

Welcome to the first of dpSTUDIO's 2016 series examining topics of **recognized environmental conditions (REC)** that may be discovered when conducting Phase I Environmental Site Assessments (ESA). The EPA has now amended the All Appropriate Inquiries (AAI) Final Rule to reference ASTM International's E1527-13 "Standard Practice for Environmental Site Assessments." The ASTM Standard provides a broad definition for recognized environmental conditions, and term "RECs" has been in our environmental jargon for years now. Unfortunately, this familiarity has not always meant that all RECs are obvious or even well defined. This article will focus on one potential area of ambiguity - septic systems.

Is a Septic System a REC?

A septic system, sometimes called a cesspool or sewage disposal system, provides an on-site method of discharging and treating sanitary wastewater. Septic systems often consist of a buried tank that collects suspended solids from the raw wastewater and accumulates the solids into a sludge on the tank bottom. Connected to the tank is an effluent distribution system composed of pipes and/or additional tanks; and a soil absorption area that provides for treatment of the wastewater effluent through dispersion and biodegradation. Septic systems also can include grease traps or other pre-treatment technologies.

Section 9.4.4.7 *Septic Systems*, of ASTM E1527-13 states: "To the extent visually and/or physically observed or identified from the interviews or records review, indications of on-site septic systems or cesspools shall be described in the report." But the Standard stops short of declaring what might make the septic system a REC. Septic systems obviously provide a direct discharge of wastewater to the ground that can impact soils on a property or percolate further to impact onsite and offsite groundwater. They also can be associated with industrial and commercial properties, not just rural residential, which raises the question – was this system used to discharge chemicals of concern and not just domestic wastewater?

Yet, environmental professionals often remain divided on whether simply the presence of an active or former septic system constitutes a REC. Discussions among regulators, engineering and environmental consultants, and attorneys have led to a general consensus that if a septic system serves or has served a commercial property that may have included a dry cleaner, gas station, or some other use with potential to discharge more than simply domestic wastewater, then that particular septic system could be a REC. It is then up to the environmental professional to make the designation, and furthermore decide whether additional investigation and sampling is justified.

Large Capacity Septic Systems

In cases where industrial discharge is not so obvious, the potential environmental impacts of septic systems also are less well defined. EPA does not specifically regulate septic systems used by single-family homes or non-residential septic systems that receive only sanitary waste and serve fewer than 20 persons per day. These are usually permitted and regulated by states and local health departments. EPA does regulate large capacity septic systems (LCSS) that receive *only sanitary waste* either from *multiple dwellings* or from a *non-residential establishment* and where the system has the capacity to *serve 20 or more persons per day*. LCSSs may be found serving such facilities as apartment buildings, trailer parks, schools, industrial buildings, shopping centers, highway rest stops, restaurants and other commercial properties. Because EPA equates discharges from such large systems as a form of underground injection control, LCSSs are "Authorized by Rule," which means that an individual permit is not required. Local, state, or tribal rules may apply to LCSSs, so it is prudent to check both federal and local regulations when encountering these systems during your Phase I ESA. This can help determine if the system has been operated according to its permit and if there is any additional concern that would justify considering it a REC.

Case Studies

A Phase I recently completed for a trucking terminal in Ohio identified a septic system that had been installed in the 1970s as a typical “package plant” system of that era, with aboveground sand filters serving as pre-treatment and a drain field sized to serve more than 20 people. The Ohio EPA and local health department maintained jurisdiction of the system and were able to document that this particular system has been regularly inspected and no significant violations were noted. This septic system was therefore not considered a REC but rather was identified in the report as an “observed condition” that may have business environmental risk or some material effect on environmental conditions depending on future use, but does not warrant further assessment as part of the Phase I due diligence process.

A septic system identified at an industrial manufacturing facility in Massachusetts had been active from 1977 until it was taken out of service in 2007. The system, which included two septic tanks and a drain field, was reported by facility personnel to have been connected only to restrooms at the facility, but no plans, regulatory records, or other documentation could be produced. While no specific evidence of industrial discharges to this septic system was identified, the potential for subsurface impacts from 30 years of poorly documented use could not be ruled out, and this system was listed in the Phase I report as a REC.

For a Phase I ESA at a multi-tenant industrial warehouse building in New Jersey, a former septic system also was identified as a REC, but in this case because it had been listed on the New Jersey Voluntary Cleanup Program. The New Jersey Department of Environmental Protection (NJDEP) provides a good guideline for septic tank investigations under its Site Remediation Program, whereby for septic tanks, one aqueous and one sludge sample is required for laboratory analysis. For residential dwellings of one to four families, if it can be documented that the septic tank only received domestic wastewater throughout the entire history of its use, then no sampling is recommended. In the case of commercial/industrial systems, NJDEP requires at least one soil boring per 900 square feet of drain field area, with a minimum of four borings per disposal field and adequately spaced so samples are representative of the entire disposal field. Results of this particular warehouse building investigation identified various contaminants that exceeded remediation standards. The septic tanks were removed since the facility had already been connected to the municipal sewer, and NJDEP issued a no further action (NFA) for the property that afforded the necessary liability protection to a potential buyer.

These are but a few examples of the range of septic system conditions that could be considered for any given property. When also considering the multiple federal and state regulations that can apply, it can be safely assumed that septic systems, especially those where industrial or commercial use is concerned, do offer the potential for being a REC and should be carefully evaluated as part of your ESA.

We hope you found this topic useful, and will look forward to our next topic: When should historic application of pesticides (HAP) be considered a REC?

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