Environmental News, Regulations, and Technical Discussions

November 2011

Atlanta Environmental Management, Inc.

Newsletter

EPA, DOE Partner to Develop Renewable Energy at Former Tronox Facility and Other Potentially Contaminated Sites

The U.S. Environmental Protection Agency (EPA) and the U.S. Department of Energy's National Renewable Energy Laboratory (NREL) are evaluating the feasibility of developing renewable energy on Superfund, brownfields, and former landfill and mining sites. As part of the RE-Powering America's Land Initiative, EPA is investing approximately $1 million for projects across the United States aiming to revitalize abandoned sites while protecting people's health and the environment and providing economic benefits, including job creation, to local communities.

In September 2008, EPA launched the RE-Powering America's Land Initiative to encourage development of renewable energy on potentially contaminated land and mining sites. EPA partnered with NREL to do an initial screening to determine sites that may be used for renewable energy projects. "The RE-Powering America's Land Initiative is not just about using these sites for energy production but using these sites to re-energize communities," said Mathy Stanislaus, assistant administrator for EPA's Office of Solid Waste and Emergency Response. "These studies are the first step to transforming these sites from eyesores today to community assets tomorrow."

Projects will analyze the potential development of wind, solar, biomass, or geothermal energy at 26 sites. The analysis will determine the best renewable energy technology for the site, the optimal location for placement of the renewable energy technology on the site, potential energy generating capacity, the return on the investment, and economic feasibility of the renewable energy projects. The 26 sites include one facility in Georgia, as well as sites located in Vermont, New York, New Jersey, Delaware, Mississippi, Illinois, Indiana, Louisiana, New Mexico, Iowa, Missouri, Kansas, Nebraska, Colorado, Montana, California, Arizona, Oregon, and Washington. Some of the sites under consideration for renewable energy projects have completed cleanup activities, while others may be in various stages of assessment or cleanup. Renewable energy projects on the sites will be designed to accommodate the site conditions.

In Georgia, a study will be conducted on the potential for solar or biopower generation at the former Tronox facility near Savannah. The feasibility study will evaluate the technical and economic opportunities and challenges at the site. It will provide a preliminary analysis of the viability of the site, will assess solar resource availability or biopower potential, will identify possible system or facility size, design, and location, and will review the economics of the proposed facility.

The 1,480-acre former Tronox facility once housed titanium dioxide and sulfuric acid production facilities, a former wastewater treatment plant, and several rail lines. From 1985 to 2008, a municipal solid waste incinerator also was in operation on a leased five-acre portion of the site. Soil and water along the existing facility are impacted by metals, volatile organic compounds, and semi-volatile organic compounds. The proposed project envisions covering the former municipal waste landfill with a solar collection system and converting the municipal solid waste incinerator to a biopower plant. Because there is significant utility infrastructure at the site, the need for extensive investment in transmission equipment to sell power for grid distribution will be minimal. If constructed, these projects may provide sufficient energy to power the facilities still in operation at the site.

Renewable energy projects of this nature have been successful in the past. There have been more than 20 renewable energy projects built on contaminated sites and more are currently underway. For example, in 2010, a six-megawatt solar array was constructed on the Aerojet General Corporation Superfund site in Sacramento County, California. This solar farm is being used to power the cleanup. Also in 2010, the 10-megawatt Exelon City Solar installation, which is the largest urban solar power plant in the United States, was built on a brownfield site in Chicago.

Superfund sites are the most complex uncontrolled or abandoned hazardous waste sites identified by EPA for cleanup. Brownfields are properties at which expansion, redevelopment, or reuse may be complicated by the presence of contaminants. Contaminated lands can be ideal locations for developing renewable energy projects because they often can leverage existing utility infrastructure, and this redevelopment may be allowed under existing zoning.

Inside this issue:

Altamaha Spinymussel Listed As an Endangered Species

The U.S. Fish and Wildlife Service has listed the Altamaha spinymussel as an endangered species and at the same time has designated 149 miles of river channel in the Altamaha River as critical habitat. The spinymussel has been a candidate for listing as an endangered species under the federal Endangered Species Act (ESA) since 2001. The listing of the spinymussel as endangered becomes effective on November 11, 2011, 30 days following the rule's publication in the *Federal Register*.

The Service has conducted an analysis of the possible economic impacts resulting from this critical habitat designation. It predicts little impact on any sector of the economy.

The Altamaha spinymussel is found only in the Altamaha Basin in southeastern Georgia. Under the ESA, an endangered species is any species in danger of extinction throughout all or a significant portion of its range. The spinymussel was listed with critical habitat because it has suffered severe declines in population numbers and distribution over several decades, coupled with no known reproductive success in recent years. In addition, little is known about the species' host fish during reproduction and its status. Host fish help mussels form during their larval stage. However, the spinymussel's host fish could potentially be threatened by the introduction of non-native species, such as the flathead catfish and Asian clam, into the Altamaha River.

Water quality in the Altamaha River has declined because of sediment from forestry, agriculture, and other land-clearing activities. Dam operations, water withdrawals, drought, and contaminants also have degraded the species' habitat. The spinymussel has disappeared from the lower portions of the Altamaha River's three major tributaries, the Ohoopee, Ocmulgee, and Oconee Rivers.

One of Georgia's most distinctive species, the Altamaha spinymussel has one to five long spikey spines on each of its shells. These spines start growing on a juvenile, can be crooked or straight, and may reach an inch or more in length by the time an individual is fully grown.

The designated critical habitat is along the main stream of the upper Altamaha, lower Ocmulgee, and Ohoopee Rivers in Appling, Ben Hill, Coffee, Jeff Davis, Long, Montgomery, Tattnall, Telfair, Toombs, Wayne, and Wheeler Counties in Georgia. "Critical habitat" is a term defined in the Endangered Species Act as referring to specific geographic areas that are essential to the conservation of a threatened or endangered species and that may require special management considerations or protection. The designation of critical habitat will help ensure that federal agencies and the public are aware of Altamaha spinymussel habitat needs and that proper consultation is conducted by federal agencies when required by law.

A critical habitat designation does not set up a preserve or refuge and only applies to situations where federal funding or a federal permit is involved. It does not allow government or public access to private land. Federal agencies that undertake, fund, or permit activities that may affect critical habitat are required to consult with the Service to ensure that such actions do not adversely modify or destroy designated critical habitat.

The ESA makes it illegal to kill, harm, or otherwise "take" a listed species. The ESA also requires all federal agencies to ensure that actions that they authorize, fund, or undertake do not jeopardize the existence of listed species, and it directs the Service to work with federal agencies and other partners to develop and carry out recovery efforts for those species. Listing also focuses attention on the needs of the species, encouraging conservation efforts by other federal, state, and local agencies, conservation groups, and other organizations and individuals.

Copies of the final rule and maps published in the *Federal Register* on October 11, 2011, are available by contacting Jimmy Rickard, U.S. Fish and Wildlife Service, Athens Ecological Services Office, 105 Westpark Dr., Suite D, Athens, Georgia 30606 (telephone 706-613-9493, extension 223; facsimile 706-613-6059). The final rule and maps can also be found at http://www.fws.gov/athens.

EPA Details Plans for Hydraulic Fracturing Study

On November 3, 2011, the U.S. Environmental Protection Agency (EPA) released the plans for its study into whether hydraulic fracturing, the drilling technique that has led to a boom in domestic natural gas production, is contaminating drinking-water supplies. EPA will try to determine the impact of large-scale water withdrawals, aboveground spills of drilling fluids, and the fracturing process itself on water quality and quantity in states where tens of thousands of wells have been drilled in recent years.

Hydraulic fracturing, or fracking, involves the high-pressure injection of millions of gallons of water, along with sand and chemical additives, deep underground in order to extract natural gas trapped in shale deposits. Energy companies have greatly expanded their use of fracking as they tap previously unreachable shale deposits, including the lucrative Marcellus Shale in Pennsylvania and neighboring states. The United States has some of the richest deposits of shale gas, mostly in areas east of the Mississippi River, and natural gas plays a key role in the nation's future clean energy plans. Industry has long contended that fracking is safe, but environmentalists and some residents who live near drilling sites claim that it has polluted groundwater.

EPA has also taken recent steps to increase federal regulation of fracking, announcing that it will develop national standards for the disposal of the wastewater and proposing for the first time to control air emissions at oil and gas wells, particularly where fracking is used. Drillers have resisted enhanced federal regulation, saying that it should be left up to individual states.

In its Fiscal Year 2010 budget report, the U.S. House of Representatives Appropriation Conference Committee identified the need for a focused study of hydraulic fracturing. In March 2010, EPA announced its intention to conduct the study in response to the request from Congress. Since then, the agency has held a series of public meetings across the nation to receive input from states, industry, environmental and public health groups, and individual citizens. In addition, the study plan was reviewed by the Science Advisory Board (SAB), an independent panel of scientists, in order to ensure a scientifically sound approach.

The study will examine drilling sites in Pennsylvania, Colorado, Louisiana, North Dakota, and Texas. Initial research results are expected by the end of 2012. A final report will be released in 2014.

Industry groups said that they are confident that the study will vindicate their position that fracking does not harm the environment or human health. "The industry has taken the lead in working with state regulators to constantly improve operations, industry practices and guidelines as well as improve communications with local communities," said Stephanie Meadows, a senior policy adviser at the American Petroleum Institute (API).

API and five other industry groups recently complained to EPA Administrator Lisa Jackson that agency staff began collecting field data and water samples months before the study plan was finished. In an October 20 letter to Administrator Jackson, the industry groups also questioned the study design itself and said that it could undermine the credibility of the findings. EPA contends that it began work over the summer so that it could finish the study by 2014.

EPA has studied fracking before. In 2004, looking at its use in coalbed methane deposits, EPA concluded that the technology is safe, but the study methodology was widely criticized as flawed. The new study will be the agency's first look at the impact of fracking in shale deposits. The new EPA study will look at the entire water lifecycle of hydraulic fracturing in shale deposits, beginning with the industry's withdrawal of large volumes of water from rivers and streams and ending with the treatment and disposal of the wastewater that comes back out of the wells after fracking. Researchers will also study well design and the impact of surface spills of fracking fluids on groundwater.

EPA Releases 2011 Edition of Exposure Factors Handbook

On September 30, 2011, the U.S. Environmental Protection Agency (EPA) released the *Exposure Factors Handbook: 2011 Edition*. The document was prepared by the National Center for Environmental Assessment (NCEA) within EPA's Office of Research and Development. The *Exposure Factors Handbook: 2011 Edition* provides information on various physiological and behavioral factors commonly used in assessing exposure to environmental chemicals.

The *Exposure Factors Handbook: 2011 Edition* is available at http://www.epa.gov/ncea/efh/report.html.

The handbook was first published in 1989 and was updated in 1997. The new edition incorporates information made available from 1997 up until July 2011. It also reflects the revisions made to the *Child-Specific Exposure Factors Handbook*, which was last updated and published in 2008. Each chapter in the *Exposure Factors Handbook: 2011 Edition* presents recommended values for the exposure factors covered in that particular chapter's exposure route as well as a discussion of the underlying data used in developing the recommendations.

The *Exposure Factors Handbook: 2011 Edition* provides a summary of the available statistical data on various factors used in assessing human exposure. The handbook is intended for use by exposure assessors inside and outside the Agency who need to obtain data on standard factors to calculate human exposure to environmental agents. Standard factors include drinking water consumption, soil ingestion, inhalation rates, and dermal factors, including skin area and soil adherence factors. The handbook also provides data on the consumption of fruits and vegetables, fish, meats, dairy products, and homegrown foods; human milk intake; human activity factors; consumer product use; and building characteristics. Recommended values are for the general population as well as for various segments of the population whose characteristics differ from those of the general population. The NCEA has strived to include full discussions of the issues that assessors should consider in deciding how to use these data and recommendations.

Recent EPA Enforcement Actions

City of Pineville LA Pleads Guilty to Illegal Discharge. The City of Pineville, Louisiana, entered a plea of guilty on October 21, 2011, in federal court stemming from an illegal discharge of hydraulic fluid from a pumping station that occurred in September 2008. Following heavy rainfall from Hurricane Gustav, the City of Pineville's Huffman Creek Pumping Station illegally discharged the hydraulic fluid over the levee and into Bayou Maria, which ultimately empties into the Red River. An investigation found that the source of the discharge was equipment at the City of Pineville's Huffman Creek Pumping Station, which was known by city personnel to be in disrepair and to be leaking hydraulic fluid. The minimum fine for the illegal discharge from the pumping station is $2,500 per day of violation, with a maximum fine of $25,000 per day of violation. Sentencing is set for January 4, 2012.

Oil Pollution Case Results in Felony Guilty Pleas and $750,000 Fine. In Portland, Oregon, on November 2, 2011, the owner and operator of a Cyprus-based ship pleaded guilty to felony oil pollution charges. A.E. Nomikos Shipping Inv. Ltd. and Lounia Shipping Co. Ltd. pleaded guilty to one count each of violating the Act to Prevent Pollution from Ships and knowingly making false statements to the U.S. Coast Guard. As part of the plea agreement, the companies agreed to pay a $750,000 fine. In addition, both defendants were sentenced to three years probation, during which they will be required to fund and implement an Environmental Compliance Plan. At least between June 2011 and October 16, 2011, the companies directed subordinate engine room crew to pipe fresh, clean water directly into the Oil Content Meter (OCM) so that it would not properly prevent the overboard discharge of oil-contaminated waste. The Chief Engineer failed to include any entries in the Oil Record Book relating to the crew's improper use of fresh water to manipulate the OCM and also included inaccurate entries in the Oil Record Book regarding the crew's use of the vessel's waste oil incinerator. This case came to light after the United States Coast Guard boarded the ship on or about October 16, 2011, to conduct a Port State Control Safety Exam for the vessel.

Former Louisiana Asphalt Plant Manager Pleads Guilty to Negligent Endangerment from Air Pollution. The former asphalt plant manager of Pelican Refining Company LLC in Lake Charles, Louisiana, pleaded guilty in federal court in Lafayette, Louisiana, to the crime of negligent endangerment under the Clean Air Act. On August 19, 2007, a load of asphalt arrived at the Pelican Refinery, and under the plant manager's direction, employees on the asphalt barges were instructed to load approximately 39,438 barrels of the high–hydrogen sulfide (H_2S) asphalt into a tank not permitted for H_2S emissions, a violation of Pelican Refinery's Title V permit. The asphalt plant manager understood that the asphalt was in a liquid phase and that H_2S would be emitted into the vapor space of the tank. Because that tank was vented to the atmosphere, H_2S would escape into the surrounding air, especially given the heated condition of the asphalt. The plant manager admitted to seeing "blue smoke" being emitted from the elbow vents toward the top of the tank, indicating that fumes were being emitted into the atmosphere. The manager faces a maximum of one year in prison and a fine of $100,000.

Idaho Man Gets Probation for Threatened Species Violation. An Idaho rancher, 73, pled guilty on October 25, 2011, in federal court to knowingly violating a regulation pertaining to a threatened species of fish, a misdemeanor. The rancher was sentenced to two years probation, a $625 fine, a condition of probation that he hold no management position at Diamond D Ranch, and fifty hours of community service at a fish hatchery. The Diamond D Ranch is located 42 miles north of Stanley, Idaho, in the Frank Church River of No Return Wilderness area. According to the plea agreement, the rancher admitted that in the summer and fall of 2009 he operated Mayfield Creek and Trail Creek irrigation diversions without fish screens and without a permit authorizing the taking of threatened species of Chinook salmon and bull trout. On October 8, 2009, a U.S. Forest Service fisheries biologist found 35 Chinook salmon and 5 bull trout trapped in the irrigation ditch behind the closed headgate to the Mayfield diversion. Chinook salmon and bull trout are listed as threatened species under 50 C.F.R. § 223.102(c)(22) and 50 C.F.R. § 17.44. The case was investigated by the U.S. Environmental Protection Agency and the National Oceanic and Atmospheric Administration.

WE HELP SOLVE ENVIRONMENTAL AND ENGINEERING PROBLEMS! PLEASE GIVE US THE OPPORTUNITY TO WORK WITH YOU.

Contact Us:

2580 Northeast Expressway
Atlanta, Georgia 30345
Phone: (404) 329-9006
Fax: (404) 329-2057

E-mail: janet-hart@aem-net.com
michael-brock@aem-net.com

Please visit us on the web:

www.aem-net.com

ABOUT US ...

AEM is a full-service environmental firm based in the southeastern United States, which has been in business for 23 years and has project locations nationwide. AEM's mission remains providing individualized, technically competent, responsive, yet highly cost-effective environmental consulting and engineering services to our clients. AEM has many long-term clients, including industrial, governmental, and commercial, who have been clients for decades. Although company growth is an objective, it is our philosophy that growth is secondary to client service and quality. Put simply, the company's primary loyalty is to its clients, not to the growth of the company, unless growth provides for better client service. Building strong and lasting relationships with our clients is the most important thing that we can do to achieve our goals and ensure long-term stability and future success.

One quality that sets AEM apart from the competition is the personalized service, quick response, and attention given to clients—direct response to our clients' needs in a timely manner. We continuously work to improve the quality of our services to our clients.

AEM actively supports a number of charities including the U.S.O., Antares Orphan Foundation, the Humane Society of the United States, the Society for the Prevention of Cruelty to Animals, Make A Wish Foundation, and A Welcome Home Animal Rescue.

Atlanta Environmental Management, Inc.

2580 Northeast Expressway

Atlanta, Georgia 30345