

1 ENERGY AND ENVIRONMENT CABINET

2 Department for Natural Resources

3 Division of Oil and Gas

4 (Amendment)

5 805 KAR 1:140. Directional and horizontal wells.

6 RELATES TO: KRS 353.050, 353.060, 353.520, 353.590, 353.610, 353.651, 353.652,
7 353.991

8 STATUTORY AUTHORITY: KRS 353.540, 353.550

9 NECESSITY, FUNCTION, AND CONFORMITY: KRS 353.540 authorizes the
10 department to promulgate administrative regulations to administer KRS 353.500 to 353.720. KRS
11 353.550 authorizes the department to regulate the drilling and casing of all wells and filing of all
12 downhole surveys. This administrative regulation identifies the requirements for permitting
13 directional and horizontal wells.

14 Section 1. Definitions.

15 (1) "Abnormal pressure" means a reservoir pressure that exceeds the hydrostatic pressure of
16 fresh water extending from the reservoir to the surface.

17 (2) "Annulus" means the space between two (2) strings of casing or between a string of
18 casing and the bore hole wall.

19 (3) "Blow-out preventer (BOP)" means a device installed on the surface or intermediate
20 casing to prevent the escape of pressure either in the annulus between casing and drill pipe or in the
21 open hole without drill pipe and which is used during drilling operations.

1 (4) "Casing" is defined by KRS 353.010(3).

2 (5) "Deep well" is defined by KRS 353.510(16).

3 (6) [~~"DES" means the State Disaster and Emergency Services Office.~~

4 (7) "Directional and horizontal drilling" means the science of directing a well bore along a
5 predetermined course to a target located a given distance from the vertical.

6 (7) [(8)] "Directional survey" is defined by KRS 353.010(8).

7 (8) [(9)] "Intermediate casing" means one (1) or more strings of pipes installed in a well in
8 addition to the surface casing in which each string is smaller in diameter than the previous.

9 (9) [(10)] "Intersection length" means the horizontal distance between the point at which
10 the well penetrates the top of the intended formation and the end point within that formation.

11 (10) "KYEM" means the state Kentucky Emergency Management office under authority of
12 the Department of Military Affairs in Frankfort, Kentucky with regional offices throughout the
13 Commonwealth.

14 (11) "Long casing string" means the last casing installed in a well to be used for production
15 or injection purposes.

16 (12) "Measured depth" means the total depth measured in the well from the surface.

17 (13) "Surface casing" means the first and largest diameter casing installed in a well the
18 primary purpose of which is to make the bore hold stand up and to protect the fresh water zones.

19 (14) "True vertical depth" means the depth of the well from any point in the well being
20 measured to the surface of the ground above the point being measured.

21 (15) "Zone" means a layer of strata capable of producing or receiving fluids.

22 Section 2. Information Submittal. (1) Prior to drilling a directional or horizontal well, the
23 operator shall submit the following [information]:

1 (a) An application form ED 1, for a permit to drill the well, with a cover letter from the
2 operator making a request for drilling the horizontal or directional well;

3 (b) Three (3) copies of a location plat satisfying the requirements of 805 KAR 1:030 (plan
4 view), in addition to the following requirements:

5 1. The surface location and proposed target formation with their respective "Carter
6 Coordinates"; [-]

7 2. The proposed course of the well; and [-]

8 3. The identification of the intersection length of the proposed well and the proposed
9 producing formation(s). To avoid any conflicts with the spacing requirements, a dashed line shall
10 be drawn around the intersection length with regard to the spacing requirements in KRS 353.610
11 or, for deep wells, 805 KAR 1:100 and KRS 353.651 and 353.652. This distance shall be clearly
12 shown in feet;

13 (c) A bond as required in KRS 353.590(7)(~~5~~); and

14 (d) An application fee of \$300.

15 (2)(a) In addition to the plan view required in this section, the operator shall submit three
16 (3) copies of a plat which shows a vertical cross-section view of the area to be drilled by the well.

17 (b) This cross-section shall be prepared from the proposed "predrill hole" directional survey
18 compiled by the contractor responsible for the directional control mechanism and certified as
19 required by 805 KAR 1:030, Sections 2 and 7(1)(k).

20 (c) The cross-section shall include the area from the well site to the target made through the
21 proposed course of the well.

22 (d) The surface shall be located as zero in reference to the depth and the lateral distance
23 from the well site and true vertical depths shall be shown for all of the following:

- 1 1. The kick-off point or selected depth at which the deviation is started;
- 2 2. The known coal seams to be intersected;
- 3 3. The producing interval;
- 4 4. The proposed producing formation; and
- 5 5. The proposed target.

6 (3) When the permit is issued, the operator shall provide verbal or written notice to the
7 department field inspector at least forty-eight (48) hours in advance of the commencement of
8 drilling operations.

9 (4) Once the well has been drilled and completed, the following shall be submitted within
10 ten (10) days from the date of completion:

11 (a) Three (3) copies of an amended plan view of the well location plat required in
12 subsection (1)(b)1. through 3. of this section, with the actual course drilled, the kick-off point, and
13 the actual target superimposed on the proposed well location plat. A correction in the target Carter
14 Coordinates, if necessary, shall then be issued by the department;

15 (b) Three (3) copies of the side or cross-sectional view plat required in subsection (2)(d)1
16 through 5 of this section of this section shall be amended for the actual path of the well, showing
17 the actual formation(s), coal seams, target, kick-off point; and

18 (c) Copies of all directional surveys certified by the operator and the contractor responsible
19 for the directional survey. This survey shall be submitted for the entire well bore, and the operator
20 shall be able to identify the path or depth of the well bore at any given time during and after the
21 drilling of the directional or horizontal well. The survey points shall be made at each tool joint or at
22 any intervals more frequent~~;~~and

1 ~~(d) On Form ED-8, the operator shall record the lateral offset from the well in feet and the~~
2 ~~true vertical depth for the producing interval and formation and the coal seam intersections and~~
3 ~~their true vertical depth].~~

4 (5) The operator shall satisfy spacing requirements of offset mineral boundary lines and
5 between wells for the actual drilled course of the well and its end point and the intersection of the
6 well bore and the producing formations.

7 (6) All coal operators or owners affected by the drilling of a directional or a horizontal well
8 shall be provided a copy of the predrill plat and cross-section plat described in subsections (1)(b)
9 and (2)(b) of this section of this section as required by KRS 353.050 and 353.060. Within ten (10)
10 days after the well is drilled, the operator shall submit to the coal operator or owner the revised
11 plats and deviation survey log required in subsection (5) of this section.

12 (7) The requirements for a deep directional or horizontal well shall satisfy those
13 requirements set out in 805 KAR 1:100 and KRS 353.651 and 353.652 regarding the application
14 process and spacing units. Prior to the deep directional or horizontal well being drilled, a hearing
15 shall be held before the Kentucky Oil and Gas Conservation Commission.

16 Section 3. When an application for a directional or horizontal permit is submitted to the
17 department, the operator shall prepare a detailed drilling and casing plan on Form ED-7 for the
18 review by and the approval of the department. The items requested in 805 KAR 1:130, Section
19 (3)~~(2)~~(1), (2) and (3) shall be submitted with this plan.

20 Section 4. The operator shall install a blow-out prevention device capable of withstanding a
21 working pressure of 1500 psi and a test pressure of 3000 psi. A description of this device and its
22 installation shall be included with the drilling and casing plan required in Section 3 of this
23 administrative regulation. This BOP equipment shall be tested at intervals necessary to maintain its

1 ability to operate at rated capacity. The results of these tests shall be kept at the drill site and made
2 available to department personnel at their request.

3 Section 5. The requirements of 805 KAR 1:130, Sections 5, 6 and 7 [~~4, 5 and 6~~] shall also
4 apply to this administrative regulation.

5 Section 6. An operator in noncompliance with the requirements of this administrative
6 regulation is subject to penalties pursuant to KRS 353.991.

7 Section 7. Incorporation by Reference. (1) The following material is incorporated by
8 reference:

9 (a) "Application Form", ED 1, March 1990; and


10 (b) "Casing and Cementing Plan [~~Form~~]", ED-7, March 2015 [~~August 1991~~; and

11 (~~c) "Operator Certification of Formation Offset and Vertical Depth Form", ED 8, August~~
12 ~~1991~~].

13 (2) This material may be inspected, copied, or obtained, subject to applicable copyright
14 law, at the Division of Oil and Gas Conservation, 1025 Capital Center Drive, Suite 201, Frankfort,
15 Kentucky 40602-2244, Monday through Friday, 8 a.m. to 4:30 p.m.

805 KAR 1:140 approved for filing.
Pages (1-6)

4/2/15
Date



Leonard K. Peters, Secretary
Energy and Environment Cabinet

PUBLIC HEARING AND PUBLIC COMMENT PERIOD: A public hearing on this administrative regulation shall be held on May 26, 2015 at 10:00 A.M. (Eastern Time) at Conference Room D-16 of the Department for Natural Resources at #2 Hudson Hollow, Frankfort, Kentucky. Individuals interested in being heard at this hearing shall notify this agency in writing by May 19, 2015, five workdays prior to the hearing, of their intent to attend. If no notification of intent to attend the hearing is received by that date, the hearing may be cancelled. This hearing is open to the public. Any person who wishes to be heard will be given an opportunity to comment on the proposed administrative regulation. A transcript of the public hearing will not be made unless a written request for a transcript is made. If you do not wish to be heard at the public hearing, you may submit written comments on the proposed administrative regulation. Written comments shall be accepted until June 1, 2015. Send written notification of intent to attend the public hearing or written comments on the proposed administrative regulation to the contact person.

CONTACT PERSON: Michael Mullins, Regulation Coordinator, #2 Hudson Hollow, Frankfort, Kentucky 40601, phone (502) 564-6940, fax (502) 564-5698, email Michael.Mullins@ky.gov.

REGULATORY IMPACT ANALYSIS
AND TIERING STATEMENT

Administrative Regulation No.: 805 KAR 1:140
Contact Person: Michael Mullins, Regulation Coordinator

(1) Provide a brief summary of:

(a) What this administrative regulation does: This administrative regulation identifies the requirements for permitting directional and horizontal wells.

(b) The necessity of this administrative regulation: This administrative regulation is necessary to establish permitting requirements for directional and horizontal wells.

(c) How this administrative regulation conforms to the content of the authorizing statutes: KRS 353.550 authorizes the department to regulate the drilling and casing of all wells and filing of all downhole surveys. This administrative regulation is related to permitting directional and horizontal wells.

(d) How this administrative regulation currently assists or will assist in the effective administration of the statutes: KRS 353.550 authorizes the department to regulate the drilling and casing of all wells and filing of all downhole surveys. This administrative regulation assist in the administration of the statutes by providing necessary details for owners and operators to obtain permits for drilling directional and horizontal wells.

(2) If this is an amendment to an existing administrative regulation, provide a brief summary of:

(a) How the amendment will change this existing administrative regulation: This amendment is necessary to amend form ED-7, Casing and Cementing Form, incorporated by reference in this administrative regulation. The form was amended due to the changes in the 805 KAR 1:130 relating to blow-out preventer pressure.

(b) The necessity of the amendment to this administrative regulation: This amendment is necessary to amend the amend form ED-7, Casing and Cementing Form. The form was amended due to the changes in the 805 KAR 1:130 relating to blow-out preventer pressure.

(c) How the amendment conforms to the content of the authorizing statutes: KRS 353.550 authorizes the department to regulate the drilling and casing of all wells and filing of all downhole surveys. This amendment is needed to amend form ED-7, Casing and Cementing Form.

(d) How the amendment will assist in the effective administration of the statutes: KRS 353.550 authorizes the department to regulate the drilling and casing of all wells and filing of

all downhole surveys. This amendment makes changes to the form ED-7 that is necessary due to the changes in 805 KAR 1:130.

(3) List the type and number of individuals, businesses, organizations, or state and local governments affected by this administrative regulation: This administrative regulation will impact approximately 1,000 oil and gas operators within the Commonwealth.

(4) Provide an analysis of how the entities identified in question (3) will be impacted by either the implementation of this administrative regulation, if new, or by the change, if it is an amendment, including:

(a) List the actions that each of the regulated entities identified in question (3) will have to take to comply with this administrative regulation or amendment: The entities listed above will be required to fill out a new ED-7 form.

(b) In complying with this administrative regulation or amendment, how much will it cost each of the entities identified in question (3): There will not be an additional cost associated with this amendment. This amendment simply alters the form ED-7 related to the amendments in 805 KAR 1:130.

(c) As a result of compliance, what benefits will accrue to the entities identified in question (3): The entities will benefit by having an updated form to fill out.

(5) Provide an estimate of how much it will cost the administrative body to implement this administrative regulation:

(a) Initially: These amendments will not increase the costs of the agency to implement.

(b) On a continuing basis: These amendments will not increase the costs of the agency on a continuing basis.

(6) What is the source of the funding to be used for the implementation and enforcement of this administrative regulation: A combination of general funds and restricted funds will be used.

(7) Provide an assessment of whether an increase in fees or funding will be necessary to implement this administrative regulation, if new, or by the change if it is an amendment: There will not be a need to increase fees or funding related to the proposed amendments.

(8) State whether or not this administrative regulation established any fees or directly or indirectly increased any fees: The amendments to this administrative regulation do not increase or establish any fees.

(9) TIERING: Is tiering applied? (Explain why or why not) No. All entities that submit an application to drill a directional or horizontal well will submit an ED-7.

FISCAL NOTE ON STATE OR LOCAL GOVERNMENT

Admin. Regulation No. 805 KAR 1:140

Contact Person: Michael Mullins, Regulation Coordinator

1. What units, parts or divisions of state or local government (including cities, counties, fire departments, or school districts) will be impacted by this administrative regulation? The Division of Oil and Gas.

2. Identify each state or federal statute or federal regulation that requires or authorizes the action taken by the administrative regulation. KRS 353.550.

3. Estimate the effect of this administrative regulation on the expenditures and revenues of a state or local government agency (including cities, counties, fire departments, or school districts) for the first full year the administrative regulation is to be in effect.

(a) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for the first year? This new administrative regulation will not generate any new revenue for the state or local government.

(b) How much revenue will this administrative regulation generate for the state or local government (including cities, counties, fire departments, or school districts) for subsequent years? This new administrative regulation will not generate revenue in subsequent years.

(c) How much will it cost to administer this program for the first year? There will not be a cost increase associated with the amendments to this administrative regulation.

(d) How much will it cost to administer this program for subsequent years? Future costs would remain essentially unchanged related to this amendment.

Note: If specific dollar estimates cannot be determined, provide a brief narrative to explain the fiscal impact of the administrative regulation.

Revenues (+/-): NA

Expenditures (+/-): NA

Other Explanation: NA