



Vol. 29, No. 2

Update to Clients

Update

SAI Assists with NJDEP Fill Guidance

SAI has recognized expertise in the remediation of complex sites and the use of alternative and clean fill to develop cost-effective and protective remedies. In fact, the first project in New Jersey that utilized alternative fill was the redevelopment of the former Elizabeth Landfill into the Jersey Gardens Mall, which has been featured in several past editions of this newsletter.

It was Joe Wiley, Senior Vice President of SAI, who pioneered the concept of reusing fill materials based upon site-specific analyses of pre-existing contaminants and the environmental controls to be used at the receiving site. To date, SAI has received approval for over 3 million cubic yards of slightly contaminated material and reviewed over 1,600 applications by fill providers and certified them to the NJDEP. SAI also developed a clean fill review procedure 15 years ago and has utilized it for numerous clean fill certifications.

Continuing the SAI tradition, Rodger Ferguson, CHMM, LSRP, was chosen to co-chair the NJDEP stakeholder workgroup that developed the *Fill Guidance for SRP [Site Remediation Program] Sites*. The guidance has been prepared

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SAI Announces New President

Dr. Lahbib Chibani, P.E., has been named President of SAI as of August 23, 2011. Dr. Chibani has been with SAI for 22 years, most recently in the position of Senior Vice President of Engineering. The former President, Dr. Marwan M. Sadat, P.E., LSRP, will now serve as Chief Executive Officer for SAI.



Dr. Lahbib Chibani, P.E., President of SAI.

“SAI is fortunate to have such a talented engineer as Dr. Chibani move into the role of providing the day-to-day oversight of the operations of the company,” said Dr. Sadat. “Lahbib has both the technical expertise and the business acumen needed to move SAI into our next phase of growth and development.”

During Dr. Chibani’s career at SAI, he has provided both engineering and project management services for many of SAI’s most successful endeavors, including the Jersey Gardens Mall brownfield redevelopment project in Elizabeth, NJ, and The Tides at Seaboard Point in North Wildwood, NJ. The Jersey Gardens Mall project was awarded the USEPA’s Phoenix Award in 2001 for Region II, and was ranked nationally. The Tides at Seaboard Point was awarded the 2003 Award for Excellence in the environmental category from the New Jersey Business and Industry Association. Currently, Dr. Chibani is working on two alternative energy projects at Edgeboro Landfill, as well as on closing several landfills in the Meadowlands.

Dr. Chibani, who was born in Morocco, has worked extensively both in the US and abroad, in countries as diverse as Algeria, Ivory Coast, Mexico, Colombia, Yemen, Jordan, Tunisia, Morocco, Armenia, West Bank, and Saudi Arabia. He has directed and/or managed environmental projects that dealt with such issues as solid waste, hazardous waste, bioremediation, and maritime pollution. He has extensive experience in computer modeling of civil and environmental engineering processes, and in financial and institutional studies.

Dr. Chibani performed his post-doctoral studies at the Computational Mechanics Institute in the UK. He received his Ph.D. in Civil Engineering from the University of Illinois, his M.S. in Civil, Hydraulic and Environmental Engineering from Rutgers University, and his B.S. in Civil Engineering from Mohamed V University in Rabat, Morocco.

“It’s an honor to be named President of SAI. This organization has been at the forefront of numerous exciting projects in our 25 years in the business, and I am looking forward to leading SAI’s extraordinary and talented scientists and engineers in their continuing successful efforts on behalf of our clients.

SAI is very pleased to welcome Dr. Chibani to his new position, and looks forward to this dynamic new change in our company.

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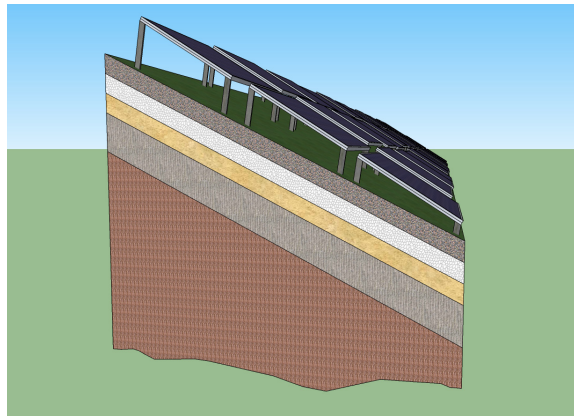
SAI Chosen as Environmental Consultant for NJ Schools Development Authority

SAI is proud to announce that we have been chosen as one of a very few firms to provide site environmental consulting and site closure services to the New Jersey Schools Development Authority (NJSDA).

SAI has worked with the NJS-DA in the past on some very successful projects. Most notably, we oversaw the removal of contaminated historic fill from the Martin Luther King - Jefferson School site in Trenton. The contamination was not discovered until after the steel framing for the new school had been completed. SAI performed a risk assessment, developed site remediation alternatives, designed the remedial actions for the site (including bid specifications), and oversaw the removal of impacted RCA and historic fill material from the site. We also oversaw the reconstruction of a stormwater management system and provided perimeter air monitoring during the construction phase.

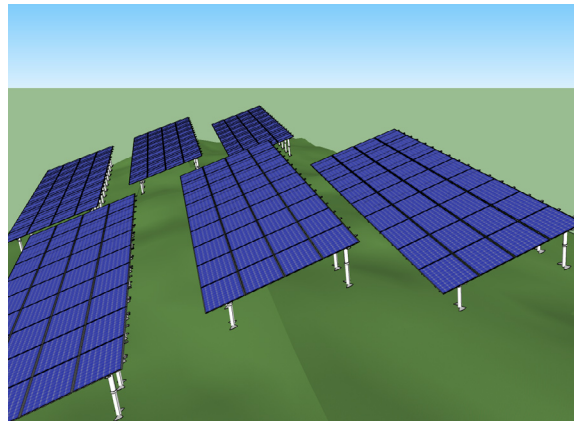
SAI is pleased to have this opportunity to utilize our expertise in site remediation issues to assist the NJSDA and the children of New Jersey.

SAI Client Proposes Massive Solar Project at ILR Landfill



An artist's rendering of a cross-section view of the landfill cap, with solar panels.

The ILR Landfill is one of the largest privately owned landfills in New Jersey. SAI has been the engineer for the ILR Landfill in Edison, New Jersey, for the past five years. During that time, SAI has provided a wide variety of services at the landfill, working to prepare it for whatever future redevelopment the owners might choose. Due to its geographic isolation, the ILR Landfill is a logical site for a renewable energy project. There are no residential neighbors and the site is only visible from major roadways at a distance of almost a mile. In addition, the landfill has been closed for many years and properly capped, so the site does not require large expenditures for environmental improvements.



A side view of the panels after installation.

Recently the owners of ILR have begun working with a solar development company to create a solar gen-

erating complex on approximately 56 acres of the closed ILR Landfill. The proposed design involves the installation of up to 61,000 ground-mounted solar panels on the site. Because ILR Landfill has over 100 feet of waste fill and relatively steep side slopes, the design of foundation for the solar complex is somewhat of a challenge. SAI engineers are once again assisting the owners of ILR, this time by designing a system involving ballasts for the foundations that can be placed on top and on the side slopes of the capped landfill without disturbing the clay cap.

SAI has completed a site plan that was presented to the Edison Township Planning Board. The Board granted Preliminary Approval of the plan in May



A view of an extraction well at ILR Landfill, with wetlands in the background. This area will be used to site some of the solar panels when the project is completed.

2011. The next level of approvals for the project, by the NJDEP, is currently in the works. This solar development will generate approximately 15 megawatts of electricity, which will be supplied to the grid.

More New Alternative Energy Development at Edgeboro Landfill

SAI is proud to be a member of the team working on two separate alternative energy projects at the Edgeboro Landfill in Middlesex County, NJ. Cinnamon Bay, LLC has recently installed a landfill gas-to-en-

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From the Editor -

If you would like to receive a full-color electronic version of our newsletter in Adobe PDF format via email, or if you want additional information about SAI and its services, please send an email to: lthompson@sadat.com.

Thanks — we look forward to hearing from you.

SAI Assists “Green” Company with Air Permit and Planning Board Approval

Primus Green Energy (Primus), based in Hillsborough, NJ, has developed a process to convert biomass into standard automotive fuels. These fuels are so compatible with current technology that they do not



Senior Project Manager Randy S. Kertes, PG, CPG stands with George Boyajian (VP Business Development) at the Primus Green Energy laboratory facility.

require engine customization and can utilize the existing fuel distribution infrastructure. The biomass for the Primus process can be grown locally and sustainably on marginal lands, without competing with food crops. The Biomass-to-Liquid fuels (BTL) approach seems the most promising of all renewable energy solutions currently being studied. BTL has been adopted by various ventures worldwide. Primus is the culmination of eight years of development work, which has yielded among other things a pilot plant operation that requires an NJDEP air permit.

The BTL pilot plant process converts biomass (wood pellets or “feedstock” composed of 100% raw Pennsylvania hardwoods and containing no additives or binders) to synthetic gas by heating the biomass at a

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for use by LSRPs in remediating contaminated sites. Mr. Ferguson conducted online training for the guidance in conjunction with NJDEP and the Licensed Site Remediation Professional Association on October 27, 2011 and is scheduled to hold this training again on November 17, 2011.

high temperature. The synthetic gas that is produced is converted into biogasoline using catalytic reactors. The Primus conversion process is a completely closed loop system -- more than 95% of the energy created is used to generate biogasoline and internal heat, with only a small amount of unused energy being burned in a combustor and released to the atmosphere.

The pilot plant process is extremely efficient and produces a very limited amount of emissions, mostly from the combustion of natural gas. SAI assisted Primus in the preparation of estimated emission calculations and the submission of NJDEP’s RADIUS permit application. SAI organized pre-application meetings with representatives from the NJDEP Air



Randy is holding a handful of wood pellets used for the biogasoline process.

Quality Permitting section and negotiated permit and compliance conditions for their air permit.

Primus’ pilot plant also required local Planning Board approval. SAI prepared an environmental impact statement and provided expert reports for both the Environmental Commission and the Planning Board to support the proposed site plan.

The Fill Guidance addresses the issues that should be considered when using imported fill material on a contaminated site. It also establishes that the LSRP is the gatekeeper for any imported fill material. This particular guidance has bridged some gaps in the current Technical Requirements for Site Remedia-

NJDEP Fill Guidance

tion and the proposed rule to be finalized in May 2012 by addressing NJDEP’s policy regarding the use of alternative fill materials and by defining clean fill and the measures necessary to document its compliance.

Alternative (or contaminated) fill material should comply with the NJDEP “Like on Like” and “75th percentile” policies. Briefly, the Like on Like policy states that contaminants in alternative fill imported to the site must be limited to those already present at the site. The 75th percentile policy establishes that the maximum allowable concentration of contaminants of concern in imported fill is 75% of what was found onsite during the remedial investigation. Both policies are relaxed for moving impacted soils within a single site.

The guidance provides a new definition of clean fill material because it was never explicitly defined until now. Sampling will now be necessary to confirm compliance with the current standards and criteria. As a result, a major point of concern in the regulated community is the use of NJDEP’s default impact to groundwater criteria. The guidance does, however, allow the LSRP to develop site-specific acceptance criteria to document that there is no groundwater impact. These criteria can be developed inexpensively for selected parameters on a case-by-case basis when the receiving site and use have been clearly identified.

Also of concern were the “de-

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Congratulations!



Janine & Doug Knapp

SAI Administrative Assistant Janine Lipski married Doug Knapp on October 1 of this year. Janine has been with SAI for four years and works primarily with the Marketing Department.

More Congratulations!

SAI Vice President of Finance Brian McGhee has successfully completed his first marathon, the 36th Annual Marine Corps Marathon in Washington, D.C. The race began in Arlington, VA, with runners travelling over the Key Bridge into Washington, D.C. The route took runners past the Capitol, the Washington Monument, and the Lincoln Memorial before crossing the finish line at the Marine Corps War Memorial. Brian finished in 3 hours 27 minutes.

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fault” and “reduced” sampling frequencies for both alternative and clean fill. These frequencies were recommended for cases where there is little or no information about the source of the fill material. However, the LSRP may deviate from these sampling frequencies when data are available about the source of the material. For example, the collection of composite samples would be appropriate in most cases where the material is shown to be homogeneous and the LSRP can provide a defensible basis for the chosen sampling strategy. The guidance states that a single sample is sufficient for potential clean fill materials from operating mines and quarries.

For more information on the use of alternative and/or clean fill, contact Rodger Ferguson at rferguson@sadat.com.

SAI Invaded!

On Wednesday, August 10, SAI was the lucky winner of WPST’s Office Invasions contest! WPST DJ Shinn and team members Tony, Regina and Steph showed up at our offices in the WPST van with lunch provided by Risoldi’s Great Value Store in Mercerville. Evening DJ Shinn manned the grill, and SAI staff spun the wheel for prizes, including T-shirts and tickets to shows in Atlantic City.

But don’t think that this is just a marketing gimmick (like we did). SAI beat out about 3,000 other entries for the chance to lunch with the crew from WPST. Our Office Invasion was a welcome break during a long summer when we’d all rather have been outside

Edgeboro Alternative Energy

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ergy (LFGTE) facility that is converting the methane produced within the closed and capped landfill into useable energy. The LFGTE facility is projected to generate about 10 megawatts of electricity.


SAI designed the gas collection system that conveys the gas from the landfill to the generating site. This LFGTE facility recently received approval by the NJDEP. It has already begun producing useable energy.

In our Fall 2010 newsletter, SAI described our work with the National Energy Renewable Corporation Middlesex Solar I, LLC (NERC) on the design and installation of an array of solar photovoltaic (PV) panels at Edgeboro Landfill. The solar panels are projected to produce about 4 megawatts of electricity.

enjoying the weather. Many thanks to WPST and to Risoldi’s for a fun surprise picnic.



SAI staff and families pose in front of the WPST Van.

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Come visit us at the 96th Annual League of Municipalities Conference! On November 14-17, 2011, SAI will once again be in booth 746 in the Atlantic City Convention Center. Now that you know where to find us, stop by and say Hello!