntary GHG destruction. The project commenced commercial operation in May of 2010.

Composting Pad Tour Frederick County, Maryland

*By: Mehal Trivedi, Engineer II
Frederick County*

Frederick County's Natural Wood Waste Recycling and Composting System facility received a Bronze award from the Solid Waste Association of North America at Wastecon held in Long Beach, California on September 24, 2009.

The Composting Pad fits the 3Rs of recycling...

- It **reduced** construction cost by 50%, the composting pad is made up of 24,422 square yards of recycled asphalt as pavement surface, avoiding costs associated with rising liquid asphalt index the price posted by the Maryland State Highway Administration for new asphalt.
- It **reused** the top of the now closed rubblefill, where it will continue to operate as a Natural Wood Waste Recycling operation on a Recycled Asphalt Pavement pad that allows for the additional loading that may be encountered during its operation. The end use of a closed and capped rubblefill for composting which otherwise would have remained an open grassy area.
- And it will continue to **recycle** wood waste to reusable mulch and compost.

Scholarship Sponsorship Opportunities

Please contact Mehal Trivedi at mtrivedi@frederickcountymd.gov regarding scholarship sponsorship opportunities. Office paper Systems (OPS) donates \$2,000 per year in memory of Kevin Stearman. Do you want to have a scholarship names for your company or an individual? The scholarship amount is negotiable (i.e., it can be less than \$2,000).



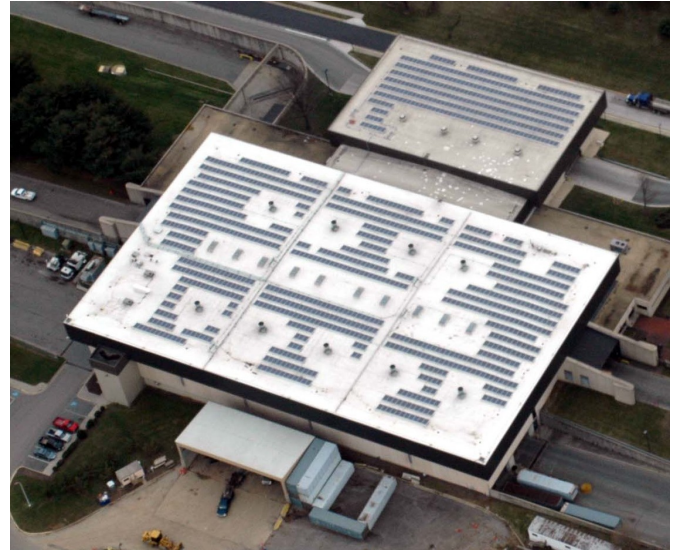
Transfer Station Solar Project Montgomery County, Maryland

By: *Andrew Kays, Project Manager*
Northeast Maryland Waste Disposal Authority

On April 18, 2011, elected officials, County staff and other dignitaries gathered at the Montgomery County Transfer Station in Derwood, MD to celebrate the installation of a roof mounted solar array. The work of bringing the solar array project to operation started twenty-two months earlier. The Northeast Maryland Waste Disposal Authority (Authority) issued a Request for Proposals (RFP) on behalf of Montgomery County (County) for the development of solar energy at the publicly owned solid waste transfer, recovery, recycling and composting facilities in the County. The County elected to use the Authority for the procurement of solar energy under the existing intergovernmental agreement between the County and the Authority. The RFP was issued on February 4, 2009. The Authority requested traditional power purchase agreement terms as well as a lease term for the solar array in the RFP. In this second option, the vendor would have the opportunity to use the roof space and sell the electricity to the grid. At the County's request, a novel approach for the vendors was also included as option three in the RFP. For this third option, the vendor would retain all Renewable Energy Credits (RECs), environmental attributes, tax credits and other credits accruing to the owner of the system and sell electricity to the Authority and provide alternative RECs equivalent to the production of the system.

The evaluation committee reviewed the proposals and made the recommendation to award to SunEdison, LLC. The power purchase agreement stipulated that the vendor supply solar RECs equivalent to the annual production of the array for the term. On July 1, 2009 the Montgomery County Council approved the recommendation of award and signed a Task Order with the Authority for the development of the solar project at the Transfer Station. SunEdison began the process of finalizing financing for the project in preparation for construction; and then the Renewable Energy Credit (REC) market in Maryland collapsed.

Fast forward almost a year later and the project was revived when the Authority was awarded two of the initial twenty grants under the Maryland Energy Administration's (MEA) Project SunBurst program. MEA received funding through the United States Department of Energy (DOE), State Energy Program (SEP), and such



funding was made available pursuant to the American Recovery and Reinvestment Act of 2009 (ARRA). The Authority was awarded a grant for the Montgomery County project as well as a grant for the New Cut Road Landfill Project in Howard County. At the Ribbon-cutting Ceremony for the Transfer Station Project, Robin Davidov highlighted "the assistance and support of Governor O'Malley's Maryland Energy Administration and the Project Sunburst grant." "This project would not have succeeded without his renewable energy leadership."

Construction of the array began in earnest in early July of 2010; almost a year to the day that the Power Purchase Agreement (PPA) was signed between the Authority and SunEdison. The Transfer Station is considered an attractive solar site with minimal shading, relative young roof (by age) and existing electrical demand. The main Transfer Station roof is about 52,500 square feet (SF), the roof on the new addition to the Transfer Station building is about 17,325 SF. SunEdison installed American made components for the Project using local contractors. A major storm hit the site on July 25, 2010, resulting in roof damage and construction setbacks. The County, the Authority, the Authority's contract Operator of the Transfer Station (Covanta Montgomery, Inc.) and SunEdison pushed through the additional challenges to complete the work.

TRANSFER STATION SOLAR PROJECT continues on page 4

The Sunburst grant was used by the project developer, Sun Edison, to reduce the overall costs of the Project to the ratepayers in the County. The County paid no upfront costs for the array and will instead pay a fixed kilowatt (KW) hour rate for the twenty year life of the PPA. The County will receive Solar Renewable Energy Credits as part of the PPA in an annual amount equal to the production of the array.

The County will be paying a lower rate for the solar array generated electricity than the current power contract at the Transfer Station. Even with the purchase of the RECs, the County will save an estimated \$200,000 over the twenty-year PPA term. The array is designed at 280 KWDC and will generate approximately 345,103 KW hours of electricity in the first year of operation; equaling almost 1/3 of the electricity needs of the Administration Building of the Transfer Station. The solar array will generate, on average every year, enough clean energy to power 30 homes.

On April 18, 2011, the Project was ceremoniously turned on by County Executive Leggett, Authority Executive Director and MEA Director Malcolm Woolf. The Project had been providing electricity to the Transfer Station since March. During the event, County Executive Leggett noted "Montgomery County is a nationally recognized leader in advancing clean energy and promoting sustainability, and although this may be a small project in the terms of output compared to some of the others, rest assured, it is a big deal for us to be able to do our part to produce clean, renewable energy."

For more information about the Authority's solar procurements or the Montgomery County contract please contact Andrew Kays at akays@nmwda.org or 410.333.2730.

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Racking system for the panels on the roof, inset showing the contact points of the rack with the roof membrane compatible wear pads.



County Executive Ike Leggett (right of the switch), (from left) Franny Yuhas, manager, SunEdison; Malcolm Woolf, director of the Maryland Energy Administration (MEA); and Robin Davidov, executive director of the Northeast Maryland Waste Disposal Authority (NMWDA) symbolically "flipped the switch" for the solar array on April 18, 2011.

Employment Announcements

Solid Waste Consulting Engineer ARM Group Inc.

ARM Group Inc. is a dynamic and growing engineering firm comprised of engineers, geologists, hydrogeologists, ecologists, and geophysicists with specialized experience in solid waste management and design, environmental services, geotechnical and geophysical investigations and design, water resources, and energy. Visit our website at www.armgroup.net.

ARM Group Inc. has an immediate need in our Columbia, MD office for a mid- to senior-level Solid Waste Consulting Engineer. Candidate should have at least 5 years of experience in landfill design, permitting, compliance support, and landfill construction oversight and certification. Advanced knowledge and implementation of MD regulations are a plus. Experience in landfill gas (LFG) management, LFGTE projects, mechanically stabilized earth (MSE) berms, thorough understanding of geosynthetic applications, leachate management, and storm water control are desired. Candidate must have a demonstrated ability to produce comprehensive permitting and construction drawings, and manage multiple projects, clients, and junior staff. Qualified candidates must have proficient verbal and written communication skills, excellent computer skills, strong work ethic, and the ability to work as a team player. A Bachelors Degree in Civil or Environmental Engineering and PE license are required. An MS degree is a plus.

ARM Group Inc. offers a competitive salary and comprehensive benefits, including medical, dental, vision, and 401k plan. Email cover letter, confidential resume, and salary history to hr.resumes@armgroup.net. ARM Group Inc., 9175 Guilford Road, Suite 310, Columbia, MD 21046, is an equal opportunity employer.

AutoCAD Operator ARM Group Inc.

ARM Group Inc. is a dynamic and growing engineering firm comprised of engineers, geologists, hydrogeologists, ecologists, and geophysicists with specialized experience in solid waste management and design, environmental services, geotechnical and geophysical investigations and design, water resources, and energy. Visit our website at www.armgroup.net.

ARM Group Inc. has an immediate need in our Columbia, MD office for an AutoCAD Operator with 5 or more years of experience in drafting for solid waste management civil engineering and/or surveying projects. Qualified candidates must have proficient verbal and written communication skills, excellent computer skills, strong work ethic, and the ability to work as a team player.

Candidate must have proven drafting presentation skills, must be proficient with AutoCAD Civil 3D 2011. Must also be able to efficiently generate grading plans, profiles, sections details, and quantity/volume calculations. Must have computer literacy in Microsoft Word and Excel. AutoCAD Operator should be accustomed to completing work with limited supervision and be comfortable working in a multi-disciplinary team environment. An Associates Degree in Surveying or Engineering is a plus.

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Reminders / Wanted

- ◆ “Reporters”/writers for our Chapter newsletter.
- ◆ Important Websites to Remember: www.swana.org, www.swana-midatl.org and www.mdrecycles.org.
- ◆ Training the Trainers: Contact a Board member if interested in being trained to be a trainer for a SWANA course.
- ◆ SWANA E-sessions: If your organization presents e-sessions, make them a Chapter event so that all attendees can get CEU's. Contact Steve Lippy, Dana Murray or Shirl Wright.
- ◆ Job Vacancies in your Organization: Contact swright@nmwda.org for inclusion in our Chapter newsletter and website.
- ◆ Articles, information, recent/on-going projects of interest, active purchase orders, etc.: Contact swright@nmwda.org to be placed in our Chapter newsletter.
- ◆ Scholarship Sponsors: Contact Steve Lippy, Mehal Trivedi or Hallie Clemm.
- ◆ Name(s) of Prospective SWANA Members: Contact either our Chapter Membership Chair, Jessica Martin jmartin@synteccorp.com or direct the prospective member to our Chapter website www.swana-midatl.org or SWANA's website www.swana.org.
- ◆ Newsletter Ads: These are business card size ads only (2" x 3.5"); \$100 for 4 issues. Send your ad in a JPG file to swright@nmwda.org. Please make check payable to: Mid-Atlantic Chapter of SWANA and mail to Shirl Wright at NMWDA, 100 S. Charles Street, Tower II - Suite 402, Baltimore, MD 21201-2705.
- ◆ American Academy of Environmental Engineers: If you are an environmental engineer, you are eligible to become a member or to be certified in solid waste management by the American Academy of Environmental Engineers. See www.swana-midatl.org or www.aeee.net.

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We're on the Web!
www.swana-midatl.org

May 9, 2011

SWANA Guiding Principle:

“Local government is responsible for municipal solid waste management, but not necessarily the ownership and/or operation of municipal solid waste management systems.”