

EXECUTIVE SUMMARY

As directed in Governor Wolf's [lapsing statement](#) for House Bill 2644, this report provides evaluations and recommendations regarding the Pennsylvania Department of Environmental Protection's (DEP or Department) oversight of the conventional oil and gas industry in Pennsylvania.

The conventional oil and gas industry's recent record of compliance is troubling and requires DEP's Office of Oil and Gas Management (OOGM) to explore new techniques for deterring violations and encouraging compliance with relevant statutory and regulatory provisions. Over the past five years, DEP's OOGM has identified significant non-compliance with laws and regulations in the conventional oil and gas industry, particularly regarding improper abandonment of oil and gas wells, as well as reporting requirements for hydrocarbon and waste production and mechanical integrity assessments.

Wells that are improperly abandoned may pose environmental and public health and safety threats and may become the responsibility of the Commonwealth to plug along with remediation and reclamation of the well sites. The reporting non-compliance denies DEP and the public critical information about the operating status of individual wells. Overall performance is so poor among operators with 11 or more conventional oil and gas wells that the failure to report seems to be an industry-wide rule rather than the exception. A significant change in the culture of non-compliance as an acceptable norm in the conventional oil and gas industry will need to occur before meaningful improvement can happen.

Although the recent compliance trends for the conventional oil and gas industry in Pennsylvania are troubling, the good news is that – if provided adequate resources, as detailed further below – DEP possesses the authority and tools necessary to take appropriate steps to begin to address these issues without significant additional program development efforts. These tools include the use of administrative orders, permit denials, civil penalty assessments, bond forfeiture, entry and docketing of liens, criminal referrals when appropriate, and increased scrutiny of permit transfer and regulatory inactive status requests. The Department is also currently drafting two proposed rulemakings to bring Pennsylvania's regulation of the conventional oil and gas industry in line with modern standards and could initiate other rulemakings if needed. However, to effectively administer increased oversight of the conventional oil and gas industry's compliance with Pennsylvania's environmental laws, DEP will require additional resources, especially in the Office of Chief Counsel and the Bureau of District Oil and Gas Operations, particularly more field inspectors and enforcement personnel such as Compliance Specialists as well as permitting geologists.

Part 1: Evaluation of the conventional industry's recent record of compliance with reporting requirements and performance requirements under existing law.

The primary statutory provisions that apply to the conventional oil and gas industry are codified in [Title 58](#) of the Pennsylvania Consolidated Statutes, [Chapter 32](#) (relating to development); for shorthand, this law is often referred to as "Act 13 of 2012" or Pennsylvania's "2012 Oil and Gas Act." The primary regulations applicable to conventional oil and gas development are located in [25 Pa. Code Chapter 78](#) (relating to oil and gas wells). Other Pennsylvania statutes and regulations, such as the Solid Waste

Management Act, the Clean Streams Law, the Dam Safety and Encroachments Act, the Air Pollution Control Act, and regulations developed under the authority of those statutes may also apply to conventional oil and gas operations in Pennsylvania, depending on the activity being conducted.

DEP’s OOGM develops and collects significant data concerning the oversight of and enforcement against the conventional oil and gas industry. In this section of this report, DEP outlines the historical compliance data for the conventional oil and gas industry over the past five calendar years, 2017 through 2021. Because calendar year 2022 is not yet complete, data from 2022 is not included in this report, but current trends suggest that the numbers for 2022 will be in line with the data from 2017 through 2021. Table 1 demonstrates that OOGM’s significant inspection efforts – including more than 63,000 inspections conducted on conventional wells from 2017 through 2021 – uncovered more than 16,000 violations and that significant numbers of conventional oil and gas operators were cited for violations of the applicable statutes and regulations.

Table 1. Summary of conventional well inspections/violations from 2017 through 2021.

Calendar Year	2017	2018	2019	2020	2021	Total
Count of unique operators that had conventional wells inspected	630	627	607	615	645	1,512
Count of unique conventional wells inspected	11,888	10,447	8,919	7,692	8,780	34,812
Count of total inspections conducted on conventional wells	15,254	13,422	12,101	10,500	11,749	63,026
Count of total violations cited on conventional wells	3,286	3,072	1,784	3,957	4,469	16,568
Count of unique operators with a violation cited for conventional wells	176	158	131	239	202	503
Count of unique conventional wells with a violation cited	1,108	1,326	453	1,039	980	4,083
Percent of conventional wells inspected with violations	9.3%	12.7%	5.1%	13.5%	11.2%	11.7%
Percent of operators that had conventional wells inspected with violations	27.9%	25.2%	21.6%	38.9%	31.3%	33.3%

Of significant concern to the Department is the general lack of compliance with reporting requirements in the 2012 Oil and Gas Act and Chapter 78. [Section 78.121](#) states:

§ 78.121. Production reporting.

(a) The well operator shall submit an annual production and status report for each permitted or registered well on an individual basis, on or before February 15 of each year. When the production data is not available to the operator on a well basis, the operator shall report production on the most well-specific basis available. The annual production report must include information on the amount and type of waste produced and the method of waste disposal or

reuse. Waste information submitted to the Department in accordance with this subsection is deemed to satisfy the residual waste biennial reporting requirements of § 287.52 (relating to biennial report).

(b) The production report shall be submitted electronically to the Department through its web site.

In addition to production reporting, conventional oil and gas operators are also required to report on the mechanical integrity of their wells. The annual reporting requirement is established in subsection (e), but the entire section is included to highlight the critical nature of this information for protecting the environment and public health and safety:

§ 78.88. Mechanical integrity of operating wells.

(a) Except for wells regulated under Subchapter H (relating to underground gas storage) and wells that have been granted inactive status, the operator shall inspect each operating well at least quarterly to ensure it is in compliance with the well construction and operating requirements of this chapter and the act. The results of the inspections shall be recorded and retained by the operator for at least 5 years and be available for review by the Department and the coal owner or operator.

(b) At a minimum, inspections must determine:

(1) The well-head pressure or water level measurement.

(2) The open flow on the annulus of the production casing or the annulus pressure if the annulus is shut in.

(3) If there is evidence of gas escaping from the well and the amount escaping, using measurement or best estimate of quantity.

(4) If there is evidence of progressive corrosion, rusting or other signs of equipment deterioration.

(c) For structurally sound wells in compliance with § 78.73(c) (relating to surface and coal protective casing and cementing procedure), the operator shall follow the reporting schedule outlined in subsection (e).

(d) For wells exhibiting progressive corrosion, rusting or other signs of equipment deterioration that compromise the integrity of the well, or the well is not in compliance with § 78.73(c), the operator shall immediately notify the Department and take corrective actions to repair or replace defective equipment or casing or mitigate the excess pressure on the surface casing seat or coal protective casing seat according to the following hierarchy:

(1) The operator shall reduce the shut-in or producing back pressure on the casing seat to achieve compliance with § 78.73(c).

(2) The operator shall retrofit the well by installing production casing to reduce the pressure on the casing seat to achieve compliance with § 78.73(c). The annular space surrounding the production casing must be open to the atmosphere. The production casing shall be either

cemented to the surface or installed on a permanent packer. The operator shall notify the Department at least 7 days prior to initiating the corrective measure.

(3) Additional mechanical integrity tests, including, but not limited to, pressure tests, may be required by the Department to demonstrate the integrity of the well.

(e) The operator shall submit an annual report to the Department identifying the compliance status of each well with the mechanical integrity requirements of this section. The report shall be submitted on forms prescribed by, and available from, the Department or in a similar manner approved by the Department.

As Table 2 shows, non-compliance with sections 78.88(e) and 78.121(a) is widespread in the conventional oil and gas industry in Pennsylvania. In order to exclude home use wells (a subset of conventional wells used by homeowners or businesses for consumptive use on the property where the well is located and typically operated by non-industry persons) from this analysis, the reporting compliance analysis presented in Table 2 was limited to include only those operators with 11 or more conventional oil and gas wells. The results are consistently disappointing – only around 30% of such operators report their production or mechanical integrity assessments on time. Even including operators who do eventually submit information after the compliance date, the annual compliance rate fails to climb above 50%.

Table 2. Conventional oil and gas industry reporting non-compliance.

Production/Waste data submissions by operators with 11 or more conventional wells						
Calendar Year	2017	2018	2019	2020	2021	Total
Count of conventional well operators that submitted data by reporting deadline	194	193	177	167	172	903
Percentage of conventional well operators that submitted data by reporting deadline	28.5%	28.7%	26.5%	25.3%	26.4%	27.1%
Count of conventional well operators that submitted data but did not meet the reporting deadline	121	106	130	109	77	543
Percentage of conventional well operators that submitted data but did not meet the reporting deadline	17.8%	15.8%	19.5%	16.5%	11.8%	16.3%
Count of conventional well operators that failed to submit data	366	373	361	383	403	1,886
Percentage of conventional well operators that failed to submit data	53.7%	55.5%	54.0%	58.1%	61.8%	56.6%
Total count of conventional well operators	681	672	668	659	652	3,332
Mechanical Integrity Assessment data submissions by operators with 11 or more conventional wells						
Calendar Year	2017	2018	2019	2020	2021	Total
Count of conventional well operators that submitted data by reporting deadline	197	184	202	192	188	963
Percentage of conventional well operators that submitted data by reporting deadline	28.9%	27.4%	30.2%	29.1%	28.8%	28.9%
Count of conventional well operators that submitted data but did not meet the reporting deadline	69	82	86	76	76	389
Percentage of conventional well operators that submitted data but did not meet the reporting deadline	10.1%	12.2%	12.9%	11.5%	11.7%	11.7%
Count of conventional well operators that failed to submit data	415	406	380	391	388	1,980
Percentage of conventional well operators that failed to submit data	60.9%	60.4%	56.9%	59.3%	59.5%	59.4%
Total count of conventional well operators	681	672	668	659	652	3,332

The widespread reporting non-compliance by the conventional oil and gas industry denies DEP and the public critical information about the operating status of individual wells, the overall industry, and, in the case of mechanical integrity assessments, may pose a threat to public health and safety and the environment.

Table 3 breaks down conventional oil and gas violations from 2017 through 2021 by violation type, with a further distinction between “environmental/health/safety” and “administrative” violations. Most disturbingly, the most frequent “environmental/health/safety” violation that DEP has noted is the violation of requirements in the 2012 Oil and Gas Act and Chapter 78 for the proper abandonment of oil and gas wells. [Section 3220](#) of the 2012 Oil and Gas Act states in relevant part (emphasis added):

§ 3220. Plugging requirements.

(a) General rule.--**Upon abandoning a well, the owner or operator shall plug it in the manner prescribed by regulation of the department to stop vertical flow of fluids or gas within the well bore, unless the department has granted inactive status for the well or it has been approved by the department as an orphan well.** If the department determines that a prior owner or operator received economic benefit, other than economic benefit derived only as a landowner or from a royalty interest, after April 18, 1979, from an orphan well or an unregistered well, the owner or operator shall be responsible for plugging the well. In the case of a gas well penetrating a workable coal seam which was drilled prior to January 30, 1956, or which was permitted after that date but not plugged in accordance with this chapter, if the owner or operator or a coal operator or an agent proposes to plug the well to allow mining through it, the gas well shall be cleaned to a depth of at least 200 feet below the coal seam through which mining is proposed and, unless impracticable, to a point 200 feet below the deepest mineable coal seam. The gas well shall be plugged from that depth in accordance with section 13 of the act of December 18, 1984 (P.L.1069, No.214), known as the Coal and Gas Resource Coordination Act, and the regulations of the department.

The Department’s conventional oil and gas well plugging regulations are codified in 25 Pa.Code §§ 78.91 – 78.98 and 78.111. [Section 3203](#) of the 2012 Oil and Gas Act defines the term “abandoned well” as:

"Abandoned well." Any of the following:

(1) A well:

- (i) that has not been used to produce, extract or inject any gas, petroleum or other liquid within the preceding 12 months;
- (ii) for which equipment necessary for production, extraction or injection has been removed; or
- (iii) considered dry and not equipped for production within 60 days after drilling, re-drilling or deepening.

(2) The term does not include wells granted inactive status.

This definition also highlights the importance of the production reporting violations, noted above. Without accurate production reporting, DEP cannot determine if a well has been “used to produce, extract or inject and gas, petroleum or other liquid within the preceding 12 months.” If a well is not so used, it is defined as abandoned and must be plugged.

Proper plugging of conventional oil and gas wells at the end of their economic life is critical for protecting public health and safety as well as the environment. Unplugged or improperly plugged wells can cause a myriad of problems, including gas migration into occupied structures, water supply impacts, surface water impacts, hazardous air pollutant emissions, methane emissions, and soil and groundwater contamination. Improperly plugged wells have been tied to fatal explosions in Pennsylvania and other states, so this is a category of potentially significant violations.

Failure to properly plug an abandoned well also means that the task of properly plugging the abandoned well might fall to the Commonwealth – “the pluggers of last resort” – with the costs to do so passed along to Pennsylvania taxpayers. The issue of plugging obligations passing to the Commonwealth is especially critical for wells abandoned today but drilled before April 15, 1985, as these wells have no bonds that could be forfeited to cover at least a portion of the cost of plugging them (see, [Act 57 of 1997](#), the original waiver through Administrative Code amendments of bonding requirements for such oil and gas wells; [Act 87 of 2012](#), Fiscal Code amendments that retained the provisions of Act 57 of 1997; and [Act 96 of 2022](#), which amended the 2012 Oil and Gas Act to continue this waiver).

Other frequent violations include improper management of residual wastes and failure to properly manage production fluids. Both violations can be directly related to environmental harm, impacts to drinking water supplies and potential threats to public health and safety.

Table 3. Ten most frequent environmental/health/safety (EHS) and administrative violations associated with conventional wells for calendar years 2017 through 2021.

Violation Code	Violation Type	Count
OGA3220(A) - PLUGGING REQUIREMENTS - Failure to plug the well upon abandoning it.	EHS	3,123
SWMA 301 - MANAGEMENT OF RESIDUAL WASTE - Person operated a residual waste processing or disposal facility without obtaining a permit for such facility from DEP. Person stored, transported, processed, or disposed of residual waste inconsistent with or unauthorized by the rules and regulations of DEP.	EHS	608
78.57(a) - CONTROL, STORAGE AND DISPOSAL OF PRODUCTION FLUIDS - Operator failed to collect the brine and other fluids produced during operation, service and plugging of the well in a tank, pit or a series of pits or tanks, or other device approved by the Department or Operator discharged brine or other fluids on or into the ground or into waters of the Commonwealth.	EHS	551
78.54 - GENERAL REQUIREMENTS - Operator failed to control and dispose of fluids, residual waste and drill cuttings, including top-hole water, brines, drilling fluids, drilling muds, stimulation fluids, well servicing fluids, oil, and production fluids in a manner that prevents pollution of the waters of the Commonwealth.	EHS	359
78.73(a) - GENERAL PROVISION FOR WELL CONSTRUCTION AND OPERATION - Operator failed to construct and operate the well in accordance with 25 Pa. Code Chapter 78 and ensure that the integrity of the well is maintained and health, safety, environment and property are protected.	EHS	262
SWMA 610(1) - UNLAWFUL CONDUCT - Person dumped or deposited, or permitted the dumping or depositing, of solid waste onto the surface of the ground or underground or into the waters of the Commonwealth, without a permit for the dumping of such solid wastes from DEP.	EHS	228
78.91(a) - PLUGGING - GENERAL PROVISIONS - Upon abandoning a well, the owner or operator failed to plug the well to stop the vertical flow of fluids or gas within the well bore under 25 Pa. Code §§ 78.92—78.98 or an approved alternate method.	EHS	217
SWMA 302(A) - DISPOSAL, PROCESSING AND STORAGE OF RESIDUAL WASTE - Person disposed, processed, stored, or permitted the disposal, processing or storage of residual waste in a manner which is contrary to the rules and regulations of DEP or to any permit or to the terms or conditions of any permit or any order issued by DEP.	EHS	217
OGA3259(1) - UNLAWFUL CONDUCT - Drilling, altering or operating a well without a permit. Failure to comply with rules or regulations adopted under the 2012 Oil and Gas Act, DEP order, or a term or condition of the well permit.	EHS	216
102.4(b)1 - EROSION AND SEDIMENT CONTROL REQUIREMENTS - Person conducting earth disturbance activity failed to implement and maintain E & S BMPs to minimize the potential for accelerated erosion and sedimentation.	EHS	197
	Total	5,978
78.121(A) - WELL REPORTING – PRODUCTION REPORTING – Conventional operator failed to submit annual conventional production and status report for permitted or registered well.	Admin	1,827
78.88(e) - OPERATING WELLS - MECHANICAL INTEGRITY OF OPERATING WELLS - Operator failed to submit an annual report to the Department identifying the compliance status of each well with the mechanical integrity requirements for structurally sound wells in compliance with 25 Pa. Code Section 78.73(c).	Admin	1,773
OGA3211(H) - WELL PERMITS - LABELING - Failure to install, in a permanent manner, the permit number on a completed well.	Admin	1,674
OGA3211(G) - WELL PERMITS - POSTING - Failure to post the well permit number and the operator's name, address and phone number at the well site during construction of the access road, site preparation and during drilling, operating or alteration of well.	Admin	831
78.121(B) - WELL REPORTING – PRODUCTION REPORTING – Operator failed to electronically submit production and status report to the Department through its web site.	Admin	722
78.88(a) - OPERATING WELLS - MECHANICAL INTEGRITY OF OPERATING WELLS - Operator failed to inspect each operating well quarterly for compliance with the well construction and operating requirements.	Admin	500
78.88(A) - OPERATING WELLS - MECHANICAL INTEGRITY OF OPERATING WELLS - Operator failed to record inspection results and retain records for at least 5 years for review by the Department.	Admin	141
78.122(A) - WELL REPORTING – WELL RECORD – Operator failed to keep a detailed drillers log at well site or submit a complete well record, on a form provided by the Department, within 30 days of cessation of drilling or altering.	Admin	60
78.124(A) - WELL REPORTING – CERTIFICATE OF PLUGGING – Owner or Operator failed to submit a certificate of plugging to the Department and each coal operator, lessee or owner who was sent notice, by certified mail, of intent to plug, within 30 days after well has been plugged.	Admin	55
102.4(b)8 - EROSION AND SEDIMENT CONTROL REQUIREMENTS – E & S plan, inspection reports and monitoring records were not available at the project site during all stages of earth disturbance activity.	Admin	54
	Total	7,637

In response to this non-compliance, the Department has undertaken significant efforts to force compliance or penalize operators for their non-compliance. Over \$1.3 million in penalties were collected from conventional oil and gas operators over the five-year period and 44 administrative orders were issued or consented to.

Of particular note in Table 4 are the rows indicating eight Petitions to Enforce and five Petitions for Contempt filed by the Department. Petitions to Enforce represent DEP's efforts to request that courts enforce DEP orders that have not been complied with while Petitions for Contempt represent DEP's efforts to have courts enforce their own court orders that have not been complied with. All enforcement actions require dedication of resources, but filing such Petitions is a significant undertaking for the Department and involve extensive counsel and enforcement staff effort and resources. In the case of a Petition for Contempt, the Department is dealing with an operator who has:

1. Violated a provision of the statute or regulations;
2. Not corrected the violation in response to receiving a Notice of Violation;
3. Was issued an administrative order to correct the violations;
4. Not complied with the administrative order;
5. Was subject to a Department Petition to Enforce filed with an appropriate court, and ordered to comply by that court;
6. Not complied with the order of that court to correct the violation; and,
7. Is subject to a Petition for Contempt to enforce the court's order.

Table 4. Summary of enforcement actions from 2017 through 2021 that were associated with conventional wells violations.

Count by Enforcement Type	2017		2018		2019		2020		2021		Grand Total	
	Count of Enforcements	Total Penalty Collected	Count of Enforcements	Total Penalty Collected	Count of Enforcements	Total Penalty Collected	Count of Enforcements	Total Penalty Collected	Count of Enforcements	Total Penalty Collected	Total Enforcements	Total Penalty Collected
ADORD - Administrative Order	4		13		3		4		3		27	\$0
BDFT - Bond Forfeiture	1	\$25,000							1	\$25,163	2	\$50,163
CACP - Consent Assessment of Civil Penalty	16	\$503,490	18	\$195,178	8	\$121,050	9	\$269,589	7	\$34,783	58	\$1,124,090
CDEC - Consent Decree					1						1	\$0
CMPOR - Compliance Order	3		6		2		2		1		14	\$0
COA - Consent Order and Agreement	5	\$16,300	3		5	\$85,900	2		2		17	\$102,200
CPA - Civil Penalty Assessment			1	\$70,000	2						3	\$70,000
CTORD - Court Order	3	\$5,000	3		9		2				17	\$5,000
EHBO - Environmental Hearing Board Order					1	\$1,950					1	\$1,950
NOV - Notice of Violation	228		207		136		304		264		1,139	\$0
PTCON - Petition for Contempt	3				1		1				5	\$0
PTNEN - Petition to Enforce	2		5		1						8	\$0
VIOIN - Violation Inquiry							1				1	\$0
Grand Total	265	\$549,790	256	\$265,178	169	\$208,900	325	\$269,589	278	\$59,946	1,293	\$1,353,403

Part 2: Evaluation of using existing authority, including increased exercise of civil penalty authority and forfeiting conventional oil and gas well bonds and requiring submission of replacement bonds, as methods to deter and motivate conventional operators to address abandoned wells and violations of the applicable law.

Clearly, there is significant non-compliance with relevant laws in the conventional oil and gas industry in Pennsylvania. The bad news is that the resources and enforcement tools and techniques available to the Department have not made an appreciable dent in compliance rates and numbers over the past five years. The good news is that with some additional resources, streamlined processes, and focused efforts, the Department's existing tools might be used in a way that will provide effective deterrence from non-compliance by the conventional oil and gas industry. However, a significant change in the culture of non-compliance as an acceptable norm in the conventional oil and gas industry will need to occur before meaningful improvement can happen.

In January 2015, the Department adopted an update to the technical guidance document titled, "[Standards and Guidelines for Identifying, Tracking, and Resolving Oil and Gas Violations](#)" (Enforcement Policy). This guidance document provides direction to DEP staff in following a consistent approach to identifying, tracking, and resolving violations of laws applicable to the oil and gas industry in Pennsylvania. This includes direction on determining appropriate actions to resolve violations, including enforcement, and to bring about compliance. This Enforcement Policy also provides the regulated industry and the public with information on the Department's approach to ensuring compliance with the law. All the recommendations in this report are well within the processes and boundaries established by the Enforcement Policy, so DEP is not recommending any specific changes to the Enforcement Policy at this time.

Administrative Orders to Plug Improperly Abandoned Wells

First, an administrative order is a basic and important enforcement tool for the Department to obtain compliance with the Commonwealth's statutes and regulations, particularly relating to improper abandonment of an oil or gas well. The Department recommends that OOGM should work with DEP's Office of Chief Counsel to develop "template" administrative orders requiring plugging of a well within a defined timeframe along with direction that such orders be issued whenever an OOGM inspector issues a Notice of Violation for failure to properly abandon and plug a well. Doing upfront work to prepare a "base" order that can be used with minimal review time should allow for these documents to be moved through internal review processes relatively efficiently. Given the significant potential for threats from abandoned, unplugged wells to the environment and public health and safety, as well as the potential fiscal impacts to the Commonwealth's taxpayers, this appears to be a prudent step for the Department to take in these cases. Finally, as discussed below, when there are violations of administrative orders, the Department is granted the authority to deny additional well permits under section 3211(e.1) and block permit transfers under sections 3211(k) and 3223 of the 2012 Oil and Gas Act.

Bond Forfeiture

Second, bond forfeiture is another enforcement tool available to the Department. As noted above, due to the adoption of Act 57 of 1997, a significant number of active conventional oil and gas wells are not subject to any bonding requirements. These are conventional wells drilled prior to April 18, 1985 and make up around 60% of the active conventional wells in Pennsylvania. Even those conventional oil and gas wells that are subject the bonding requirements in section 3225 of the 2012 Oil and Gas Act only have a maximum bond of \$25,000 for all conventional oil and gas wells in Pennsylvania.

Forfeiture of bonds is available as a compliance and enforcement measure, but involves significant expenditure of limited legal resources. Historically, DEP has generally not forfeited bonds due to the relatively small amount of money in question. In the last three years, however, OOGM has moved to forfeit bonds when conventional oil and gas wells are improperly abandoned. These steps have not resulted in a noticeable improvement in conventional oil and gas operator compliance rates, but, when used in conjunction with the other tools outlined in this report, may begin to address the underlying culture of improper well abandonment. [Section 3225](#)(c) of the 2012 Oil and Gas Act states, in relevant part (emphasis added):

(a) General rule.--The following shall apply:

(1) Except as provided in subsection (d), upon filing an application for a well permit and before continuing to operate an oil or gas well, the owner or operator of the well shall file with the department a bond covering the well and well site on a form to be prescribed and furnished by the department. **A bond filed with an application for a well permit shall be payable to the Commonwealth and conditioned upon the operator's faithful performance of all drilling, water supply replacement, restoration and plugging requirements of this chapter...**

* * * * *

(c) Noncompliance.--**If a well owner or operator fails or refuses to comply with subsection (a), regulations promulgated under this chapter or conditions of a permit relating to this chapter, the department may declare the bond forfeited** and shall certify the same to the Attorney General, who shall proceed to enforce and collect the full amount of the bond and, if the well owner or operator has deposited cash or securities as collateral in lieu of a corporate surety, the department shall declare the collateral forfeited and direct the State Treasurer to pay the full amount of the funds into the Well Plugging Restricted Revenue Account or to sell the security to the extent forfeited and pay the proceeds into the Well Plugging Restricted Revenue Account. If a corporate surety or financial institution fails to pay a forfeited bond promptly and in full, the corporate surety or financial institution shall be disqualified from writing further bonds under this chapter or any other environmental law administered by the department. A person aggrieved by reason of forfeiting the bond or converting collateral, as provided in this section, shall have a right to appeal to the Environmental Hearing Board in the manner provided by law. Upon forfeiture of a blanket bond for a violation occurring at one or more well sites, the person whose bond is forfeited shall, within ten days of the forfeiture, submit a replacement bond to cover all other wells of which the person is an owner or operator. Failure

to submit the replacement bond constitutes a violation of this section as to each of the wells owned or operated by the person.

Regarding bond forfeiture, the Enforcement Policy states (emphasis added):

Bond Forfeiture

Depending on the circumstances, **the Department will normally initiate bond forfeiture at the same time that it issues an administrative order** or files a court action, or only after attempts at other enforcement actions have been pursued.

The District Program Manager will prepare and forward to the Bureau Director a recommendation to forfeit an operator's bond. The recommendation should include a summary of events in the history of enforcement actions leading to the decision. The District Office will prepare the Forfeiture Order and should require a replacement bond be submitted within 10 calendar days of the date the bond is declared forfeited to cover all wells under the forfeited bond.

If the operator does not appeal the bond forfeiture action to the EHB, or after an operator's appeal is dismissed, the Bureau Director will notify DEP's Division of Certification, Licensing, and Bonding to proceed with collecting the bond.

The Department recommends that OOGM work with the Office of Chief Counsel to develop a template "Notice of Intent to Forfeit" letter to be issued to operators at the same time that the Department issues the template administrative order to properly plug abandoned wells; this letter commences the bond forfeiture process. The Department will need sufficient resources to carry the process to its conclusion, forfeiting the bond and requiring replacement as a condition of continued operation of conventional oil and gas wells. For other violations, the Department recommends continuing to follow the standard approach outlined in the Enforcement Policy outlined above.

Civil Penalty Assessments

Third, OOGM should work with DEP's Office of Chief Counsel to develop a standard assessment of civil penalties for violations relating to improper abandonment of conventional oil and gas wells. Assessment and collection of civil penalties for violations can provide a significant deterrence effect if they are used consistently for significant violations such as improper abandonment. [Section 3256](#) of the 2012 Oil and Gas Act establishes the Department's authority to assess civil penalties against conventional oil and gas operators, and states, in relevant part (emphasis added):

§ 3256. Civil penalties.

In addition to other remedies available at law or in equity for a violation of this chapter, a regulation of the department, a departmental order or a permit condition, the department, after a hearing, may assess a civil penalty regardless of whether the violation was willful. The penalty shall not exceed \$25,000 plus \$1,000 for each day during which the violation continues or, in the case of a violation arising from the construction, alteration or operation of an unconventional well, \$75,000 plus \$5,000 for each day during which the violation continues.

In determining the amount, the department shall consider willfulness of the violation, damage or injury to natural resources of this Commonwealth or their uses, endangerment of safety of others, the cost of remedying the harm, savings resulting to the violator as a result of the violation and any other relevant factor. When the department proposes to assess a civil penalty, it shall notify the person of the proposed amount of the penalty. The person charged with the penalty must, within 30 days of notification, pay the proposed penalty in full or file an appeal of the assessment with the Environmental Hearing Board...

Within the context of section 3256 of the 2012 Oil and Gas Act and appropriate policies, the Department should consider more routine assessments of civil penalties against conventional oil and gas operators, particularly for improper abandonment.

Liens

Fourth, in addition to the direct deterrence impact of civil penalty assessments, failure to pay such assessments or appeal to the Environmental Hearing Board also gives the Commonwealth the ability to enter and docket liens. Section 3256 of the 2012 Oil and Gas Act states, in relevant part (emphasis added):

Failure to comply with the time period under this section shall result in a waiver of all legal rights to contest the violation or the amount of the penalty. The civil penalty shall be payable to the Commonwealth and collectible in any manner provided at law for collection of debts. *If a violator neglects or refuses to pay the penalty after demand, the amount, together with interest and costs that may accrue, shall become a lien in favor of the Commonwealth on the real and personal property of the violator, but only after the lien has been entered and docketed of record by the prothonotary of the county where the property is situated. The department may transmit to the prothonotaries of the various counties certified copies of all liens. It shall be the duty of each prothonotary to enter and docket the liens of record in the prothonotary's office and index them as judgments are indexed, without requiring payment of costs as a condition precedent to entry.*

Regarding liens, the Enforcement Policy states:

Lien

In general, liens are filed by DEP attorneys assigned to the particular District, or in Central Office. Liens are filed for final penalty assessments or Court judgments which are unpaid. In some cases, liens are filed as part of a negotiated settlement, and are documented in a CO&A or Consent Decree. In all cases, liens are filed in a Pennsylvania County Court of Common Pleas, and in any other state as appropriate.

Section 3256 of the Oil and Gas Act establishes a procedure for imposing liens. DEP's Office of Chief Counsel should be consulted in this process.

OOGM should work with the DEP Office of Chief Counsel to ensure that the Department routinely enters and docket liens on the real and personal property of conventional oil and gas operators when valid civil penalty assessments are not paid.

Criminal Referrals

Finally, the Department can refer oil and gas operators to the Office of Attorney General or a county District Attorney for criminal enforcement. In addition to other statutory provisions relating to criminal penalties such as the Solid Waste Management Act and the Clean Streams Law, [section 3255](#) of the 2012 Oil and Gas Act contains the following language:

§ 3255. Penalties.

(a) General violation.--A person violating a provision of this chapter commits a summary offense and, upon conviction, shall be sentenced to pay a fine of not more than \$1,000 or to imprisonment of not more than 90 days, or both. Each day during which the violation continues is a separate and distinct offense.

(b) Willful violation.--A person willfully violating a provision of this chapter or an order of the department issued under this chapter commits a misdemeanor and, upon conviction, shall be sentenced to pay a fine of not more than \$5,000 or to imprisonment of not more than one year, or both. Each day during which the violation continues is a separate and distinct offense.

(c) Authority.--The department may institute a prosecution against any person or municipality for a violation of this chapter.

Regarding criminal referrals, the Enforcement Policy states:

K. Criminal Action

The Department will consider referring violations that meet the requirements of the procedures established with the Office of Attorney General for criminal investigation and prosecution. Criminal referrals require the highest degree of confidentiality and are made through the Office of Chief Counsel.

The Department recommends that OOGM should continue to review enforcement cases with the DEP Office of Chief Counsel and consider referral of appropriate cases to the Office of Attorney General for criminal prosecution under the environmental statutes.

Part 3: Recommendations for increased scrutiny of conventional oil and gas operators' requests for regulatory inactive status approval, permit transfers and new applications for permits to drill and operate a well.

In addition to taking enforcement actions to require correction of non-compliance and deter future violations, the Department also engages in several administrative functions that may lessen the likelihood of operators improperly abandoning non-economic oil and gas wells. Primarily, these

functions concern conventional oil and gas well permit transfers from better- to lesser-capitalized entities, and review and approval of regulatory inactive status requests, which enable operators to cease producing wells without plugging them and reclaiming the well site. In addition, the Department has the authority to deny new permits for non-compliance with final actions or issue permit suspension and revocation orders in particular cases.

Permit Transfers

Permit transfers are a routine and appropriate part of conducting business in the conventional oil and gas industry and the Department's oversight of the industry. Regarding permit transfers, several provisions of the 2012 Oil and Gas Act control this practice. First, [section 3211\(k\)](#) states:

(k) No transfer permitted.--No permit issued under this section or registration issued under section 3213 (relating to well registration and identification) may be transferred without prior approval of the department. A request for approval of a transfer shall be on the forms, and in the manner, prescribed by the department. The department shall approve or deny a transfer request within 45 days of receipt of a complete and accurate application. The department may deny a request only for reasons set forth in subsection (e.1)(4) and (5). Approval of a transfer request shall permanently transfer responsibility to plug the well under section 3220 to the recipient of the transferred permit or registration.

There are several important provisions in this subsection. First, the statute makes it clear that a permit transfer is only effective if approved by the Department. Second, on its face, this subsection appears to limit the Department's consideration of the transfer to the reasons set forth in subsection 3211(e.1)(4) and (5); those paragraphs state:

(e.1) Denial of permit.--The department may deny a permit for any of the following reasons:

* * * * *

(4) The requirements of section 3225 (relating to bonding) have not been met.

(5) The department finds that the applicant, or any parent or subsidiary corporation of the applicant, is in continuing violation of this chapter, any other statute administered by the department, any regulation promulgated under this chapter or a statute administered by the department or any plan approval, permit or order of the department, unless the violation is being corrected to the satisfaction of the department. The right of the department to deny a permit under this paragraph shall not take effect until the department has taken a final action on the violations and:

(i) the applicant has not appealed the final action in accordance with the act of July 13, 1988 (P.L.530, No.94), known as the Environmental Hearing Board Act; or

(ii) if an appeal has been filed, no supersedeas has been issued.

Therefore, the only grounds for the Department to deny a permit transfer are inadequate bonding under section 3225 and failure to comply with a final action of the Department, which includes an

administrative order. By routinely issuing administrative orders requiring plugging when improper abandonment of a conventional oil and gas well occurs, the Department will either: (1) obtain compliance with the plugging and reclamation requirements; or (2) be entitled to block the transfer of permits from the violator to a third party.

This second piece is particularly critical given the final sentence of section 3211(k), as well as section 3223 of the 2012 Oil and Gas Act, which together transfer the obligation to plug the well under section 3220 to the third-party transferee. Operators should not be entitled to benefit from their non-compliance and avoid their plugging obligation through a permit transfer. Although the tools in the 2012 Oil and Gas Act available to the Department regarding permit transfers are limited, issuing administrative orders to plug wells will allow the Department to exercise its authority to deny permit transfers if the plugging order has not resulted in compliance.

Finally, the Department recommends that OOGM “revamp” its transfer application forms. When an operator requests to transfer permits, it is an appropriate time for the Department to gather useful information that would be critical later if the wells are improperly abandoned. This information should include operating agreements and identification of well owners and corporate structures so that OOGM can identify who actually controls and/or manages the wells in question.

Inactive Status

As noted above, section 3220 allows an operator of a conventional oil and gas well to avoid responsibility for plugging a well even if the well is not producing so long as the Department grants inactive status approval to the operator. While inactive status approval can be reasonable in certain circumstances, such as fluctuations in commodity prices, it should not be used as a means of delaying proper plugging until the operator can transfer the well or otherwise avoid their plugging responsibilities. Section 3214 of the 2012 Oil and Gas Act and the Department’s regulations in 25 Pa. Code §§ 78.101 – 78.105 govern the standards to qualify a well for inactive status and the operator’s ongoing responsibilities regarding the well while it is in inactive status. Of particular importance to qualification for inactive status and this discussion, [section 3214\(a\)\(3\)](#) states:

§ 3214. Inactive status.

(a) General rule.--Upon application, the department shall grant inactive status for a period of five years for a permitted or registered well, if the following requirements are met:

* * * * *

(3) the operator anticipates construction of a pipeline or future use of the well for primary or enhanced recovery, gas storage, approved disposal or other appropriate uses related to oil and gas well production...

[Section 78.102](#)(4) of the Department’s regulations states:

§ 78.102. Criteria for approval of inactive status.

To obtain inactive status, the applicant shall affirmatively demonstrate to the Department’s satisfaction that:

* * * * *

(4) The applicant shall certify that the well is of future utility and shall **present a viable plan for utilizing the well within a reasonable time**. In addition to providing information to demonstrate compliance with paragraphs (1) and (2), the application for inactive status shall include the following:

(i) **A plan showing when the well will be used.**

(ii) A certification identifying that one of the following applies:

(A) Significant reserves remain in place and the operator plans to produce the well.

(B) The well will be used as a disposal well.

(C) The well will be used as a storage well.

(D) The well will be used as an observation well.

(E) The well will be used as a secondary or tertiary recovery injection well or that the well will be used for other purposes specified by the applicant.

(iii) Other information necessary for the Department to make a determination on inactive status.

In the past, the Department was not as aggressive in requiring detailed plans to be submitted by conventional oil and gas operators demonstrating the future utility of the well in detail, relying instead on certifications of future utility made by the operator. Table 5 outlines the number of regulatory inactive status requests approved by the Department since 2017.

Table 5. Count of conventional well inactive status requests approved each calendar year by District.

Year	2017	2018	2019	2020	2021	Total
Eastern District Office	0	9	5	2	6	22
Northwest District Office	58	31	3	3	3	98
Southwest District Office	15	0	31	1	1	48
Total	73	40	39	6	10	168

In 2018, the Department updated its [Inactive Status request form](#). One of the changes to the form was to require additional data and plans relating to the future utility of the well, which is critical for separating legitimate inactive status applications from attempts to defer plugging responsibilities. The Department should continue to request this information from inactive status applicants and only grant inactive status applications where the operator has met the burden of proving future utility.

Permit Denial

As noted above, section 3211(e.1) of the 2012 Oil and Gas Act establishes conditions under which the Department may deny a permit application to drill or operate a conventional well. As noted in the Permit Transfer discussion above, issuing administrative orders to plug wells will allow the Department to exercise its authority to deny new well permit applications if the plugging order has not resulted in compliance. Operators should not be entitled to benefit from their non-compliance and still obtain permits to drill new wells. The Department should consider issuing plugging orders when improper abandonment occurs, and base denials of new well permit applications if the plugging orders do not result in compliance to the satisfaction of the Department.

Permit Suspension or Revocation

Permit suspension or revocation is authorized under [section 3253\(b\)](#) of the 2012 Oil and Gas Act, which states:

(b) Suspension and revocation.--

(1) The department may suspend or revoke a well permit or well registration for any well:

(i) in continuing violation of any of the following:

(A) This chapter.

(B) The act of June 22, 1937 (P.L.1987, No.394), known as The Clean Streams Law.

(C) The act of July 7, 1980 (P.L.380, No.97), known as the Solid Waste Management Act.

(D) Any other statute administered by the department; and

(ii) the likely result of a violation is an unsafe operation or environmental damage.

The Enforcement Policy discusses when it might be appropriate for a well permit to be suspended or revoked by OOGM staff:

E. Suspension or Revocation of Permit or Registration

Suspension or revocation of a permit or registration is accomplished by an order of the Department. The Oil and Gas Act establishes procedures for the Department to follow before issuing the suspension or revocation order (58 Pa. C.S. § 3253). This involves (1) notifying a well operator explaining the reasons for the action, using citations to specific statutory provisions, regulations or other reasons, and including the relevant facts, and (2) providing an opportunity for a conference.

A permit suspension is the temporary withdrawal of the privilege to conduct an activity under a specific permit or registration. The suspension may be for a fixed period of time or indefinitely until the Department is satisfied with progress towards compliance or resolution of the violation(s). A permit suspension would be issued to temporarily halt activity where a permit was based on erroneous, correctible information or where a well or other facility is causing a

condition that can be remedied. Failure to comply after permit suspension could result in revocation of the permit. A suspension order terminates automatically once the violation is corrected to the Department's satisfaction, upon written confirmation by the Department following notice by the operator.

A permit revocation is the permanent termination of the privilege to conduct an activity under a specific permit or registration. A revoked permit or registration should not be reinstated using the original application materials. A new application would be required.

Revoking a permit or registration is an action of last resort where a well or other facility is malfunctioning or incapable of being repaired, or the permit or registration was based on false or deficient information that cannot be remedied, or the operator displays a lack of intention or ability to comply with the law.

Although not appropriate for all violations, the Department should consider moving to suspend or revoke operating permits and order wells to be plugged if the conditions of section 3253(b) are met.

Part 4: Recommendations for regulatory reform to comprehensively regulate conventional drilling according to modern best practices and industry standards.

There are several reforms that can be undertaken to regulate the conventional oil and gas industry in Pennsylvania according to modern practices.

Surface Activities Rulemakings

First, the Department currently has two proposed rulemakings in the process of development that would primarily address surface activities at conventional oil and gas well sites. These two rulemakings propose to amend Chapter 78 to update the environmental protection performance standards related to oil and gas activities (i.e., environmental protection and waste management). The purpose of these rulemakings is to update the performance standards for surface activities at conventional well sites to ensure that these activities are conducted in a manner that protects the health, safety, and environment and property of Pennsylvania citizens consistent with the environmental laws that provide authority for these rulemakings and the Pennsylvania Constitution. These rulemakings represent the first updates to rules governing surface activities associated with the development of conventional oil and gas wells in Pennsylvania since 2001.

Major areas of the proposed environmental protection standards rulemaking include public resource impact screening and water supply replacement standards (including pre-drill surveys). Other parts of the environmental protection standards rulemaking will include standards for well development impoundments, site restoration, borrow pits, underground injection control well permitting, and well development (fresh or otherwise approved water) impoundments.

Major areas of the proposed waste management rulemaking include: waste management and disposal (including a process for the closure or waste permitting for wastewater impoundments and onsite wastewater processing); establishing requirements for identification, select monitoring, and

remediation of wells proximal to hydraulic fracturing activities (area of review); and standards for reporting and remediating spills and releases. The Department anticipates this proposed rulemaking will be silent as to the practice of roadspreading of conventional oil and gas well brine, but that practice could potentially be addressed through this rulemaking.

Since 2016, OOGM has worked with Pennsylvania Grade Crude Development Advisory Council (CDAC) on potential legislation and proposed regulations relating to conventional oil and gas wells. Specifically, OOGM staff discussed proposed rulemaking concepts at several CDAC meetings throughout 2016, 2017 and 2018. In April 2018, program staff and CDAC members met at the DEP Moshannon District Mining Office and developed a scoping document outlining where agreement could be reached on potential legislative or regulatory language.

In 2018 and 2019, program efforts on this issue centered more directly on legislative language with the hope that regulatory development could commence once the proposed Conventional Oil and Gas Wells Act (“COGWA”) passed. Those discussions reached an impasse and Governor Wolf [vetoed](#) COGWA/Senate Bill 790 on November 25, 2020.

Given the lack of progress on COGWA, the Department restarted the rulemaking process to address these issues in 2020. OOGM staff discussed the proposed regulations at CDAC meetings throughout 2020 and 2021 and at meetings of the Department’s Oil and Gas Technical Advisory Board (TAB) in 2020, 2021, and 2022. The proposed environmental protection standards rulemaking was the primary focus of the April 2022 CDAC meeting and the May 2022 TAB meeting. CDAC vigorously opposed adoption of the majority of the environmental protection standards rulemaking and adopted a report detailing CDAC’s concerns with the proposed rulemaking. The proposed waste management rulemaking will be considered in detail by CDAC and TAB in 2023. The Department should continue to move these proposed rulemakings forward to the Environmental Quality Board (EQB) for consideration and public comment.

Subsurface Activities Rulemakings

There are several rulemakings addressing well plugging and construction/operation issues that the Department could develop. Pennsylvania’s plugging regulations have not been updated since 1994. Conventional industry representatives have called out conflicts between the Coal and Gas Coordination Act and Act 13 of 2012 in terms of plugging requirements. The well construction and operation regulations were last updated in early 2011, and the Department now has more than a decade’s experience in implementing those regulations. The five general categories of proposed changes to the subsurface regulations include:

- Regulations that were not modified substantively as part of the 2011 rulemaking (e.g., well plugging)
- Subjects that have not historically been addressed through rulemaking (e.g., coalbed methane wells)

- Minor modification/clarification regarding sections that were changed substantively in the 2011 rulemaking
- Consistency between chapters (e.g., discrepancies between Chapter 78 and Chapter 79)
- New/substantively enhanced subjects associated with field data analysis and observation

Bonding

As for conventional oil and gas well bonding, the General Assembly, as noted above, has significantly limited the EQB's authority to change bond amounts for conventional wells drilled after April 18, 1985 or even require bonds for wells drilled before that date. There might be other avenues to make improvements to Department programs designed to reduce future orphaned well burdens, such as alternative funding mechanisms for orphaned well programs to protect taxpayers from assuming additional liabilities, and reforms to programs relating to well transfer or temporary abandonment, as noted above. The Department should compile information regarding how other states approach these issues and make recommendations for any reasonable legislative or regulatory changes that might assist in avoiding improper abandonment.

Conclusion

The conventional oil and gas industry's recent record of compliance with Pennsylvania law is simply not good, particularly with regard to improper abandonment of wells. This record of non-compliance will require DEP to further develop and refine its techniques for deterring violations and encouraging compliance with relevant statutory and regulatory provisions. A significant change in the culture of non-compliance as an acceptable norm in the conventional oil and gas industry will need to occur before meaningful improvement can happen.

Wells that are improperly abandoned may pose environmental and public health and safety threats and may become the responsibility of the Commonwealth to plug along with remediation and reclamation of the well sites. The reporting non-compliance denies DEP and the public critical information about individual wells and the overall industry and has become so widespread among operators with 11 or more conventional oil and gas wells as to be the rule rather than the exception.

Although the recent compliance trends for the conventional oil and gas industry in Pennsylvania are troubling, DEP does possess, as laid out in this report, the necessary authority and tools needed to take appropriate steps to address these issues. These tools include the use of administrative orders, permit denials, civil penalty assessments, bond forfeiture, entry and docketing of liens, criminal referrals when appropriate, permit suspension and revocation, and increased scrutiny of permit transfer and regulatory inactive status requests. The Department is also currently developing two rulemakings to bring Pennsylvania's regulation of the conventional oil and gas industry in line with modern standards and could initiate other rulemakings if needed.

It cannot be emphasized strongly enough, however, that increased oversight of the conventional oil and gas industry and enforcement will require additional resources for the Department, especially in

the DEP Office of Chief Counsel and the Bureau of District Oil and Gas Operations. Developing a stable funding source to fund these efforts will be critical to successfully altering the current course of widespread non-compliance in the conventional oil and gas industry in Pennsylvania.