

**CONSOL Energy Kuhns Well Pad Incident Report**  
**FINAL**  
**August 2, 2012**

On July 21 at approximately 10:30 pm, CONSOL Energy observed an operational irregularity while cementing a water protection casing during our scheduled drilling program at the Kuhns 3B well pad in Bell Township, Westmoreland County. Our early detection procedures prompted us to begin inspection of the area between the Kuhns pad and the Beaver Run Reservoir. It was determined that liquid cement intercepted a hidden spring, causing the liquid cement to proceed to a surface drainage ditch which discharges to the reservoir. Liquid cement is a non-toxic substance used to isolate fresh water aquifers from gas well casings. CONSOL Energy contained this event to the edge of the reservoir by quickly plugging the drainage ditch and installing pump trucks to divert the spring water from the reservoir.

CONSOL Energy immediately notified the Pennsylvania Department of Environmental Protection (PA DEP) and the Municipal Authority of Westmoreland County (MAWC) of the situation. CONSOL Energy employees immediately repaired the casing cement on July 21. After the casing cement repair, no more fluids were introduced to the hidden spring interval in the Kuhns 3B wellbore. The duration of the entire casing cementing process and repair was approximately one hour.

CONSOL Energy, in conjunction with the MAWC, conducted a third-party water quality analysis and environmental sampling, providing all results to the PA DEP. Initial results indicated that there were no observed impacts to the aquatic life in the reservoir and water quality impacts were minimal and localized. The overall water quality of the reservoir was not affected and remained at safe drinking water standards. The liquid cement did not enter the drinking water supply nor the drinking water out-take. We continued to sample the affected area twice daily, providing results to the PA DEP and the MAWC. All water quality has returned to normal, pre-incident levels.

CONSOL Energy takes our 'license to operate' privileges across our entire operational footprint very seriously, especially near the Beaver Run Reservoir. Our core values of safety, compliance, and continuous improvement drive our operational philosophy and performance. To that end, we deploy multiple safeguards that are designed to minimize the impact of the well site, many of which exceed state and federal regulations. These include strict policies and procedures utilized in our natural gas operations at both the surface and below ground. Some, but not all utilized on the MAWC Kuhns 3B pad, are as follows:

**Surface Considerations**

- CONSOL Energy's gas drilling sites are designed such that in the event of a large surface spill, fluids are contained and directed toward sumps that stop offsite migration and can be pumped back into a lined pit on site.
- Each well has a cellar constructed of concrete and sealed to prevent any fluids from escaping.
- Two environmental on-site inspections are conducted daily.

### **Sub-Surface Considerations**

- Each well is designed with an extra segment of casing – measuring 20 inches in diameter -- which is not required by current state or federal regulations. This segment is run 50 - 100 feet below the base of the reservoir (~320 feet) to isolate the reservoir from subsequent drilling. Once in place, the casing is cemented to the surface to provide added insulation from the environment. This is the process that was taking place at the Kuhns 3B site.
- No chemical additives were utilized during the drilling phase in this section; the only drilling aids used were fresh water and air.

### **Going forward**

- CONSOL Energy completed its current drilling activity on the Kuhns 3B on Tuesday, July 31.
- Personnel will patrol the down slope from the pad to the reservoir for potential discharges. Commencing immediately, known springs will be individually and continuously inspected while drilling and casing the fresh water protection section of the remaining Kuhns pad wellbores.
- Simultaneously, CONSOL Energy has deployed its internal environmental auditing team, who constantly evaluate our field operations to ensure proactive measures are incorporated into our daily activities, to the Kuhns site.
- Prior to moving ahead with planned drilling activity on its next well in Westmoreland County, CONSOL Energy's team will conduct a thorough review of the site and make recommendations on how the company can further strengthen its operational procedures and protocols.
- Once the Environmental Audit Review is completed and the results analyzed, CONSOL Energy will review it with MAWC and implement necessary improvements to further safeguard against future similar occurrences.