

**WASTING AWAY: Four states' failure to manage gas and oil field waste from the Marcellus and Utica Shale** Full report at: <http://wastingaway.earthworksaction.org>

## **PENNSYLVANIA: Key findings**

Pennsylvania is currently revising its oil and gas regulations, including some aspects related to waste management. But the **Pennsylvania Department of Environmental Protection (PADEP) plans to continue to allow environmentally risky practices**, such as open-air waste storage in pits and impoundments and the spreading of waste on roads and land.

**Pennsylvania defines oil and gas field waste as residual waste**, which puts it in the same regulatory category as garbage, refuse, and discarded materials. The state's solid waste management law specifically excludes drill cuttings, which makes it possible for operators to bury and leave them behind at well sites.

According to PADEP data, **between 2011 and 2014, the volume of liquid waste reported by Marcellus Shale drillers increased over 100% to reach nearly 130 million barrels, while solid waste grew over 500% to reach over 5 million tons.**

Marcellus Shale operators have claimed waste recycling rates as high as 90%. **But data reported by unconventional drillers in Pennsylvania indicate far lower reuse and recycling rates, which dropped in the last few years to about 60% in 2014.**

The proportion reused or recycled has not kept pace with the volume generated. **Between 2011 and 2014, the volume of waste generated by unconventional drilling increased by 104% but the rate of reuse and recycling grew only 47%**; most of this was "reuse other than road-spreading," a category that neither operators nor PADEP clearly define.

Pennsylvania requires generators of residual wastes to complete a chemical analysis form, but also allows them to avoid conducting a full analysis by stating that the waste hasn't changed from the previous year. **If waste generators don't want to provide landfills with detailed chemical and radiological analysis, the landfill can accept the waste based on "generator knowledge."**

Pennsylvania requires that wastewater from natural gas wells must be pre-treated at a centralized wastewater treatment facility and that treatment facilities fully analyze what's in the wastewater stream. But such **binding standards only apply to new treatment plants, not ones "grandfathered in" prior to 2010.** To date, PADEP has only requested operators to voluntarily stop sending waste to municipal wastewater treatment plants.

**Between 2011 and 2014, the volume of waste disposed of through underground injection increased 43% to over 4 million barrels;** currently, almost all of this is from shale gas wells. EPA has recently issued several permits for new UIC wells in the state, with others likely to follow.

**PADEP allows the road-spreading of brine from conventional wells even though it has not yet issued legal approval of the practice** or a specific permit for it, nor demonstrated its safety.

PADEP stated that its 2015 study on radioactivity in drilling waste showed "there is little potential for radiation exposure to workers and the public" But actual findings show very high levels of radioactivity. **The study concluded that there are potential environmental and health impacts if gas field wastes are spilled and that waste facilities may need to require that workers wear protective gear.**