EREF Report Documents the Threat Potential from a Closed MSW Landfill using the EPCC Process

Raleigh, NC (May 2, 2016) – Regulations specify that owner/operators of closed landfills are responsible for maintenance, monitoring and condition of the site for 30 years (Subpart F of Subtitle D). This period could change depending on the time required for a site to no longer pose a threat to human health and the environment (HHE). Current regulations provide no guidance or specific criteria to release a landfill from post-closure care (PCC). To provide guidance on ending PCC, the Environmental Research & Education Foundation (EREF) funded the development of a performance-based Evaluation of Post-Closure Care (EPCC) methodology in 2006. This methodology provides a modular approach for evaluating the four primary PCC elements, leachate management, landfill gas management, groundwater monitoring and cover maintenance. The EPCC methodology defines the end of PCC in terms of “functional stability.” Functional stability is achieved when a closed landfill no longer presents an unacceptable threat to HHE in the absence of active care.

Since this time, EREF has funded additional grants to further evaluate the methodology and is pleased to announce the availability of a final report from a recent effort aimed to illustrate how EPCC methodology can be applied to demonstrate step-wise reductions in PCC activity from active controls to fully passive measures. To do this, a series of retroactive data evaluations at a case study landfill were conducted over a 20 year PCC period. The landfill evaluated is a 29-acre municipal solid waste (MSW) landfill on an 80-acre property located near Frankfort, New York that operated between the early 1970s and 1991 and was closed in 1993.

This study showed that the EPCC methodology can be successfully applied to a closed landfill to assess functional stability. However, the research showed that site conditions and the availability of data are imperative to demonstrate that functional stability is achieved and passive controls can be successfully implemented at a site. “The key that unlocks the door to successful PCC is ensuring that the right data are collected and the site is evaluated relative to the property end-use which drives the point of exposure used in the analysis,” noted Dr. Jeremy Morris, Senior Consultant for Geosyntec and the primary investigator on the project. The cornerstone of the EPCC process is the confirmation monitoring (CM) program that is implemented after shut down of active controls as part of the transition from active to passive care. Functional stability is attained upon completion of the CM period.

“Using performance-based criteria to guide PCC has been gaining acceptance across the U.S. and abroad. The EPCC methodology is attractive because it provides a scientific/data driven basis for decision making when it comes to post-closure care, which reduces uncertainty that landfill owners and regulatory agencies face when dealing with closed landfills sites,” noted Dr. Bryan Staley, President and CEO of EREF. A final report that describes this recent project can be found here: Transitioning from Active to Passive Care at Municipal Landfills: Full-Scale Site Evaluations using the EPCC Methodology.
Prior reports describing the EPCC methodology and related research can be found here:

Determining Critical Data Requirements for Implementation of the EPCC Methodology
Prerequisites Module - a Multi-Site Case Study

Performance Based System for Post Closure Care at MSW Landfills: A Procedure for Providing
Long Term Stewardship under RCRA Subtitle D

For more information on these and other projects funded by EREF, please visit http://erefdn.org.

EREF is the only private, grant making institution with a national and international scope whose
sole mission is to support solid waste research and education initiatives. EREF’s research
grants program is led by its Research Council, a body of volunteers consisting of technical
experts in industry, academia and consulting. The work of the Council is guided by a long range
strategic plan with the goal to achieve greater sustainability, good environmental stewardship,
higher process efficiency and increased knowledge. Council recommended projects are then
reviewed by EREF’s Board of Director’s Projects Committee for a final review and funding
allocation.

Pre-proposals are now REQUIRED prior to submitting a full proposal. The next preproposal
deadline is June 1, 2016. For more information, including a download of the PreProposal
Template, please visit www.erefdn.org/grants/proposal.

EREF is a 501(c)3 class charity that funds and directs scientific research and educational initiatives for
waste management practices to benefit industry participants and the communities they serve. For more
complete information on EREF funded research, its scholarship program and how to donate to this great
cause, visit www.erefdn.org.

###

Media Contact:
Catherine Ardoin
Communications Coordinator
919.861.6876 ext. 109
cardoin@erefdn.org