

Chapter 332-17 WAC
GEOHERMAL DRILLING RULES AND REGULATIONS

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WAC

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WAC 332-17-010 Inspection. The department shall inspect all geothermal operations for the purpose of obtaining compliance with the rules, regulations, and orders promulgated by authority of the Geothermal Resources Act, chapter 43, Laws of 1974 ex. sess.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-010, filed 1/4/79.]

WAC 332-17-020 General rules. General rules shall be statewide in application unless otherwise specifically stated and shall be applicable to all lands within the jurisdiction of the state of Washington.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-020, filed 1/4/79.]

WAC 332-17-030 Supremacy of special rules and orders. Special rules and orders will be issued as required and shall prevail as against general rules if in conflict therewith.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-030, filed 1/4/79.]

WAC 332-17-100 Application for permit to commence drilling, re-drilling or deepening. (1) The owner or operator of any well, or proposed well, before commencing the drilling, re-drilling, or deepening of any wells shall file with the department a written application in triplicate of the intention to commence such drilling, re-drilling or deepening accompanied by a fee of two hundred dollars as prescribed in RCW 79.76.070, except no fee is required for the drilling of core holes. The application shall be on forms as prescribed by the department and contain the following:

- (a) The name of operator or company and address.
 - (b) Description of the lease or property including acres together with the name and address of the owner or owners of surface and mineral rights.
 - (c) The proposed location of the well or wells including a typical layout showing the position of mud tanks, reserve pits, cooling towers, pipe racks, etc.
 - (d) Existing and planned access and lateral roads.
 - (e) Location and source of water supply and road building material.
 - (f) Location of supporting facilities.
 - (g) Other areas of potential surface disturbances.
 - (h) The topographic features of the land, including drainage patterns.
 - (i) Methods for disposing of waste materials.
 - (j) The proposed drilling and casing plan.
 - (k) A surveyed plat showing the surface and expected bottom-hole locations and the distances from the nearest section or tract lines as shown on the official plat of survey or protracted surveys of each well or wells. The scale shall not be less than 1:24,000.
 - (l) A narrative statement describing the proposed measures to be taken for protection of the environment, including, but not limited to, the prevention or control of:
 - (i) Fires,
 - (ii) Soil erosion,
 - (iii) Pollution of surface and groundwaters,
 - (iv) Damage to fish and wildlife or other natural resources,
 - (v) Air and noise pollution, and
 - (vi) Hazards to public health and safety during operational activities.
 - (m) Such other pertinent information or data which the department may require to support the application for the development of geothermal resources and the protection of the environment.
- Provisions for monitoring may be required as deemed necessary by the department to ensure compliance with these regulations.
- The collection of data concerning existing air and water quality, noise, seismic and land subsidence activities, and the ecological system of the area may be required as deemed necessary by the department.
- (2) An application for the drilling of core holes shall contain the following:
 - (a) Name and address of the operator or company.
 - (b) Name and number, location of the core hole or holes to the nearest quarter-quarter section or lot.
 - (c) Proposed depth of each core hole, but not to exceed 750 feet into bedrock.
 - (d) A map of sufficient scale to show topography and drainage patterns, access roads, and the proposed core hole locations. A metes and bounds description of each core hole location shall be provided to the department within thirty days of completion of the core hole or the approved core hole program.
 - (3) Well names and numbers shall not be changed without first obtaining the written approval of the department.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-100, filed 1/4/79.]

WAC 332-17-110 Casing requirements. (1) All wells shall be cased to protect or minimize damage to the environment, surface and groundwaters, geothermal resources and health and property. The department shall approve proposed well spacing and well casing programs or prescribe such modifications to the programs as the department determines necessary for proper development, giving consideration to such factors as:

- (a) Topographic characteristics of the area.
- (b) Hydrologic, geologic, or reservoir characteristics of the area.
- (c) The number of wells that can be economically drilled to provide the necessary volume of geothermal resources for the intended use.
- (d) Protection of correlative rights.
- (e) Minimizing well interference.
- (f) Unreasonable interference with multiple use of lands.
- (g) Protection of the environment.

(2) Casing specifications shall be established on an individual well basis. The following specifications are general, but should be used as guidelines in submitting drilling permit applications.

(a) **Conductor pipe.** Annular space shall be cemented solid from the shoe to surface. An annular blowout preventer, or equivalent, remotely controlled hydraulically operated including a drilling spool with side outlets or equivalent may be required by the department. A kill line and blowdown line with appropriate fittings shall be connected to the drilling spool when same is required.

Conductor casing shall be set to a minimum depth of 15 meters (50 feet).

(b) **Surface casing.** This casing shall be set at a depth equivalent to, or in excess of, ten percent of the proposed depth of the well, provided, however, such depth shall not be less than 60 meters (200 feet) or extend less than 30 meters (100 feet) into bedrock. Surface casing holes shall be logged with an induction electric log, or equivalent, prior to running surface casing.

(c) **Intermediate casing.** This casing shall be required whenever anomalous pressure zones, cave-ins, washouts, abnormal temperature zones, uncased fresh water aquifers, uncontrollable lost circulation zones, or other drilling hazards are present or occur, and whenever the surface casing has not been cemented through competent rock units. Intermediate casing strings shall be cemented solid if possible from the shoe to surface. If a liner is used as an intermediate string, the lap shall be tested by a fluid entry or pressure test to determine whether a seal between the liner top and the next casing string has been achieved. The liner overlap shall be a minimum of 30 meters (100 feet). The test shall be recorded in the driller's log and may be witnessed by a representative of the department.

(d) **Production casing.** This casing may be set above or through the producing or injection zone and cemented above the objective zones. Production casings shall be cemented to the surface or lapped into the intermediate string. Overlap shall not be less than 30 meters (100 feet) and shall be pressure tested. Lap or casing failure shall require repair, recementing, and successful retesting.

(e) **Cementing of casing.** Conductor and surface casing strings shall be cemented with a quantity of cement sufficient to fill the annular space from the shoe to surface. A high temperature resistant admix shall be used in cementing production casing unless waived by the department, and shall be cemented in a manner necessary to exclude,

isolate, or segregate overlying formation fluids from the geothermal resources zone and to prevent the movement of fluids into possible fresh water zones.

A temperature or cement bond log may be required by the department if an unsatisfactory cementing job is indicated.

(f) **Pressure testing.** Prior to drilling out the casing shoe after cementing, all casing strings set to a depth of 152 meters (500 feet) or less except for conductor casing, shall be pressure tested to a minimum pressure of 35 bars (500 psi). Casing strings set to a depth of 152 meters (500 feet) or greater shall be pressure tested to a minimum pressure of 69 bars (1,000 psi) or 0.045 bars/meter (0.2 psi/ft) whichever is greater. Such test shall not exceed the rated working pressure of the casing or the blowout preventor stack assembly, whichever is lesser.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-110, filed 1/4/79.]

WAC 332-17-120 Blowout prevention. Blowout prevention and related control equipment shall be installed, tested immediately thereafter, and properly maintained ready for use until drilling operations are completed. Certain components, such as packing elements and ram rubbers, shall be of high temperature resistant material as necessary. All kill lines, blowdown lines, manifolds, and fittings shall be steel and have temperature derated minimum working pressure rating equivalent to the maximum anticipated wellhead surface pressure. Unless otherwise specified, blowout prevention equipment shall have manually operated gates and remotely controlled hydraulic actuating systems and accumulators of sufficient capacity to close all of the hydraulically operated equipment and have a minimum pressure of 69 bars (1,000 psi) remaining on the accumulator. Dual control stations shall be installed with a high pressure backup system. One control panel shall be located at the driller's station and one control panel shall be located on the ground at least 15 meters (50 feet) away from the wellhead or rotary table. Blowout prevention assemblies involving the use of air or other gaseous fluid drilling systems may include, but are not limited to, a rotating head, a double ram blowout preventer or equivalent, a banjo-box or an approved substitute therefore and a blind ram blowout preventer or gate valve, respectively. Exceptions to the requirements of this paragraph will be considered by the department for areas of known surface stability and low subsurface formation pressure and temperatures.

(1) **Conductor casing.** One remotely controlled hydraulically operated expansion type preventer or acceptable alternative, including a drilling spool with side outlets or equivalent, may be required before drilling below conductor casing.

(2) **Surface, intermediate and production casing.** Prior to drilling below any of these strings, blowout prevention equipment shall include a minimum of:

(a) One expansion-type preventer and accumulator or a rotating head,

(b) A manual and remotely controlled hydraulically operated double ram blowout preventer or equivalent having a temperature derated minimum working pressure rating which exceeds the maximum anticipated surface pressure at the anticipated reservoir fluid temperature,

(c) A drilling spool with side outlets or equivalent,

- (d) A fillup line,
- (e) A kill line equipped with at least one valve, and
- (f) A blowdown line equipped with at least two valves and securely anchored at all bends and at the end.

(3) **Testing and maintenance.** Ram-type blowout preventers and auxiliary equipment shall be tested to a minimum of 69 bars (1,000 psi) or to the working pressure of the casing or assembly, whichever is the lesser. Expansion-type blowout preventers shall be tested to 70 percent of the above pressure testing requirements.

(a) The blowout prevention equipment shall be pressure tested:

- (i) When installed,
- (ii) Prior to drilling out plugs and/or casing shoes,
- (iii) Not less than once each week, alternating the control stations, and
- (iv) Following repairs that require disconnecting a pressure seal in the assembly.

(b) During drilling operations, blowout prevention equipment shall be actuated to test proper functioning as follows:

- (i) Once each trip for blind and pipe rams, but not less than once each day for pipe rams, and
- (ii) At least once each week on the drill pipe for expansion-type preventers.

All flange bolts shall be inspected at least weekly and retightened as necessary during drilling operations. The auxiliary control systems shall be inspected daily to check the mechanical condition and effectiveness and to ensure personnel acquaintance with the method of operation. Blowout prevention and auxiliary control equipment shall be cleaned, inspected and repaired, if necessary, prior to installation to assure proper functioning. Blowout prevention controls shall be plainly labeled, and all crew members shall be instructed on the function and operation of such equipment. A blowout prevention drill shall be conducted weekly for each drilling crew. All blowout prevention tests and crew drills shall be recorded on the driller's log.

(4) **Related well control equipment.** A full opening drill string safety valve in the open position shall be maintained on the rig floor at all times while drilling operations are being conducted. A kelly cock shall be installed between the kelly and the swivel.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-120, filed 1/4/79.]

WAC 332-17-130 Drilling fluid. The properties, use and testing of drilling fluids and the conduct of related drilling procedures shall be such as are necessary to prevent the blowout of any well. Sufficient drilling fluid materials to ensure well control shall be maintained in the field area readily accessible for use at all times.

(1) **Drilling fluid control.** Before pulling drill pipe, the drilling fluid shall be properly conditioned or displaced. The hole shall be kept reasonably full at all times, however, in no event shall the annular mud level be deeper than 30 meters (100 feet) from the rotary table when coming out of the hole with drill pipe. Mud cooling techniques shall be utilized when necessary to maintain mud characteristics for proper well control and hole conditioning. The conditions contained herein shall not apply when drilling with air or aerated fluids.

(2) **Drilling fluid testing.** Mud testing and treatment consistent with good operating practice shall be performed daily or more frequently as conditions warrant. Mud testing equipment shall be maintained on the drilling rig at all times. The following drilling fluid system monitoring or recording devices shall be installed and operated continuously during drilling operations, with mud, occurring below the shoe of the conductor casing:

(a) High-low level mud pit indicator including a visual and audio-warning device, if applicable,

(b) Degassers if applicable, and desilters and desanders if required for solids control,

(c) A mechanical, electrical, or manual surface drilling fluid temperature monitoring device. The temperature of the drilling fluid going into and coming out of the hole shall be monitored, read, and recorded on the driller's or mud log for a minimum of every 9 meters (30 feet) of hole drilled below the conductor casing, and

(d) A hydrogen sulfide indicator and alarm shall be installed in areas suspected or known to contain hydrogen sulfide gas which may reach levels considered to be dangerous to the health and safety of personnel in the area.

No exceptions to these requirements will be allowed without the specific prior permission of the department.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-130, filed 1/4/79.]

WAC 332-17-140 Well logging. All wells shall be logged with an induction electric log or equivalent from total depth to the shoe of the conductor casing. The department may grant an exception to this requirement when well conditions make it impractical or impossible to meet the above requirements.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-140, filed 1/4/79.]

WAC 332-17-150 Removal of casing. No person shall remove casing or any portion thereof from any well without first obtaining prior written approval from the department. In the request to remove casing, the applicant must describe the condition of the well, the proposed casing to be removed, all casing in the hole, location of plugs, and perforations.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-150, filed 1/4/79.]

WAC 332-17-160 Drilling bond. The owner or operator who proposes to drill, redrill, or deepen a well for geothermal resources shall file with the department a good and sufficient bond in the sum of fifteen thousand dollars for each well or a fifty thousand dollar blanket bond for one or more wells being drilled, redrilled, or deepened at any time. The bond shall be filed with the department at the time of filing the application to drill, redrill, or deepen a well or wells. Approval of the bond by the department must be obtained prior to the commencement of drilling, redrilling, or deepening. The bond shall be

made payable to the state of Washington, conditioned for performance of the duty to properly:

- (1) Drill all geothermal wells,
- (2) Operate and maintain producing wells, and
- (3) Plug each dry or abandoned well in accordance with applicable rules and regulations of the department.

The bond shall be executed by such owner or operator as principal and by a surety company authorized to do business in the state of Washington as surety, conditioned upon the faithful compliance by the principal with the laws, rules, regulations, and orders under the Geothermal Resources Act and shall secure the state against all losses, charges, and expenses incurred by the state in obtaining such compliance by the principal of the bond.

A single core-hole bond shall be in the sum of five thousand dollars and a blanket core-hole bond shall be in the sum of twenty-five thousand dollars.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-160, filed 1/4/79.]

WAC 332-17-165 Cancellation of bond. Termination and/or cancellation of any bond will not be permitted until the well, or wells, for which the bond has been issued have been properly abandoned or another valid bond for such well or wells has been submitted therefore and approved by the department. A bond may be canceled upon transfer of the jurisdiction of the well to and acceptance of jurisdiction by the department of ecology. No bond shall be released until the department in writing shall have authorized such release.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-165, filed 1/4/79.]

WAC 332-17-200 Transfer of jurisdiction to department of ecology. Transfer of jurisdiction over a well to the department of ecology may be permitted provided it has been established that it is not technologically practical to produce electricity commercially or usable minerals cannot be derived from the well and provided, further, the department of ecology has by affidavit indicated its willingness to assume such responsibility. Transfer of such jurisdiction will relieve the owner or operator of further compliance with the provisions of the Geothermal Resources Act and these rules and regulations, however, the owner or operator shall be subject to applicable laws and regulations relating to wells drilled for appropriation and use of groundwaters.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-200, filed 1/4/79.]

WAC 332-17-300 Proper completion and abandonment. Completion and abandonment of any well or wells shall be conditioned upon implementation of adequate procedures to protect the environmental and esthetic qualities of the drill site, access roads, and other areas that were disturbed as a result of drilling or related operations.

(1) **Completion.** For the purposes of the Geothermal Resources Act and these rules and regulations, a well will be considered as properly

completed when drilling has been completed and a production head has been installed on the well pending actual utilization in the production of geothermal resources as defined in this act. Suspension of a well after completion and prior to actual production shall not exceed six months duration unless approved in writing by the department.

(2) **Abandonment.** A well shall be properly abandoned for the purposes of this act when:

(a) Drilling, redrilling, or deepening operations have ceased; or geothermal resources cannot be produced from the well; or the well no longer commercially produces geothermal resources; and proper cement plugs have been placed by the owner or operator and approved by the department; and

(b) The owner or operator has taken all appropriate steps to protect surface and groundwaters and prevent the escape of deleterious substances to the surface.

(3) **Site restoration.** Cellars, pads, structures, and other facilities shall be removed. All drilling supplies and scrap shall be removed. The surface shall be graded and revegetated as appropriate to the immediate area or as otherwise specified by the department.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-300, filed 1/4/79.]

WAC 332-17-310 Abandonment procedures. No well shall be plugged and abandoned until the manner and method of plugging have been approved or prescribed by the department. The owner or operator shall give notice to the department of the intention to abandon the well and the date and time abandonment procedures will commence.

(1) The notice shall specify the condition of the well and the proposed method of abandonment. The owner or operator shall furnish such additional information concerning the well condition and abandonment procedures as may be required by the department.

(2) The owner or operator shall within twenty-four hours after giving notice of intent to abandon provide the department with a written notice setting forth the proposed abandonment procedures and the condition of the well.

(3) All wells to be abandoned shall have cement plugs placed in the well as prescribed herein. Such cement shall consist of a high temperature resistant admix unless waived by the department in accordance with the particular circumstances existing in the well.

(a) **Cased holes.**

(i) A cement plug shall be placed across all perforations in the casing, extending 30 meters (100 feet) below and 30 meters (100 feet) above the perforated interval.

(ii) A cement plug shall be placed across all casing stubs, laps, and liner tops, extending a minimum of 15 meters (50 feet) below and 15 meters (50 feet) above such stub, lap, or liner top.

(iii) Casing shoes shall be straddled by a cement plug with a minimum of 30 meters (100 feet) below and 30 meters (100 feet) above and below the shoe.

(iv) All annular space open to the surface shall be filled with cement to the surface.

(v) All casing exposed to the surface shall be cut off 6 feet below ground surface unless otherwise designated by the department.

(vi) A surface plug shall be placed in the casing extending for a minimum of 10 meters (30 feet) below the approved cut off top of the

casing. The casing shall be capped by welding a steel plate on the casing stub.

(b) **Open holes.** Cement plugs shall be placed across fresh water zones, geothermal resource zones, to isolate formations, and to prevent interformational migration or contamination of fluids. Such plugs shall extend a minimum of 30 meters (100 feet) above and below all such zones.

(4) All intervals between plugs shall be filled with drilling mud.

(5) Within thirty days after plugging a well the owner or operator shall file an affidavit with the department setting forth in detail the method used in plugging the well and restoring the site. The affidavit shall be made on a form supplied by the department.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-310, filed 1/4/79.]

WAC 332-17-320 Suspension. Drilling equipment shall not be removed from any well where drilling operations have been suspended before adequate measures have been taken to close the well and protect the surface and subsurface resources including fresh water aquifers. A suspended well shall be mudded and cemented as set forth in WAC 332-17-310 of these rules and regulations or as otherwise approved by the department except that WAC 332-17-310 (3)(a)(iv) - (vi) will not be required.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-320, filed 1/4/79.]

WAC 332-17-340 Notice of change of ownership. Every person who acquires the right of ownership or right of operation of a geothermal well or wells shall within ten days notify the department in writing of the newly acquired ownership or right of operation and provide a bond equivalent to the bond supplied by the prior owner or operator. Each notice shall contain the following:

(1) Name, address, and signature of the person from whom the well or land was acquired;

(2) Name and location of such well or wells;

(3) Date of acquisition; and

(4) Description of the land upon which such well or wells is situated.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-340, filed 1/4/79.]

WAC 332-17-400 Records. The owner or operator of any well or wells shall keep or caused to be kept careful and accurate logs, core records, and history of the drilling of the well. The logs and tour reports shall be kept in the local office of the owner or operator and shall be subject during business hours to inspection by the department except during casing or abandonment operations when appropriate logs will be available at the well site.

Records that shall be filed with the department as set forth in RCW 79.76.210 are:

(1) The drilling log and core record showing the lithologic characteristics and depths of formations encountered, and the depths and temperatures of water-bearing and steam-bearing strata, and the temperature, chemical compositions, and other chemical and physical characteristics of fluids encountered. Core records shall show the depth, lithologic character, and the fluid content of cores obtained.

(2) The well history shall describe in detail in chronological order on a daily basis all significant operations carried out and equipment used during all phases of drilling, testing, completion, re-completion, and abandonment of the well.

(3) The well summary report shall accompany the drilling logs and well history report. It shall show the spud date, completion date, abandonment date, casing summary, fresh water zones, producing zones, total depth, well location, tops of formations penetrated and bottom hole temperature.

(4) Production records shall be submitted monthly to the department on or before the 10th of each month for the preceding month on a form approved by the department.

(5) Electric logs, directional logs, physical or chemical logs, tests, water analysis, surveys including temperature surveys, and such other logs or surveys as may be run.

(6) A set of ditch samples if taken at not less than 30 meters (100 feet) intervals.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-400, filed 1/4/79.]

WAC 332-17-410 Vertical and directional wells. Deviation surveys shall be taken on all wells during the normal course of drilling at intervals not to exceed 152 meters (500 feet). The department may require a directional survey giving both inclination and azimuth or a dipmeter to be obtained on all wells. In calculating all surveys, a correction from true north to Lambert-Grid north shall be made after making the magnetic to true north correction. All surveys shall be filed with department as set forth in WAC 332-17-400. Wells are considered to be directional if inclination from vertical exceeds an average of five degrees. In directional wells directional surveys shall be obtained at intervals not to exceed 30 meters (100 feet) prior to, or upon setting any casing string or lines (except conductor casing) and total depth.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-410, filed 1/4/79.]

WAC 332-17-420 Department to witness tests. Sufficient notice shall be given in advance to the department of the date and time when the owner or operator expects to run casing, test casing, conduct a drill stem test, or log a well in order that the department may have a representative on the drill site as a witness.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-420, filed 1/4/79.]

WAC 332-17-430 Well designation. The owner or operator shall place in a conspicuous location near the well site a sign setting forth the name of the owner or operator, lease name, well number, permit number, and the quarter-quarter section or lot, township, and range of the well location. Such well designation shall maintained until the well has been abandoned.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-430, filed 1/4/79.]

WAC 332-17-440 Well spacing. The department will approve proposed well spacing programs or prescribe such modifications to the programs as it determines necessary for proper development, giving consideration to such factors as:

- (1) Topography of the area;
 - (2) Geologic conditions of the reservoir;
 - (3) Minimum number of wells required for adequate development;
- and
- (4) Protection of environment.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-440, filed 1/4/79.]

WAC 332-17-450 Right of entry. Department representatives shall have the right to enter upon any lands and examine such records related to the drilling, redrilling, deepening, or the completion, or the abandonment of, or production from any geothermal well to ensure compliance with the Geothermal Resources Act and these rules. Any owner or operator who denies the right of entry of a department representative or willfully hinders or delays the enforcement of the provisions of the act and these rules or who otherwise violates, fails, neglects, or refuses to comply with any of the provisions of the act or these rules will be subject to the penalties as set forth in RCW 79.76.260.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-450, filed 1/4/79.]

WAC 332-17-460 Pits or sumps. The owner or operator shall provide pits and/or sumps of adequate capacity and design to retain all fluids and materials necessary to the drilling, production, and related operations on the well. No contents of pits and/or sumps shall be allowed to:

- (1) Contaminate streams, artificial canals, waterways, groundwaters, lakes, or rivers;
- (2) Adversely affect the environment, persons, plants, and wildlife; and
- (3) Adversely affect esthetic values of the property or adjacent properties.

When pits and/or sumps are no longer needed, they shall be pumped out and the contents disposed of in approved disposal sites unless otherwise approved by the department.

[Statutory Authority: RCW 79.76.050(2). WSR 79-02-001 (Order), § 332-17-460, filed 1/4/79.]