pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

December 18, 2023

Kimbra Davis, Director
U.S. Department of the Interior
Orphaned Wells Program Office

Re: Docket No. DOI-2023-0014; Request for Information To Inform the Orphaned Wells Program Office's Development of Regulatory Improvement Grants Under the Bipartisan Infrastructure Law
Ms. Davis:

The Pennsylvania Department of Environmental Protection (DEP) submits the following comments in response to the Department of the Interior, Orphaned Wells Program Office (OWPO) request for comments to help inform its efforts in determining how to best structure the Regulatory Improvement Grant (RIG) program, pursuant to section 40601 of the Infrastructure Investment and Jobs Act, also referred to as the Bipartisan Infrastructure Law (Act).

Applicable to both RIG Criteria

1. *Should a specific amount of the $1.5 billion in Performance Grant funds be set aside for Regulatory Improvement Grants? Similarly, should a specific amount be set aside for Plugging Standards and Program Standards?*

No, the Department of the Interior (Interior) should not set funds aside. There appears to be sufficient funding available for anticipated state Regulatory Improvement Grant applications.

2. *A state that receives a RIG shall reimburse the United States the amount of the grant if, during the 10-year period beginning on the date of receipt of the grant, the state enacts a law or regulation that, if in effect on the date of submission of the application, would have prevented the state from being eligible to receive the grant. What would be the most effective and administratively prudent way to address this requirement (*e.g., *an annual audit, certifications to attest to compliance, on-site reviews, etc.)?*

An annual audit and review of laws and regulations would provide the information to make the determination. In conjunction with annual audits and onsite reviews, a state should be required to provide a yearly summary to the OWPO of any new laws or regulations enacted. This information could be evaluated and reviewed to determine if any new laws or regulations enacted affect RIG eligibility requirements. If the state did at some time in the future implement a law or regulation contrary to the eligibility requirements; pro-rate the reimbursement based upon the enacted date.

3. *Different states may require different standards, financial reform methodology, and policies or procedures. Is there a recommended amount of time that the revised standards, methodologies, policies, or procedures should be in effect prior to applying for a RIG?*

It may take several months for a regulatory body to develop and implement new standards and policies. However, if a state has standards, methodologies, policies, and procedures that are in effect at the time of submitting the grant application, Interior should award the grant to the state.

4. *What metrics or factors should the OWPO use for measuring and evaluating the improvements a state makes to its plugging standards or procedures (Plugging Standard RIG) and actions a state may take to reduce future orphaned well burdens (Program Standard RIG)? How can the OWPO ensure for the public that actions states take will achieve the intended purposes?*

If federal money is to be spent, then state plugging standards and procedures should at minimum meet the federal plugging standards. Utilize organizations like the IOGCC to track such state plugging improvement methods. Pennsylvania does not appear to have deficiencies in their plugging requirements or methodologies, but only in responsible funding necessary to address the large historical inventory of orphan wells.

5. Should a RIG be an all-or-nothing grant, whereby an applying state either receives the full $20 million or nothing based on a threshold criteria? Or, should a RIG award be some portion of $20 million based on how the state's application scores on a series of factors?

Pennsylvania believes that the RIG grants should be all-or-nothing grants which are awarded based on state improvements to the state program.

6. What are the best practices pertaining to effective methods, policies, plugging approaches, or actions a state may use to avoid future issues or address past issues with failed partial plugging of wells (e.g., oil and gas wells partially plugged and converted to water wells)?

Have the states identify these wells on a master spreadsheet which captures issues encountered and identifies what led to a plugging issue and how those issues were mitigated. Have the contractor transfer or register the well into their name prior to plugging. After a designated period, the well can be transferred to a regulatory entity. If an individual knowingly and willingly converts an oil/gas well into a water well, they should be held liable until the well is plugged completely and their name is removed from being associated with that well. Partial plugging of oil and gas wells usually has the context of isolating (plugging) deeper/lower formations and the continuation of production from a higher formation(s). Leaving the well exposed to fresh groundwater (aquifers) and unplugged would not and should not be considered a partially plugged well in any circumstance for an oil and gas plugging application.

Applicable to Plugging Standards RIGs

1. *What should be considered as "standards and procedures" when evaluating grant applications and awarding RIG grants (e.g., laws or regulations, taxes or tax incentives, utilization of public funds, and fees or assessments, state personnel and staffing)?*

The following should be considered:

- Laws and Regulations – Existing regulatory framework and well plugging programs.
- Staffing and personnel – Staff and personnel in place to manage and implement the plugging program at an administrative level and field level.
- Evaluate the state's framework or procedures that detail how they effectively and efficiently implement sound plugging standards to problematic orphan well circumstances.

2. What factors or elements should be considered in evaluating whether a standard or procedure is intended to ensure that orphaned wells are plugged "in an effective manner"? Should specific factors or elements be weighed more heavily than others? Are there best practices for determining effective well plugging?

Elements of a standard or procedure should include but are not limited to:

a. Geologic assessment including identification of fresh groundwater zone and other fluid bearing zones;
b. Effective plug placement and plugging materials to properly isolate oil, gas, and fluid bearing strata;
c. Removal of uncemented casing to total depth;
d. Placement of cement behind casing that cannot be retrieved;
e. Pre-plugging inspections including baseline well metrics and emission quantification;
f. Mechanical integrity assessment of the well;
g. Post plugging inspection.

Best practices for determining effective plugging should include:

a. Frequent inspections during the plugging operation;
b. Post plugging inspections;
c. Review of the plugging affidavit to verify compliance with applicable statutes and regulations; and
d. Installing a solid column of cement should be considered the ideal standard for these cases.

When approaching considerations for wells located in areas where mineable coal and other resources remain, and areas where coal extraction has previously occurred, the above criteria should be weighed more heavily.

3. *Is there a specific regulatory entity (i.e., Federal agency, state agency, Tribal agency, non-United States jurisdictions) that has performed the best in ensuring oil or gas wells are properly plugged and abandoned, and that the associated surface has been restored?*

Yes, DEP Oil and Gas Program. The DEP Oil and Gas Program staff oversee and inspect various phases of the plugging process by following DEP's plugging and site restoration regulations, resulting in stopping the vertical flow of fluids within the wellbore. Staff ensure the cementing of the well solid from total depth or attainable bottom to surface, which has proven extremely effective even with subsequent drilling and hydraulic fracturing influences occurring nearby.

4. What are the standards and procedures used by the above specific entity that were most effective in ensuring that oil or gas wells were properly plugged and abandoned, and that the associated surface has been restored?

Standards and procedures should include inspections of the well/well site prior to, during, and after plugging to verify and confirm compliance with surface and subsurface regulations. The Department has also found effective a one-year warranty inspection for all state-run plugging contracts, to ensure restoration has been performed and no leaks at surface exist. See also answer #3.

5. What elements or factors should be considered in determining whether an entity has plugged a well effectively? Similarly, what elements or factors should be considered in determining whether the associated surface has been restored? Do standards or best practices exist? If so, what are they?

Standards and/or best practices include:

a. Being onsite anytime during plugging;
b. Frequent site visits;
c. Witnessing the tagging of any plugs;
d. Zero gas expression at surface and no known subsurface gas migration; and
e. One-year warranty inspection- occurs a year after the end of work for plugging contracts. The well is inspected for any visual evidence of fluid or gas leaks. Checks for methane are also made using Altair meters. During this inspection, site conditions are also assessed to ensure they comply with regulatory specifications.

6. Are there any particular standards or procedures, or lack of addressing certain aspects in standards or procedures, that should disqualify a state from receiving a Plugging Standards RIG? If so, what are they and why?

Pennsylvania does not have any examples of practices that should disqualify a state from receiving a grant. So long as the "State has strengthened plugging standards and procedures designed to ensure that wells located in the State are plugged in an effective manner that protects groundwater and other natural resources, public health and safety, and the environment."

7. *What is the best approach for identifying the ways in which a state's plugging standards and processes have been strengthened to achieve proper plugging and abandoning of oil and gas wells? What is the best approach for measuring or quantifying the ways in which a state's previous standards and processes were adequate or inadequate?*

A recommended approach to identify the ways in which a state's plugging standards and processes have been strengthened is to request that the state provide a regulatory history and overview of the state's plugging regulations, including specific examples of regulatory or program improvement and changes that strengthened or improved plugging standards and processes.

8. What factors or elements should be considered when evaluating whether a standard or procedure will affect each of the following: (1) groundwater; (2) public health and safety; and (3) natural resources or the environment?

(1) Will the quantity or quality of groundwater be impacted, and will proper distances for work activities be maintained to protect groundwaters?
(2) Will proper gas migration protection and investigation measures be put into place and observed in order to protect the public?
(3) With each state having their own set of environmental protection regulations, capturing a summary of the regulations and setting forth minimum environmental standards for all to meet would be beneficial.
(4) Complete isolation of gas, oil, brine, coal, limestone etc. and freshwater intervals to the extent possible.

9. Should the evaluation of a state's application be based on a criteria that focuses on the text and structure of the state's plugging standards and procedures that are specifically identified in the application, or should an approach be taken whereby an applicant state is free to implement any standards or procedures, and take any resulting action, so long as the state can demonstrate how its actions will protect groundwater and other natural resources, public health and safety, and the environment? If the later approach is taken, how might a state demonstrate effectiveness in protection of groundwater, natural resources, public health and safety and the environment?

The applicant state should be free to implement standards and procedures which comply with that state's environmental regulations and that detailed procedure and inspection report documentation can confirm that the work has been completed according to that state's requirements.

The application evaluation should not solely be based on the text and structure of the state's plugging standards and procedures that are detailed in the application. Other plugging methods, materials, and procedures not currently identified or in use at the time of the application may become available. A state should be permitted to evaluate and use new methods, materials and procedures that would satisfy the state's plugging standards and regulations resulting in the overall goal of protecting groundwater and other natural resources, public health and safety, and the environment.

10. Are there any other thoughts, innovative approaches, or comments pertaining to the administration of the RIG program?

Setting up monthly Plugging Operator Team Calls where best management practices, plugging issues and their mitigation, and success stories could be shared for the benefit all involved. Often, well operators and state regulators struggle in isolation with issues that others have found a way to work through. Shared communication would have the potential to reduce the time, resources, and environmental impact of the plugging projects upon the citizens, air, land, and waters of the states.

Applicable to Program Standards RIGs

1. What changes to state programs designed to reduce orphaned well burdens should be considered in evaluating a state's Program Standards RIG application? Should the improvements include changes to procurement, budgeting, staffing, or other actions of state governance?

One size will not fit all here. All steps a state might take to reduce the future burden of orphan wells should be considered by Interior when reviewing state grant applications. Tools might include:

- Increased bond amounts to reflect the cost to the state of plugging improperly abandoned wells,
- development of alternative financial assurance mechanisms to ensure that wells are properly plugged upon abandonment,
- the use of administrative orders to require responsible parties to plug abandoned wells,
- permit denials,
- civil penalty assessments,
- bond forfeiture,
- entry and docketing of liens,
- criminal referrals when appropriate,
- increased scrutiny of permit transfer requests,
- increased scrutiny of regulatory inactive status requests, and
- appropriation of additional resources to state agencies to carry out these tasks.

As noted in IIJA, the goal of this Regulatory Improvement Grant is to encourage applicant states to make "improvements to State programs designed to reduce future orphaned well burdens, such as financial assurance reform, alternative funding mechanisms for orphaned well programs, and reforms to programs relating to well transfer or temporary abandonment."

2. What factors, elements, or benchmarks should be used to evaluate a state's financial assurance reforms? Is there a state or other entity that has the best financial assurance requirements to reduce the orphaning of wells?

Pennsylvania has no comments on financial assurance benchmarks at this time and is currently in the process of reviewing other jurisdictions' approaches to financial assurance for oil and gas wells. We do note that the approach taken by the Energy Regulator of the Province of Alberta appears to be a thoughtful, comprehensive, and clear-eyed approach to the question of oil and gas well financial assurance.

3. What factors, elements, or benchmarks should be used to evaluate a state's alternative funding mechanisms for orphaned well programs? Is there a state or other entity that has strong alternative funding mechanisms for orphaned well programs?

Pennsylvania is interested in alternative funding mechanisms for the orphaned well plugging program but does not have a comment on benchmarks or other state/entities with strong

alternative funding mechanisms. Pennsylvania currently operates an Underground Storage Tank Indemnification Fund (USTIF) that allows operators of underground storage tanks to meet state and federal financial assurance requirements relating to remediation of releases from those facilities. USTIF could serve as a model for future development on this issue in Pennsylvania.

4. What factors, elements, or benchmarks should be used to evaluate a state's reforms to programs relating to well transfer or temporary abandonment? Is there a state or other entity that has strong programs related to well-transfer or temporary abandonment?

Pennsylvania believes that state reforms should at least include an element that ensures no wells that are in violation can be transferred without proper resolution. Assessment of the fiscal health of the transferee and the productive life of the transferred well could also be a best practice.

Pennsylvania's current regulations relating to inactive status approval requires that an operator requesting such a designation (and thereby avoiding plugging the well) demonstrate that the condition of the well is sufficient to prevent damage to the producing zone or contamination of fresh water or other natural resources or surface leakage of substances, stop the vertical flow of fluid or gas within the well bore, protect fresh groundwater, and pose no threat to the health and safety of persons, property or the environment. The well must also meet certain casing and cementing requirements. Finally, the well operator must certify that the well is of future utility and shall present a viable plan for utilizing the well within a reasonable time, either for active hydrocarbon production or some other valid purpose (e.g., a change in use to an injection well).

5. What state actions are likely to increase future orphaned well burdens on the state, and why? How should those actions be reversed?

First, having an oil and gas program that does contain the regulatory and implementation provisions outlined above.

With low gas prices and well-maintenance expenses increasing yearly, if a State would fail to adequately inspect wells, or have the staff to closely monitor annual mechanical integrity reports for submission and proper completion, or if inactive status would be granted to wells for too many years, then well operators would tend to slip away from the responsibility to properly plug and abandon these wells. As additional well funding becomes available, there should be more money allocated to additional State staffing so the States can more closely monitor active wells. Interior should consider allowing states to use this Regulatory Improvement Grant to carry out these tasks rather than using these funds to exclusively plug abandoned wells.

States may have an existing backlog of unplugged orphaned wells due to legislation that does not adequately fund a state's well plugging program. Increased future burdens are likely to occur when a state does not propose new legislation, modify existing legislation, or find other funding sources or mechanisms to address the backlog of wells and future wells not yet identified. Well plugging costs will likely increase due to the deteriorating mechanical integrity of the wells, changes in site conditions, and inflationary costs associated with service providers, materials, and plugging program management and oversight.

6. Should the evaluation of a state's application be based on criteria that focuses on the text and structure of the programs identified in the application, or should an approach be taken whereby an applicant state is free to implement any programs it sees fit, so long as the state can show how its programs are designed to reduce future orphaned well burdens?

States need to be able to develop and alter *their* programs to achieve the goal of reducing future orphan wells. States that have a competent regulatory program in place for well monitoring from cradle to grave should be free to implement programs which the state has identified as necessary to effectively reduce future orphaned well burdens, given the particular legal, economic and geological challenges that exist in that particular state.

7. What are the most effective methods or best practices a state may use to compel companies to properly plug and abandon wells at the end of their useful life? Are there states or other entities that are currently implementing those?

Pennsylvania has found that the most effective methods to compel companies to properly plug and abandon wells include:

a. Timely communications between well operators and the State agency tasked with the oversight of those wells;
b. A rigorous inspection program to get out to wells and visually inspect them for production and compliance;
c. Requiring well operators to submit accurate lists of out of production wells;
d. Requiring well operators to meet with regulatory staff annually to review the list of wells out of production; and
e. Sanctioning an operator's ability to sell their commodities if they do not have, at a minimum, a legal agreement with the state to address plugging and abandonment issues.
f. Development and appropriation of adequate enforcement resources to compel compliance with existing plugging, restoration, and remediation requirements.
g. The authority to require a well transferor to properly plug a well if the well transferee fails to meet its legal obligation to properly plug the well.
h. Requiring bonding adequate to cover the projected cost to the state to plug the well at the time the well is permitted, transferred or inactive status is approved, along with authority to easily forfeit those bonds and require replacement.

8. What are effective methods or best practices a state may use to prevent a company from transferring its liability for plugging and reclamation to another party that may become financially insolvent, or will otherwise be unable to properly plug and abandon a well?

Upon receiving a well transfer request, a state can conduct a compliance review of the subject well and other wells owned by the operator and the transferee. Approval of the transfer request could be contingent upon the transferor or transferee's compliance history, including but not limited to compliance issues related to addressing plugging liabilities.

Another effective method involves educating private landowners so they know the disadvantages of purchasing a gas well. Quite often, well operators approach landowners with an offer to

purchase a well(s) for a nominal amount so they can have "free house gas." This passes the responsibility of properly plugging and abandoning those wells from an operator who benefited from the sale of gas from those wells, to those who may never have the ability to pay to plug and abandon those wells. It should no longer be possible for private landowners to purchase potential plugging liabilities for next to nothing while allowing the operator to walk away from their rightful responsibility.

Additionally, if a company has been granted inactive status for a well that has never been properly completed or put into production for a period of several years, the operator should not be allowed to transfer those wells to another operator who may continue to apply for inactive status until the well(s) potentially end up as abandoned.

9. What types of state enforcement actions, policies, and procedures have been found to result in timely well plugging and how might they be applicable in evaluating a RIG application?

Effective policies and procedures include inspection and identification of wells that are improperly abandoned and initiating timely compliance actions that will result in the operator plugging the well. Enforcement steps that states can take include assessing civil penalties, forfeiting a well bond, issuing unilateral administrative orders, requiring proper plugging and restoration, and negotiated agreements to properly plug the well such as a consent order.

10. Is joint and several liability an effective means to prevent taxpayers from eventually paying for plugging and reclaiming orphaned wells, and how could or should joint and several liability be incorporated into Program Standards? Similarly, is an assignor's retention of well-plugging liability an effective means to prevent a State's taxpayers from being liable, in the future, for plugging orphaned wells? Why or why not? And if so, how could or should retention of assignor liability be incorporated into Program Standards?

Availability of such legal tools would give states a wider range of entities to pursue to ensure proper plugging and abandonment of oil and gas wells. This seems equitable given that the prior owners and operators profited from the operation of the well. A state would also likely benefit if the ownership structures surrounding oil and gas development were more transparent to the state. However, as noted above, Interior should leave it to the applicant state whether or not to use such an approach as the state works to reduce its future burden of orphan wells.

11. Are financial strength tests an effective method to gauge whether operators will likely meet plugging, remediation, and decommissioning requirements? If so, are there specific criteria a state should incorporate into its financial strength tests?

Requiring proof of being financially solvent could help in determining the risk of improper abandonment when a well is being transferred to another party. Also, past operational practices of the operator (*i.e.*, their compliance record, including how have they handled plugging wells in the past) should be considered.

Additionally, performing a financial strength test on an operator could be helpful to assess the likelihood of an operator satisfying its plugging requirements or aid in identifying financial

problems. Criteria to be considered include, company growth history/profitability, assets, liabilities, and net worth. The United States Environmental Protection Agency and Pennsylvania have established a financial test and corporate guarantee as a method for financial assurance for owners and operators of hazardous waste treatment, storage, and disposal facilities, which could serve as a model for such a test (40 CFR § 264.143(f), incorporated by reference in 25 *Pa.Code* §§ 264a.1, 264a.143, 264a.156).

Finally, adequate and appropriate financial assurance mechanisms should be required when a well is permitted, transferred or granted inactive status to ensure that the eventual plugging and abandonment of the well(s) occurs without taxpayer expense.

12. How should idle wells and a state's approach to managing idle wells be factored into the development and administration of Program Standards for RIGs?

Reviewing every state well management program and utilizing the best management practices from the entire group. Knowing what works, and what does not work can help to set up a better system for all.

Additionally, the approach should encourage that the well be put back into production sooner than later, require submission of a firm plan to put the well back into use, and limit timeframes for inactive status approval.

13. Are there any other thoughts or comments that should considered pertaining to the administration of the RIG program?

No.

Thank you for the opportunity to comment prior to the release of the draft Regulatory Improvement Grant guidance.

Sincerely,

Jessica K Shirley

Jessica Shirley
Interim Acting Secretary