

## Keeping the Environment Safe

### Environmental Firm turns to Mobile Technology to Automate Field Force



Advanced Environmental Management, Inc. (AEM) provides a wide range of environmental services for landfill, solid waste, underground storage tank, and environmental property assessments. The work requires field technicians to visit landfill sites regularly to collect water and/or gas samples from monitoring stations around the landfill. The samples are tested in the field for numerous variables, such as PH level, methane, dissolved oxygen, conductivity, and turbidity. Additional samples are also taken to a laboratory for further analysis.

Other variables are collected as well, such as time and date of the procurement, sampling station identification, site identification, sampling technician identification, weather conditions, and any other relevant notes concerning the sampling site or station conditions. After these results are received, reports are generated for the local regulators to determine the environmental condition of each landfill site.

## **Using paper and pen method is inefficient and error prone**

With approximately 50 landfill facilities currently in AEMs operations, which include semi-annual groundwater monitoring and quarterly methane gas monitoring, field technicians were taking approximately 5,000 samples a year. That means that AEM administrative personnel were required to read and manually enter the field results recorded on 5,000 separate pieces of paper. The old system of pen and paper was not only inefficient, but also prone to human error, resulting in the need to return and retest areas at times. These simple errors were costing AEM a considerable amount of time and money. The errors also made data assessment for potential environmental threats harder to recognize as quickly as possible. Without timely recognition of such hazards, AEM cannot develop solutions for their clients to mitigate the harm before the conditions worsen.

Streamlining a data collection process for AEMs monitoring services was no longer a luxury, but a necessity. The company looked to technology to improve their efficiency and maintain their level of quality services.

## **Requirements for the mobile application**

AEM looked for a solution that would not only make its field operations virtually paperless, but would also minimize the lag time between field analysis and reporting. We wanted flexibility to add items in the order that we wanted and also be able to create templates that could be easily adapted to other sites, said Darrell Webb, Advanced Environmentals Principal Engineer. It also needed to be able to export the data into a format that we could easily pull into Access databases that we use for reporting.

Before investing the time and money in a custom application, AEM came across an application that appeared to be the perfect match for its field operations GeoAge's Field Adapted Survey Toolkit (FAST). This commercial, off-the-shelf software application is user-customizable and enables field technicians to build surveys and forms using the simple drag-and-drop features built into the FAST Survey Designer. Now, each of the 50 different landfills currently being monitored by AEM can have a customized survey to meet the data collection needs of that particular site.

These custom forms can be built in a matter of minutes, deployed, and exported to an electronic format when completed. The Windows interface gives non-technical users the ability to master the software's functionality in a short period of time. The flexibility that the FAST Survey Designer offers allows AEM to quickly adapt to their changing data collection needs without reinvesting in new software.

## **Return on investment**

With the FAST Survey Designer, field technicians can enter data in the field and e-mail the results to the office with ease. By streamlining the data collection process through automation, AEM has significantly reduced errors of manual data entry into the database. Additionally, it has decreased the time differential between field activities and reporting by approximately 30%. This new surge of efficiency in data collecting and reporting amounts to lower costs and higher quality for AEM's clients.

Thanks to FAST software, what was once a procedure so laden with errors and inefficiency is now a more simplified and effective method of field data collection and reporting. At Advanced Environmental Management, Inc. (AEM), providing clients with high quality, superior environmental consulting services at a competitive cost is of top importance. Using more efficient and accurate methods allows them to continue this tradition.

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