THINK TANK

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Revised AST Regs Take Effect February 11, 2005

Jill Hall

In June 2004, the Department promulgated the first set of *Regulations Governing Aboveground Storage Tanks* (ASTs) in Delaware. Based on public comments received at the public hearing prior to promulgation of the first set of AST regulations, the Department immediately began work on incorporating changes into a second edition of AST Regulations. In addition, on July 22, 2004, Governor Minner signed Senate Substitute 1 for Senate Bill No. 344, which amended several sections of the Jeffrey Davis Aboveground Storage Tank Act. These amendments required further changes to the AST Regulations. A comprehensive list of all changes made to the AST Regulations may be found on the DNREC AST web page.

Significant changes to the Regulations include:

- The addition of Part A, Section 10, Signage Requirements. ASTs subject to this section must label the tank in accordance with the hazard rating system in the National Fire Protection Association (NFPA) standard 704, *Standard System for the Identification of the Hazards of Materials for Emergency Response.*

- The addition of Part B, Sections 11.3 and 11.4. These sections were added to address situations where use of an AST is converted from storage of a non-regulated substance to storage of a regulated substance.

- Changes made to the breakdown of aggregate storage capacities in Part D, Section 3, relating to Financial Responsibility requirements to more effectively represent the breakdown of AST ownership in Delaware.

- Other changes made throughout the AST Regulations to add clarity.

The revised AST Regulations are effective February 11, 2005. They are available for downloading from the DNREC web-site (http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/ast/). Printed copies may be purchased from the Tank Management Branch at a cost of $15.00.

Aboveground Storage Tank Timeline

January 2002 - Jeffrey Davis AST Act introduced in General Assembly

July 2002 - Jeffrey Davis AST Act enacted

June 2004 - Regulations promulgated

July 2004 - AST Act amended

Feb 11, 2005 - Revised Regulations effective

Natural Resources, Capability and Planning

Emil Onuschak, Jr., PG

If asked, nearly everyone can recite the natural resources upon which we all depend: clean air, pure water, uncontaminated land. With a little further thought, most of us can acknowledge various laws and regulations aimed at protecting these natural resources for the benefit of all.

To date, the common trait of environmental laws and regulations is that they are responses to recognized problems. That is, they are *reactive.* And therein lies their shortcoming.

While no one will deny the need for government to respond to problems affecting the public welfare, a more thoughtful approach addresses *prevention* of environmental problems in the first place. In other words, how can environmental programs become *proactive*, rather than reactive?

Some may consider this "looking for trouble," rather than responding as-needed on a case-by-case basis. But numerous studies have shown time and again that problem *prevention* is less expensive than problem *remediation.*

So, how does one go about preventing environmental problems? This is already being done to some extent, although on an intuitive, non-systematic basis. Placement of underground storage tanks is prohibited in aquifer recharge zones, for example, and if not prohibited, then are required to be double-walled and have other leak detection provisions, new aboveground storage tanks are required to be surrounded by containment dikes in advance of a release, etc.

But how can we go about problem prevention in a more systematic way? Answer: By taking an inventory of our natural resources and characterizing their capabilities in terms of their natural limitations.

This approach is not new, and has been used by the US Soil Conservation Service in its series of nationwide county soil surveys. The SCS groups individual soils into series according to their physical and chemical characteristics and these series are then described in terms of *limitations* for various common uses. It is the *user's* responsibility to decide (thereby avoiding any appearance of "taking without compensation") whether or not to spend the funds necessary to overcome a given limitation from the perspective of a proposed project or to look for a more accommodating site.

In the early days, some of the first environmental laws mistakenly specified overly-stringent cleanup goals for contaminated soil and ground water. "Drinking water quality" was a common goal, for example. With experience, however, came the realization that astronomical sums of money would frequently be required to achieve these goals and that achieving them did not always serve a useful purpose.

In the 1990s with support from the US EPA, the American Society for Testing and Materials (ASTM) promulgated the risk-based corrective action (RBCA) procedure for assessing potential environmental risks at impacted sites. RBCA quantifies potential risks at an environmentally-impacted site and helps identify appropriate responses. While this is a great advance over earlier, qualitative approaches, it is still *reactive* in nature.

The U.S. EPA has recently acknowledged that potential risks are not uniformly distributed spatially—a major epiphany—and is undertaking a research effort to more specifically characterize the geographic distribution of potential risks. The goal is to allocate resources where they will do the most good, such as assigning available personnel to perform the majority of facility compliance inspections in areas where potential risks are the highest. Some early reports of these activities are available online (http://www.epa.gov/nerlesd1/land-sci/pesticides/pesticides.htm). Other agencies have come closer to the mark with "sensitivity analyses" (http://www.noaa.gov), but a comprehensive systematic approach is still lacking.

So, we have various building blocks for characterizing the capabilities of our natural resources:

- environmental laws and regulations, however reactive,
- recognition that proactive prevention is less expensive than reactive remediation,

- RBCA, or in Delaware DERBCAP, a quantitative risk assessment tool,
- a resource limitation perspective exemplified by the US Soil Conservation Service, and
- some scattershot, non-systematic examples of capability mapping.

How can we best synthesize these into a comprehensive, unified approach to natural resource management? Or, to use a popular vernacular, a "systems approach?"

The Texas Bureau of Economic Geology pioneered such an approach in 1971 by defining *resource capability units* and describing their application in the Texas coastal zone (Brown and others, 1971). Given its coastal plain setting, this approach is directly applicable to Delaware.

A resource capability unit is an environmental entity defined in terms of:

- its physical characteristics,
- its dominant active processes,
- its biologic characteristics, or
- its man-made characteristics.

For the Texas coastal zone, the Bureau of Economic Geology identified 34 resource capability units interacting with 17 human activities and characterized these interactions in terms of natural limitations in a way reminiscent of the approach used by the Soil Conservation Service in its county soil surveys (Brown and others, 1971, p. 8).

A map of Delaware according to its resource capability units—a natural resource inventory—is apt to look quite different from a traditional geologic map, which shows units based on their relative ages. A place to start might be a statewide soil survey map modified in accordance with the foregoing bulleted list and with an awareness of vulnerability to environmental contamination. Geographic Information Systems (GIS) technology is a powerful tool for such a project.

The important point is that, in addition to physical and chemical similarities, *capability units tend to respond in similar fashion to imposed stresses, such as contaminant loading or human activity*. And thereby offer a rational, consistent approach to environmental planning and management.

Reference

Brown, L.F. and others, 1971, Resource capability units; their utility in land- and water-use management with examples from the Texas coastal zone: Austin, TX, Bureau of Economic Geology, Geological Circular 71–1, 22 p.

New Branch Manager On-board

My name is Alex Rittberg and I am the new Branch Manager for DNREC's Tank Management Branch. I have inherited a great staff of well-experienced people who are dedicated to maintaining underground and aboveground storage tank compliance, cleaning up leaking storage tanks, and ensuring our industrial boilers run safely without incident.

A little about me. I've lived in Delaware most of my life, graduating from Newark High School and the University of Delaware. After school, I joined the U.S. Army as a chemical officer and participated in Operation Desert Storm. I joined DNREC in December 1991 and have managed in DNREC's Solid and Hazardous Waste Management Branch and the Site Investigation and Restoration Branch.

I believe in involving the regulated community in our environmental protection efforts and I will be reaching out to you this year as we revise our underground storage tank regulations, and develop new guidance for our aboveground storage tank program.

I look forward to meeting all of you.I may be reached at 302-395-2500

Alex Rittberg

THINK TANK

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Announcements

Kathy Stiller Banning, branch manager for the TMB for the past 13 years, has accepted a position as the branch manager for DNREC's Site Investigation and Restoration Branch (SIRB). We wish Kathy well in her new position.

Ellen Malenfant, program manager for the TMB's compliance and cleanup groups, has accepted the branch manager position with DNREC's Environmental Prevention and Response Branch. Good Luck Ellen!

William "Tripp" Fischer — Hydrologist III, has accepted a new position as an Environmental Engineer III with the TMB's Aboveground Storage Tank corrective action program. Rest assured he will continue to manage his current LUST projects. In addition, Tripp received his Delaware Professional Geologist license in October, 2004. Congratulations and good luck!

Jennifer Roushey — Hydrologist II, has accepted a position with Groundwater & Environmental Services, Inc. after almost 5 years with the Tank Management Branch. We wish Jen well in her new endeavors!

Jenny Garey — Clay Shaffer Garey was born November 17, 2004. He weighed in at 8 lbs, 4 oz. and stretched out to 21 inches. Congratulations to Jenny and her family!

Updated soil sampling and notification documents available at TMB web site.

Four documents covering soil sampling and notification requirements for UST removal, abandonment, retrofit, and change-in-product were updated this month and placed on the TMB web site for downloading. Go to the "Download Library" at http://www.dnrec.state.de.us/dnrec2000/Divisions/AWM/ust/Forms/ust_forms.asp and scroll to Soil Sampling.

You may also obtain the documents by mail or fax by calling the TMB office.

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