



OIL AND GAS NEWS LINE



TOM WOLF, GOVERNOR • PATRICK MCDONNELL, DEP SECRETARY

Welcome to DEP's Oil and Gas News Line

It's hard to believe that we're already over halfway through the year, and summer is drawing to a close. In spite of the global pandemic, the Office of Oil and Gas Management has continued to successfully partner with the regulated community and stakeholders to overcome obstacles and deliver an innovative and effective oil and gas program. Even with the adjustments made to standard protocols to address the Governor's directives for the mitigation of the spread of the coronavirus, our workgroups and committees were vigilant, continuing their good works, while our inspections and permitting teams charged forward, completing 25,883 compliance inspections, issuing 4,680 permits – all the while protecting the health and safety of its staff, the regulated community, and the residents of this great commonwealth.

Perhaps, most exciting still is the long-term, behind-the-scenes works that continue to move forward with industry and agencies on regulations, backed by research, that cannot be measured in numbers but will go far in bettering the industry and its impact on the environment for generations to come. I know I proudly stand behind this talented team of professionals, whose dedication to public service and commitment to being unrelentless problem solvers is second to none; and I trust after you read through some of our highlights below that you do too.

- Scott Perry, Deputy Secretary, Office of Oil and Gas Management

2020 Oil and Gas Annual Report Now Available

Natural gas production in Pennsylvania increased while new well drilling decreased in 2020, according to the 2020 Oil and Gas Annual Report recently released by the Pennsylvania Department of Environmental Protection (DEP).

Production from natural gas wells continues to increase. More than 7.1 trillion Mcf of natural gas was produced, continuing an upward trend from previous years. Due to the increased volume, Pennsylvania is currently the second largest producer of natural gas in the United States.

Other details of interest from the annual report are:

- 1,017 drilling permits were issued; 918 unconventional and 99 conventional.
- 527 wells were drilled; 476 unconventional and 51 conventional.
- DEP conducted 25,883 inspections and found 9,363 violations.
- DEP collected \$33.3 million in fines and penalties in 2020.

"DEP will continue to improve systems to better serve the commonwealth and will remain vigilant in regulating the commonwealth's oil and gas industry," said DEP Secretary Patrick McDonnell.

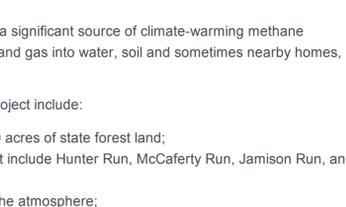
DEP continues to identify and plug orphan and abandoned wells in Pennsylvania, many of which predate regulatory oversight – a result of Pennsylvania's 160-year history of oil and gas development. DEP estimates that there may be as many as 200,000 abandoned oil and gas wells in the state, which can leak methane into the air and possibly contaminate groundwater or surface water. On average, it costs \$33,000 to plug one well.

"There are thousands of wells that need to be plugged," said McDonnell. "Finding solutions to plug these wells will make the commonwealth a healthier place for our current and future residents."

[See the full 2020 Annual Report here.](#)



DEP and DCNR Plugging 12 Abandoned Wells in Cornplanter State Forest, Forest County



On April 7, 2021, the Departments of Environmental Protection (DEP) and Conservation and Natural Resources (DCNR) [announced that work would begin for plugging 12 abandoned oil and gas wells in the Cornplanter State Forest, Forest County](#). The 12 wells, some of which are believed to have been in the forest since the 1920s, are located in Harmony Township. This is the first phase of a four-phase project in this area.

Old, decaying orphan wells not only act as a significant source of climate-warming methane emissions, but in many cases, can leak oil and gas into water, soil and sometimes nearby homes, creating an explosion hazard.

Benefits associated with the Cornplanter project include:

- Conservation of approximately 1,260 acres of state forest land;
- Protection of cold-water fisheries that include Hunter Run, McCaferty Run, Jamison Run, and Dawson Run;
- Reduction in methane emissions to the atmosphere;
- Protection of public trail users and valuable recreation areas including Hunter Run Trail System and Lashure Interpretive Trail;
- Increased opportunities for forest management; and
- Increased availability of public lands for healthy, outdoor recreation without risk of injury.

DCNR provided funding to the DEP Well Plugging Program to manage contracts to properly plug abandoned wells where no responsible party can be identified. DCNR bid the project and is responsible for overall project management and contract oversight, while DEP provided the technical specifications for the contract documents and also will provide on-site inspection services of the work. The contract was awarded to Howard Drilling, LLC, of Mount Jewett.

There are believed to be more than 156 abandoned wells on state forest land. There are more than 8,700 currently known abandoned wells in Pennsylvania, but it is estimated that there are an additional 200,000 orphan wells across the state.

Coal-Gas Industry-Agency Stakeholder Committee Works

This committee, which consists of staff from DEP's District Oil and Gas Operations, DEP's Division of Subsurface Activities, DEP's Bureau of Mine Safety, the National Institute of Occupational Safety and Health (NIOSH), and the Mine Safety and Health Administration (MSHA), as well as coal and unconventional gas operators and West Virginia and Ohio regulatory representatives, developed a recently finalized technical guidance document to direct regulatory coordination between longwall mining operations and unconventional gas development in chain pillars in a manner aimed at protecting miner safety and ensuring environmental protection. The Committee has also been working on regulatory coordination matters in other areas where the two industries intersect. Work products in development include a risk-based matrix for directing industry activity, an analysis of well integrity data in areas adjacent to mining, and enhanced drilling plans/notification processes for unconventional completions adjacent to mining operations. The work has also prompted [significant technical research](#) by NIOSH to better understand deformation processes associated with longwall mining that could affect gas well integrity.

2021 Pennsylvania Independent Oil and Gas Association (PIOGA) Spring Meeting

On May 19, Well Development and Surface Activities Division staff presented at the Pennsylvania Independent Oil and Gas Association's (PIOGA's) annual Spring Meeting. Presentations were delivered virtually by staff, although approximately 250 attendees were present during the event.

Two separate presentations were delivered:

1. Update on a number of Well Development and Surface Activities projects and initiatives, including: Well Plugging Erosion and Sediment Control Template; Geologic Hazard Mitigation Planning Guidance for ESCGPs; Chapter 102 Permit Amendment FAQ; collaboration with the Chapter 102 Program on the Clean Water Academy; the Marcellus Shale Coalition Settlement Agreement commitments; and the draft ESCGP Prioritized Review documents.
2. A detailed discussion regarding the Policy for the Replacement or Restoration of Private Water Supplies Impacted by Unconventional Oil and Gas Operations guidance document.

The presentations were followed by a Q&A session.

Oil and Gas Technical Advisory Board (TAB) Meeting, May 5, 2021

DEP hosted a virtual meeting of TAB on May 5, 2021 at 9:00 a.m., via Skype. Topics discussed during this meeting included presentation of the draft proposed Annex A for the Environmental Protection Standards rulemaking amending Chapter 78 to address surface activities at conventional oil and gas wells, and presentation of the draft final Pressure Barrier Policy Technical Guidance Document (PBP TGD). As required by statute, DEP consulted with both TAB and the Pennsylvania Grade Crude Development Advisory Council on the proposed rulemaking. The next step for this proposed rulemaking will be for DEP to present it to the Environmental Quality Board for review, consideration, and adoption. If adopted by the Environmental Quality Board, the proposed rulemaking will be published for public comment in the Pennsylvania Bulletin. The final PBP TGD, which provides crucial information on compliance with the Department's well control regulations, will be published in the Pennsylvania Bulletin as a final guidance document after internal review and approval.

Department staff also provided updates on the Regional Greenhouse Gas Initiative, orphan and abandoned well plugging, ESCGP-3 Prioritized Review draft guidance, oil and gas finance and budget status, the WMGR123 general permit, and the partial settlement of litigation with the Marcellus Shale Coalition challenging Chapter 78a. The TAB chairman, David Yoxheimer, presented the results of a Pennsylvania State University "Depth to Brine" study.

The next regular TAB meeting is scheduled for September 9, 2021.

Federal Stimulus Funding

The Bureau of Oil and Gas Planning and Program Management recently participated with representatives from the Interstate Oil and Gas Compact Commission, PSE Healthy Energy, and Resources for the Future at a congressional panel to discuss the benefits of safely managing orphaned oil and gas wells. The event was sponsored and moderated by the American Association for the Advancement of Science. Panelists provided short presentations on the topic and then participated in a live question and answer session with congressional staffers and representatives from several government agencies. Key topics that were discussed during the event included greenhouse gas emissions/climate change, public health and safety risks tied to stray methane migration and heavier hydrocarbons, plugging costs and economic impacts, research and bonding needs, and regulatory program work across jurisdictions aimed at well decommissioning. More than 30 attendees joined from multiple House and Senate offices and committees, as well as employees from federal agencies.

Federal legislation providing significant stimulus funding to plug orphan and abandoned oil and gas wells nationally was introduced on April 8, 2021 in the United States House of Representatives (H.R. 2415). Senator Ben Ray Lujan (D-NM) introduced companion legislation in the Senate on April 12, 2021 (S. 1076). Such funding was also announced as part of President Biden's American Jobs Plan in Pittsburgh on March 31, 2021, increasing awareness of the issue, and indicating Executive Branch support for the concept. The text of S. 1076 was included in the Bipartisan Infrastructure Framework, which amends H.R. 3684. The Senate approved that bill on August 10, 2021, with consideration by the House to follow.

Update on New Cement Blend Approved for Use in Commonwealth Wells

DEP recently received a request regarding the use of newly formulated Class L cement in the construction and plugging of oil and gas wells. Joppa Class L cement is a low CO2 (lower environmental impact) oil well cement designed for normal slurry applications for cementing oil and gas wells. In 2019, the American Petroleum Institute (API) added the Class L designation to Annex B of Specification 10A. Class L composite well cement is manufactured by inter-grinding Portland cement clinker and one or more forms of gypsum with pozzolanic material. Fly ash, silica fume, and natural pozzolans all qualify as pozzolanic materials. API also allows the addition of suspension agents in Class L cements. The API Monogram is pending.

Section 78.1 and 78a.1 define "Cement" as "[a] mixture of materials for bonding or sealing that attains a 7-day maximum permeability of 0.01 millidarcies and a 24-hour compressive strength of at least 500 psi in accordance with applicable standards and specifications."

Sections 78.85 and 78a.85 provide the following:

Cement standards

(a) When cementing surface casing or coal protective casing, the operator shall use cement that meets or exceeds the ASTM International C 150, Type I, II or III Standard or API Specification 10. The cement must also:

1. Secure the casing in the wellbore.
2. Isolate the wellbore from fresh groundwater.
3. Contain any pressure from drilling, completion and production.
4. Protect the casing from corrosion from, and degradation by, the geochemical, lithologic and physical conditions of the surrounding wellbore. For wells employing coal protective casing, this includes, but is not limited to, formulating cement to withstand elevated sulfate concentrations and other geochemical constituents of coal and associated strata which have the potential to adversely affect the integrity of the cement.
5. Prevent gas flow in the annulus. In areas of known shallow gas producing zones, gas block additives and low fluid loss slurries shall be used.

After review of available laboratory testing data, DEP has determined that the Class L blend of cement "meets or exceeds the ASTM International C 150, Type I, II or III Standard or API Specification 10" and also meets requirements of Section 78.85(a)(1)-(5) and 78a.85(a)(1)-(5) when used in accordance with the manufacturer's specifications and standards for well cementing. This determination has been made based on a detailed review of laboratory testing data for the blend and comparison of laboratory performance to Class A cement. Accordingly, operators may use the Class L blend to meet the requirements of Sections 78.85 and 78a.85. This determination applies for use in Pennsylvania at any oil and gas well sites, either previously permitted, in the process of permitting or at future permitted wells.

Oil and Gas Mobile Inspection Application Transition

The Office of Oil and Gas Management is currently in the process of transitioning to new SAIR (Surface Activities Inspection Report) and SubSAIR (Subsurface Activities Inspection Report) mobile inspection applications. The previous applications were developed and maintained by PennDOT for the DEP. The new applications were developed and will be maintained by the DEP. This transition will allow for the development of future enhancements through the sharing of a common mobile inspection platform with other DEP programs.

Operators may notice minor differences with respect to email sources, language, and formatting, as well as the layout/formatting of inspection report PDF records. However, overall functionality of the PennDOT and DEP applications is very similar.

The new applications rolled out to a limited number of DEP OOGM inspectors for pilot use in early July. Operators may see inspection records submitted through both the PennDOT and DEP applications for a period of time. The complete transition to the new DEP applications is anticipated to occur this Fall.

Updates to Technical Guidance Documents, Fact Sheets and Other Miscellaneous Permits and Forms

Just the Facts:

On May 25, 2021, DEP Oil and Gas posted onto its website [Fact Sheet, 8000-FS-2319, Underground Gas Storage Fields in Pennsylvania](#). For a listing of DEP Oil and Gas Fact Sheets and FAQs featuring a variety of subjects, please [visit the website](#) as these items are updated regularly and oftentimes contain answers to some of the most popular questions received in our offices.

Technical Guidance Documents Notice of Availability:

On Tuesday, August 28, 2021, the Department of Environmental Protection published notice in the *Pennsylvania Bulletin* of the availability for the following:

[Final TGD 800-0810-004: Guidelines for Chain Pillar Development and Longwall Mining Adjacent to Unconventional Wells](#). The Department developed this guidance to inform those engaged in longwall coal mining and unconventional natural gas production on how to comply with existing statutory and regulatory requirements. These guidelines facilitate appropriate unconventional well inactivation and re-entry procedures in advance of and subsequent to longwall panel removal that will allow for continuous isolation of gas from workable coal seams, protection of mining personnel, and prevention of pollution of the waters of this Commonwealth, consistent with applicable law.

[Draft TGD 800-2100-001: Prioritized Review Process Under the Erosion and Sediment Control General Permit for Earth Disturbance Associated with Oil and Gas Exploration, Production, Processing, or Treatment Operations or Transmission Facilities \(ESCGP\)](#). This draft technical guidance document establishes a Prioritized Review Process for certain authorizations approved by the Department's Office of Oil and Gas Management (OOGM). The Prioritized Review Process contained in this draft technical guidance seeks to encourage persons preparing Notices of Intent (NOI) for Authorizations of Coverage under the Erosion and Sediment Control General Permit issued by OOGM to voluntarily develop and implement superior environmental enhancements to proposed projects by providing priority status in the NOI review process to qualifying applicants. Interested persons may submit written comments on this draft TGD through Monday, September 27, 2021.

Oil and Gas Contact Info

The DEP Office of Oil and Gas Management is dedicated to operating a world class oil and gas regulatory program. The office includes the Bureau of District Oil and Gas Operations that is comprised of three district offices and two permitting divisions. DEP's regional and district offices staff are available to respond to emergencies, complaints, as well as routine inspection, compliance, and permitting matters. The Bureau of Oil and Gas Planning and Program Management is located in DEP's central office and is responsible for administrative, policy and regulatory development functions.

[View a map of the various DEP Oil and Gas offices and contact information.](#)

To report any cases of suspected water contamination that may be associated with the development of oil and gas resources or any other environmental complaint, **call the DEP's statewide environmental hotline at: 1-866-255-5158.**

To report an environmental emergency to DEP, [visit our website and call the appropriate regional emergency contact number.](#)

If you have any questions related to the articles in this newsletter or if you have something you would like to see included in this newsletter, please contact the Bureau of Oil and Gas Planning and Program Management office in Harrisburg at 717-772-2199 or email RA-epOilandGas@pa.gov.

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