Place/Time: Allen County Health Department, April 19, 2016, 3:00 pm.

Members Present: Kathy Luhn, Mike Edmiston, Steve Kayatin, Bill Kelly, Gary Sheely, Eric Getz.

Others Present: INEOS: Joe Bianco. Husky: Gary Vonderembse, Matt Elkins, LD Pierce, Amy Rode.

Approval of Minutes:

- The minutes for the January 19, 2016 meeting were approved as distributed.

Special Report: Deep Wells: Joe Bianco

- The INEOS wells are Class I wells into which hazardous materials are injected. This type of well requires demonstration of "no-migration" before it can be permitted. This means the injected material will not migrate from the intended injection layer. This is different from a Class II well which involves injection of less-hazardous material from oil and natural gas production and does not require a no-migration determination.
- The INEOS wells inject material into the Mt Simon sandstone layer which is deep below the surface throughout several states including Ohio. In the Lima area, this layer is about 3400 feet below the surface.
- The first injection well at the Lima facility started in 1968. A second well was added in 1970, and a third was added in 1971.
- The "no-migration" demonstration became a requirement in 1992 so the facility conducted seismological studies and also bored a fourth hole down into the Mt Simon layer. This fourth hole was bored in a special manner that allowed contiguous core samples to be obtained from the surface clear down to the Mt Simon layer. As a result of the studies, the no migration petition was approved, and the USEPA granted permits for the operation of four wells in Lima. (The "core-sample hole" that was bored for the no-migration certification became the fourth Class I injection well used by the facility.)
- The injection wells are double-lined... essentially a metal pipe within a metal pipe. The space between the two pipes is called the "annulus." The annulus contains a nonhazardous fluid and operates at a pressure at least 50 psi higher than the hazardous-waste pressure within the inner pipe. Thus, if the annulus pressure should drop, a leak would be indicated and the injection can be halted before any hazardous waste is injected into an inappropriate geological layer.
- The waste is about 95% water, about 4% salts (such as ammonium sulfate), and about 1% organic compounds consisting mostly of the class of chemicals called nitriles. It is the roughly 1% organic compounds that constitute the "hazardous waste."
- In 2015 the four wells injected about of 218,000,000 gallons of fluid into the Mt Simon layer. That translates into about 1,941,000,000 pounds of RCRA-reportable fluid of which about 7,750,000 pounds (0.4%) was SARA-reportable hazardous compounds.
- To remain in compliance with the operating permit, the company must...
  - — submit monthly reports of all the pressure readings
  - — submit quarterly reports that include corrosion monitoring, seismic monitoring, and ground-water monitoring in the area around the deepwells
  - — perform annual testing that shows the Mt Simon layer is accepting the waste
  - — perform annual mechanical integrity testing with radio-tracers.
- The USEPA grants the no-migration permit (certifying waste confinement).

- The OEPA monitors the operation of the wells and visits/inspects the site several times a year.
- The testing/reporting/permitting requirements (for all four wells together) cost about $220,000 annually.

Industry Status Reports:

- **INEOS** (Joe Bianco)
  — A printed report was distributed and there was no discussion.
- **Husky** (Gary Vonderembse)
  — A printed report was distributed.
  — BP Remediation submitted a request for permit modifications for inspections of the SWMUs (solid-waste management units), and an updated monitoring plan for the "primary pond landfill."
  — An emergency hazardous waste permit was requested from OEPA to allow storm water to overflow from G-Tank into D Pond in the event of a major storm event.
  — A "notice of violation" was issued by OEPA because some of the continuous emission monitor systems (CEMS) did not meet the required 95%-operational requirement.
- **OEPA** (Eric Getz)
  — A printed report was distributed.
  — OEPA conducted a complaint investigation at the refinery. The complainant reported release of oily material onto a concrete pad. Refinery personnel indicated that equipment is decontaminated on that pad, and afterwards the pad is cleaned and any contamination is properly processed.
  — OEPA granted the emergency hazardous waste permit (mentioned in the Husky report) to allow overflow of storm water from G-tank into D pond, and also granted an extension of the original permit.

Other Business:

- The next regularly-scheduled meeting will be July 19, 2016. As is tradition, the meeting will likely occur at one of the industrial sites. Members memory was that we visited the refinery in 2013, PCS in 2014, and there was no July meeting in 2015. Therefore it would be appropriate to visit INEOS at the July 2016 meeting if this can be arranged.

Michael Edmiston
Recording Secretary