DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF OIL AND GAS MANAGEMENT

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TITLE: Pennsylvania’s Plan for Addressing Problem Abandoned Wells and Orphaned Wells

EFFECTIVE DATE: April 10, 2000

AUTHORITY:

The Oil and Gas Act (P.L. 1140, No. 223) (58 P.S. Section 601.101 et seq.)
Coal and Gas Resource Coordination Act (P.L. 1069, No. 214) (58 P.S. Section 501.1 et seq.)
Oil and Gas Conservation Law (P.L. 825, No. 359) (58 P.S. Section 401.1 et seq.)
The Clean Streams Law (P.L. 1987, No. 394) (35 P.S. Section 691.1 et seq.)
Solid Waste Management Act (P.L. 380, No. 97) (35 P.S. Section 6018.101 et seq.)
The Administrative Code (P.L. 177, No. 175) (71 P.S. Section 510-1 et seq.)

POLICY:

DEP will follow the strategy explained in this document when deciding which abandoned oil and gas wells to plug under contract.

PURPOSE:

This guidance document provides the Department’s rationale in determining the optimal use of funds, including Growing Greener funding, available for plugging abandoned wells under contract. The strategy is to be incorporated into the state’s Reclaim PA initiative.

APPLICABILITY:

These policies apply as guidance for decisions by DEP’s oil and gas management program when determining which abandoned wells to plug, and when.

DISCLAIMER:

The policies and procedures outlined in this guidance document are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or regulation. There is no intent on the part of the Department to give these rules that weight or deference. This document establishes the framework within which DEP will exercise its administrative discretion in the future. DEP reserves the discretion to deviate from this policy statement if circumstances warrant.

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I. Introduction

The first commercial oil well was drilled near Titusville in 1859. However, plugging requirements designed to protect oil producing formations from flooding by fresh water were not enacted by the Legislature until the 1890s. Legislation passed in 1921 specified methods for pulling casing and plugging wells. It was not until 1956 that legislation required gas wells to be permitted so their locations could be coordinated with underground coal mining to assure the safety of coal miners. The same legislation was amended in the early 1960s to require all oil and gas wells to be permitted. These initial permits were registrations of locations where well drilling was being considered.

In the early 1980s more comprehensive oil and gas legislation was enacted. In December 1984 the Oil and Gas Act was signed into law. The Act defined an abandoned well as any well that had not been produced by its operator in the last year or any well that was not completed for production within 60 days of having been drilled. Excluded from this category were any wells that had been granted inactive status by the Department. This statute provided for, among other things, an Abandoned Well Restricted Revenue Account and the registration of wells drilled prior to the permitting requirements. The Abandoned Well Restricted Revenue Account was to be used by the Department of Environmental Protection (DEP) to plug abandoned wells causing health, safety, or environmental problems, and for carrying out other purposes of the Act. This fund received revenues from fines, fees, penalties, and from a $50.00 surcharge on all oil and gas well drilling permits.

In the 140 years since the first oil well was drilled, an unknown number of oil and gas wells have been drilled in Pennsylvania. An estimate by the Independent Petroleum Association of America places that number at approximately 325,000. DEP has records of 88,300 operating wells which it regulates, 44,700 plugged wells, and approximately 8,000 orphaned and abandoned wells. The status of the remaining 184,000 wells is unknown. Many wells were drilled, operated, and plugged at the end of their useful life while others were drilled, operated and abandoned without proper plugging. Some wells were “temporarily abandoned” while the operators waited for the price of oil to rise to a level which would make producing the wells profitable; this sometimes never occurred.

With the passage of the well registration requirements of the Oil and Gas Act, questions arose concerning plugging liability for wells that were abandoned years ago by prior, often unidentified, operators. Consequently, in 1992 the Legislature amended the Act to establish an Orphan Well Plugging Program. Orphaned wells are a subclass of abandoned wells. Orphaned wells are wells that were abandoned prior to April 18, 1985. They have not been affected or operated by the present owner or operator and the present owner, operator or lessee has received no economic benefit. If DEP determines that a prior owner or operator received economic benefit, other than economic benefit derived as a landowner or from a royalty interest subsequent to April 18, 1979 from an orphaned well or from a well which has not been registered, that owner or operator is responsible for plugging the well. The Orphan Well Plugging Program receives revenues from industry through a $100.00 surcharge on new oil well permit fees and a $200.00 surcharge on new gas well permit fees. The Orphan Well
Plugging Fund is separate from, and in addition to, the Abandoned Well Plugging Fund which was established with the $50 surcharge from the Abandoned Well Restricted Revenue Account of 1984.

The Oil and Gas Act authorizes DEP to plug abandoned oil and gas wells. The main focus to date has been the plugging of wells which were clearly showing hazards to public health and safety and/or environmental degradation particularly to water supplies. A ranking system for abandoned wells, based on threats to health and safety or pollution of the waters of the Commonwealth, is currently in use. A similar ranking system for orphaned wells is based on whether the well is on public or private land; its distance from public or private water supplies, accessible areas or buildings; its distance from streams, bodies of water, or wetlands; and whether or not it is in a special protection watershed. Revenues from surcharges into the Abandoned Well Plugging Fund and the Orphan Well Plugging Fund total approximately $300,000 a year.

Since the well plugging program began, 108 wells have been plugged at a cost of over $2.4 million using funds from the Abandoned Well Plugging Fund, the Orphaned Well Plugging Fund, and a Federal Clean Water Act, Section 319 Non-Point Source (319 NPS) grant. The wells plugged under the 319 NPS grant were plugged to halt discharges of acid mine drainage and improve stream quality in the Mill Creek Watershed and stop oil migration in the Oil Creek Watershed.

On December 15, 1999, Governor Thomas Ridge signed the Growing Greener legislation. This represents the largest single investment of state funds in Pennsylvania history to address critical environmental concerns such as abandoned and orphan wells. Approximately $3 million dollars a year of Growing Greener funding will go towards plugging wells from 2000 to 2004. Initial Growing Greener grant dedications include $280,000 funded the plugging of 79 wells in McKean County, $20,000 towards one well in Allegheny County, and $213,180 for 50 wells in Warren County. These examples demonstrate how Growing Greener is helping Pennsylvania’s plan to plug abandoned and orphaned wells.

The Environmental Protection Agency (EPA) has also plugged over 190 abandoned wells in Pennsylvania that were leaking oil, or threatening to leak oil, to the navigable waters of the United States. The well plugging was made possible using funds from the Federal Oil Spill Liability Trust Fund (OSLTF) that was established under the Oil Pollution Act of 1990 (OPA 90).

II. Purpose for This Plan

The purpose of this plan is to establish the direction of DEP well plugging activities.

III. Guiding Principles

In developing and implementing a comprehensive plan for addressing problem abandoned wells and orphaned wells, state and federal resources should be coordinated to ensure cost-effective results. The following set of principles is intended to guide decision-making.
• Priority will be given to problem wells that threaten the health and safety of people or property or pollution of the waters of the Commonwealth.

• Partnerships between DEP, the Department of Conservation and Natural Resources (DCNR), other state and federal agencies, and watershed associations will be established, when appropriate, to achieve cleanup of a defined geographical area in an efficient and effective manner.

• Where practical, plugging activities will be coordinated with other projects that involve a watershed or geographic area where environmental cleanup and restoration efforts are planned or in progress. This coordination would occur as part of the Reclaim PA initiative.

• Consideration will be given to plugging projects where arrangements for utilization of money from federal and other sources, such as the OSLTF, or 319 NPS grants, exist or can be developed.

• Adoption of problem abandoned wells or orphaned wells that have production potential will be encouraged so that the oil and gas resources are conserved.

• Problem abandoned wells and orphaned wells will continue to be documented and added to the inventories as they are identified.

IV. Goals

Specific goals to be achieved are set forth below. These goals are to be reviewed, modified, expanded, or changed when necessary to ensure the goals meet the needs of the time.

A. Focus expenditures for plugging problem abandoned wells on those which threaten the health and safety of persons or property or pollution of the waters of the Commonwealth.

Of the approximately 8,000 unplugged orphaned wells, 550 are considered problem wells. Of the 550 problem wells, approximately 129 are prioritized at 30 points or more. Our goal is to give these 129 wells high priority for plugging.

B. Develop partnerships with the federal government, DCNR, watershed associations, local governments, and other groups that promote locating and plugging problem abandoned and orphaned wells.

DEP completed a 319 NPS three well plugging contract in Mill Creek Watershed to improve stream quality. These wells were brought to the attention of DEP by the Mill Creek Coalition as being the source of acid mine drainage into Mill Creek. Seven other wells discharging oil, or threatening to discharge oil, into Oil Creek were plugged under the same 319 NPS grant. DEP will continue to foster additional cooperative partnerships with governmental or other watershed groups.
C. Develop an areal approach to planning plugging operations that will result in reclamation and rehabilitation of an entire geographical area or watershed.

DEP’s goal during the next five years is to contract for plugging clusters of wells in defined geographic areas. The key well in each well cluster contract will be a problem abandoned well with high priority points. When the key well or wells are identified, the abandoned and orphaned well lists will be examined to determine what other wells are located in the same geographic area. Once these wells are identified, they will be included in a cluster well plugging contract.

D. Encourage adoption of problem abandoned wells and orphaned wells.

DEP is providing oil and gas operators lists of abandoned wells in the database. The oil and gas operators can determine whether it is economically beneficial to them to adopt the well and return it to production, rather than have DEP plug the well and lose a potential resource. Our goal is to continue to make oil and gas operators aware of the opportunities to adopt orphaned oil and gas wells and to return them to production.

V. Plan Elements

A. Focusing of Expenditures

DEP maintains an inventory of problem abandoned and orphaned wells. This inventory is also in a database format. Prioritized lists of problem abandoned and orphaned wells are generated from this database. These prioritized lists aid in selecting wells for plugging.

These prioritization lists are being used to focus plugging expenditures on the 129 high priority wells.

B. Developing Partnerships

Currently DEP uses funds from the Abandoned Well Plugging Fund to plug problem abandoned wells, and funds from the Orphan Well Plugging Fund to plug orphaned wells. Abandoned wells that are an immediate threat to the health and safety of people or property or pollution of the waters of the Commonwealth are plugged by DEP through emergency response action. Abandoned wells that discharge or threaten to discharge oil into navigable waters of the United States are eligible to be plugged by DEP or EPA using funds from the Oil Spill Liability Trust Fund (OSLTF) established under the Oil Pollution Act 90. EPA is currently plugging these types of wells using funds from this source.
Contacts between DEP and EPA have been established to coordinate activities for plugging problem abandoned wells. This will ensure that the respective agencies will not duplicate efforts by both trying to plug the same wells at the same time.

Problem abandoned wells that had been leaking oil and were previously plugged by DEP will be examined to determine their eligibility for reimbursement of plugging costs under the OSLTF. Claims for reimbursement will be submitted to the OSLTF.

Contacts have been made with DCNR to enter into a cost sharing partnership to plug orphaned wells on property owned by DCNR. Approximately 100 orphaned wells fall within this category.

Contacts have been made with the Mill Creek Coalition, the Pine Creek Headwater Protection Group, and The Scott Conservancy to determine if abandoned wells are contributing to the pollution of watershed areas the associations are trying to clean up.

Contacts have been made with the United States Forest Service to access orphaned wells located in the Allegheny National Forest.

C. An Areal Approach to Well Plugging

DEP will group problem abandoned and orphaned wells by municipalities, watersheds, geographic boundaries, or surface landowners to more efficiently address the plugging of these wells. This will facilitate a cluster well plugging program that will result in the restoration of an entire area rather than scattered sites, and decrease per well plugging costs.

The key well in the cluster will be a well that has a high priority. When these problem wells are plugged, they will be grouped into clusters with other orphaned wells in the area. When possible, 50 to 100 wells or more will be grouped together into single contracts. It is expected that clustering wells into contracts will increase program efficiency.

D. Encouraging Adoption

DEP will periodically remind the oil and gas industry of the availability for adoption of orphaned and abandoned wells on our plugging lists. DEP will do this by placing articles in the Update and by posting information on the web site.

Upon request, DEP will provide a list of orphaned and abandoned wells to anyone who requests such information for the purpose of adoption.